

DATA BOOK

INVERTER PACKAGED AIR-CONDITIONERS

(Split system, air to air heat pump type)

HYPER INVERTER

CEILING CASSETTE-4 WAY COMPACT TYPE

| | |
|-------------|---------------|
| Single type | Twin type |
| FDTC40ZSXVH | FDTC71VNXPVH |
| 50ZSXVH | 100VNXPVH |
| 60ZSXVH | 100VXSPVH |
| | 125VNXPVH |
| | 125VXSPVH |
| | Triple type |
| | FDTC140VNXTVH |
| | 140VXSTVH |

DUCT CONNECTED-HIGH STATIC PRESSURE TYPE

| |
|-------------|
| Single type |
| FDU71VNXVH |
| 100VNXVH |
| 100VXSVH |
| 125VNXVH |
| 125VXSVH |
| 140VNXVH |
| 140VXSVH |

MICRO INVERTER

CEILING CASSETTE-4 WAY COMPACT TYPE

| | |
|---------------|------------------|
| Twin type | Triple type |
| FDTC100VNAPVH | FDTC140VNATVH |
| 100VSAPVH | 140VSATVH |
| 125VNAPVH | Double twin type |
| 125VSAPVH | FDTC200VSADVH |
| | 250VSADVH |

DUCT CONNECTED-HIGH STATIC PRESSURE TYPE

| |
|-------------|
| Single type |
| FDU100VNAVH |
| 100VSAVH |
| 125VNAVH |
| 125VSAVH |
| 140VNAVH |
| 140VSAVH |
| 200VSAVG |
| 250VSAVG |

DUCT CONNECTED-LOW/MIDDLE STATIC PRESSURE TYPE

| | |
|-------------|---------------|
| Single type | Twin type |
| FDUM40ZSXVH | FDUM100VNXPVH |
| 50ZSXVH | 100VXSPVH |
| 60ZSXVH | 125VNXPVH |
| 71VNXVH | 125VXSPVH |
| 100VNXVH | 140VNXPVH |
| 100VXSVH | 140VXSPVH |
| 125VNXVH | Triple type |
| 125VXSVH | FDUM140VNXTVH |
| 140VNXVH | 140VXSTVH |
| 140VXSVH | |

CEILING SUSPENDED TYPE

| | |
|-------------|--------------|
| Single type | Twin type |
| FDE40ZSXVH | FDE71VNXPVH |
| 50ZSXVH | 100VNXPVH |
| 60ZSXVH | 100VXSPVH |
| 71VNXVH | 125VNXPVH |
| 100VNXVH | 125VXSPVH |
| 100VXSVH | 140VNXPVH |
| 125VNXVH | 140VXSPVH |
| 125VXSVH | Triple type |
| 140VNXVH | FDE140VNXTVH |
| 140VXSVH | 140VXSTVH |

DUCT CONNECTED-LOW/MIDDLE STATIC PRESSURE TYPE

| | |
|--------------|---------------|
| Single type | Twin type |
| FDUM100VNAVH | FDUM100VNAPVH |
| 100VSAVH | 100VSAPVH |
| 125VNAVH | 125VNAPVH |
| 125VSAVH | 125VSAPVH |
| 140VNAVH | 140VNAPVH |
| 140VSAVH | 140VSAPVH |
| | 200VSAPVH |
| | 250VSAPVH |
| | Triple type |
| | FDUM140VNATVH |
| | 140VSATVH |
| | 200VSATVH |

CEILING SUSPENDED TYPE

| | |
|-------------|------------------|
| Single type | Twin type |
| FDE100VNAVH | FDE100VNAPVH |
| 100VSAVH | 100VSAPVH |
| 125VNAVH | 125VNAPVH |
| 125VSAVH | 125VSAPVH |
| 140VNAVH | 140VNAPVH |
| 140VSAVH | 140VSAPVH |
| | 200VSAPVH |
| | 250VSAPVH |
| | Triple type |
| | FDE140VNATVH |
| | 140VSATVH |
| | 200VSATVH |
| | Double twin type |
| | FDE200VSADVH |
| | 250VSADVH |

STANDARD INVERTER

DUCT CONNECTED-HIGH STATIC PRESSURE TYPE

| |
|------------|
| FDU71VNPVH |
| 90VNPVH |
| 90VNP1VH |
| 100VNP1VH |

DUCT CONNECTED-LOW/MIDDLE STATIC PRESSURE TYPE

| |
|-------------|
| FDUM71VNPVH |
| 90VNPVH |
| 90VNP1VH |
| 100VNP1VH |

CEILING SUSPENDED TYPE

| |
|------------|
| FDE71VNPVH |
| 90VNPVH |
| 90VNP1VH |
| 100VNP1VH |

V Multi System

| | |
|----------------|---------------|
| (OUTDOOR UNIT) | (INDOOR UNIT) |
| FDC71VNX | FDE40VH |
| 100VNX | 50VH |
| 100VXS | 60VH |
| 125VNX | 71VH |
| 125VXS | |
| 140VNX | |
| 140VXS | |

V Multi System

| | |
|----------------|---------------|
| (OUTDOOR UNIT) | (INDOOR UNIT) |
| FDC100VNA | FDE50VH |
| 100VNA | 60VH |
| 125VNA | 71VH |
| 125VSA | 100VH |
| 140VNA | 125VH |
| 140VSA | |
| 200VSA | |
| 250VSA | |

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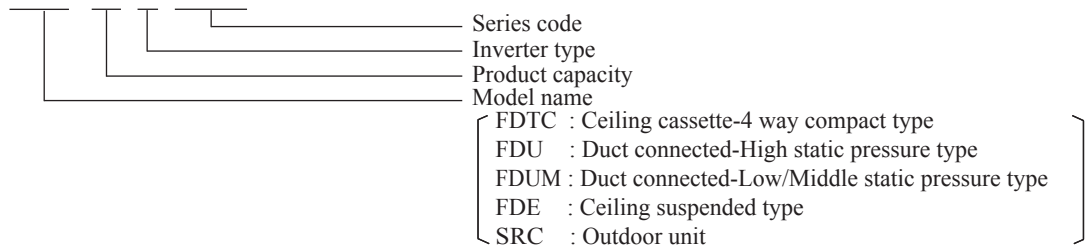
1. HYPER INVERTER PACKAGED AIR-CONDITIONERS

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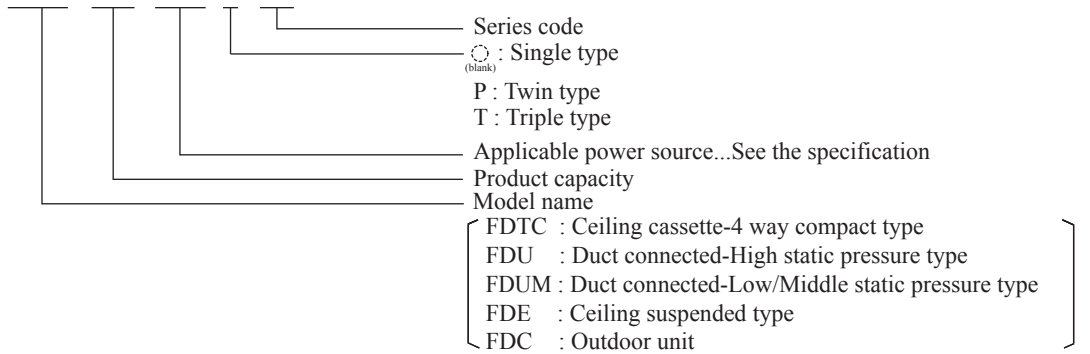
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■ How to read the model name

Example: **FDTC 40 Z SXVH**



Example: **FDTC 100 VNX P VH**



1.1 SPECIFICATIONS

(1) Ceiling cassette-4 way compact type (FDTC) (a) Single type

| Item | | Model | | FDTC40ZSXVH | | |
|--|-----------------------------------|------------------------------------|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDTC40VH | Outdoor unit SRC40ZSX-S | |
| Power source | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 4.0 [1.1(Min.) - 4.7(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 4.5 [0.6(Min.) - 5.4(Max.)] | | | |
| | Power consumption | Cooling | kW | 0.980 | | |
| | | Heating | | 1.13 | | |
| | Max power consumption | | 2.60 | | | |
| | Running current | Cooling | A | 4.3 / 4.5 | | |
| | | Heating | | 5.0 / 5.2 | | |
| | Inrush current, max current | | 5 , 12 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 4.08 | | |
| | COP | Heating | | 3.98 | | |
| | Sound power level | Cooling | dB(A) | 59 | | 63 |
| Heating | | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | 50 | | |
| Sound pressure level | Cooling | dB(A) | — | | 49 | |
| | Heating | | — | | Cooling:42 / Heating:43 | |
| Silent mode sound pressure level | | | Cooling:42 / Heating:43 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | | 640 × 800 (+71) × 290 | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7044) near equivalent | |
| Net weight | | kg | Unit 14 Panel 2.5 | | 45 | |
| Compressor type & Q'ty | | | — | | RMT5113MCE2 (Twin rotary type)x1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.45 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan x1 | | Propeller fan x1 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 34 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | |
| | Heating | | 36 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x1(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | | W | — | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.30 | | | |
| Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 x 5pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 4.8 | | | |
| Interconnecting wires Size x Core number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IPX4 | |
| Standard accessories | | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Cooling | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| | | Model | FDTC50ZSXVH | | |
|--|-----------------------------------|--|--|---|--------------------------|
| Item | | | Indoor unit FDTC50VH | Outdoor unit SRC50ZSX-S | |
| Power source | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 5.0 [1.1(Min.) - 5.6(Max.)] | | |
| | Nominal heating capacity (range) | kW | 5.4 [0.6(Min.) - 6.3(Max.)] | | |
| | Power consumption | Cooling | kW | 1.43 | |
| | | Heating | | 1.53 | |
| | Max power consumption | | 2.90 | | |
| | Running current | Cooling | A | 6.3 / 6.6 | |
| | | Heating | | 6.7 / 7.0 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 99 | |
| | | Heating | | 99 | |
| | EER | Cooling | | 3.50 | |
| | COP | Heating | | 3.53 | |
| | Sound power level | Cooling | dB(A) | 59 | |
| Heating | | 63 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | |
| | Heating | | 50 | | |
| Silent mode sound pressure level | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 640 × 800 (+71) × 290 | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7044) near equivalent | |
| Net weight | | kg | Unit 14 Panel 2.5 | 45 | |
| Compressor type & Q'ty | | | — | RMT5113MCE2 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | 0.45 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | |
| Fan type & Q'ty | | | Turbo fan ×1 | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | 34 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | |
| | Heating | | 40 | | |
| Available external static pressure | | Pa | 0 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | |
| Electric heater | | W | — | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| | | Gas line | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable with VP25(O.D.32) Hole size φ 20 x 5pcs | | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | |
| Recommended breaker size | | A | — | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | |
| Interconnecting wires Size x Core number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose Drain elbow, Drain hole grommet | | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards |
| | DB | WB | DB | WB | |
| | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-T1 ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| | | Model | FDTC60ZSXVH | | | |
|--|-----------------------------------|--|--|--|------|------------|
| Item | | | Indoor unit FDTC60VH | Outdoor unit SRC60ZSX-S | | |
| Power source | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 5.6 [1.1(Min.) - 6.3(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 6.7 [0.6(Min.) - 6.7(Max.)] | | | |
| | Power consumption | Cooling | kW | 1.76 | | |
| | | Heating | | 2.14 | | |
| | Max power consumption | | 2.9 | | | |
| | Running current | Cooling | A | 7.7 / 8.1 | | |
| | | Heating | | 9.4 / 9.8 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.18 | | |
| | COP | Heating | | 3.13 | | |
| Sound power level | Cooling | dB(A) | 60 | | | |
| | Heating | | 65 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | | | |
| | Heating | | 64 | | | |
| Silent mode sound pressure level | | | Cooling:42 / Heating:43 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 640 × 800 (+71) × 290 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7044) near equivalent | | |
| Net weight | | kg | Unit 14 Panel 2.5 | 45 | | |
| Compressor type & Q'ty | | | — | RMT5113MCE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | | kW | — | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | 0.45 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan x1 | Propeller fan x1 | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | 34 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | | |
| | Heating | | 41.5 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Possible | — | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x1(Washable) | — | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | | |
| Electric heater | | W | — | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.30 | | | |
| Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | | | |
| Drain hose | | Hose connectable with VP25(O.D.32) Hole size φ 20 x 5pcs | | | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size x Core number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | Drain elbow, Drain hole grommet | | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

(b) Twin type

| Item | | Model | | FDTC71VNXPVH | | |
|--|-------------------------------------|-----------------------------------|---------|--|---|-----------------------|
| | | | | Indoor unit FDTC40VH (2 units) | | Outdoor unit FDC71VNX |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | | kW | | 7.1 [3.2(Min.)-8.0(Max.)] | |
| | Nominal heating capacity (range) | | kW | | 8.0 [3.6(Min.)-9.0(Max.)] | |
| | Power consumption | Cooling | kW | | 2.03 | |
| | | Heating | kW | | 1.64 | |
| | Max power consumption | | kW | | 3.25 | |
| | Running current | Cooling | A | | 9.0 / 9.4 | |
| | | Heating | A | | 7.3 / 7.6 | |
| | Inrush current, max current | | A | | 5 , 17 | |
| | Power factor | Cooling | % | | 98 | |
| | | Heating | % | | 98 | |
| | EER | | Cooling | | 3.50 | |
| | COP | | Heating | | 4.88 | |
| | Sound power level | Cooling | dB(A) | | 59 | |
| | | Heating | dB(A) | | 66 | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | |
| | Heating | dB(A) | | 51 | | |
| Silent mode sound pressure level | | dB(A) | | 48 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | |
| Net weight | | kg | | Unit14 Panel 2.5 | | |
| Compressor type & Q'ty | | | | — | | |
| Compressor motor (Starting method) | | kW | | — | | |
| Refrigerant oil (Amount, type) | | ℓ | | — | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | | Turbo fan x1 | | |
| Fan motor (Starting method) | | W | | 50 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | |
| | Heating | m ³ /min | | 60 | | |
| Available external static pressure | | Pa | | 0 | | |
| Outside air intake | | | | Possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net x1(Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | | — | | |
| Operation control | Remote control | | | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | |
| | Room temperature control | | | | Thermostat by electronics | |
| | Operation display | | | | — | |
| Safety equipments | | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | |
| | | Gas line | mm | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | |
| | Connecting method | | | | Flare piping | |
| | Attached length of piping | | m | | — | |
| | Insulation for piping | | | | Necessary (both Liquid & Gas lines) | |
| | Refrigerant line (one way) length | | m | | Max.50 | |
| Vertical height diff. between O/U and I/U | | m | | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | | Hose connectable with VP25(O.D.32) | | |
| Drain pump, max lift height | | mm | | Built-in drain pump , 850 | | |
| Recommended breaker size | | A | | — | | |
| L.R.A. (Locked rotor ampere) | | A | | 5.0 | | |
| Interconnecting wires | | Size x Core number | | φ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| IP number | | | | IPX0 | | |
| Standard accessories | | | | Mounting kit, Drain hose | | |
| Option parts | | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDTC100VNXPVH | | |
|--|---|-----------------------------------|--|--|--------------------|--------------|
| | | | | Indoor unit | FDTC50VH (2 units) | Outdoor unit |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | | 2.80 | |
| | | Heating | kW | | 3.50 | |
| | Max power consumption | | | 5.60 | | |
| | Running current | Cooling | A | | 12.4 / 13.0 | |
| | | Heating | A | | 15.5 / 16.2 | |
| | Inrush current, max current | | | 5 , 24 | | |
| | Power factor | Cooling | % | | 98 | |
| | | Heating | % | | 98 | |
| | EER | Cooling | | | 3.57 | |
| | COP | Heating | | | 3.20 | |
| | Sound power level | Cooling | dB(A) | | 59 | |
| | | Heating | dB(A) | | 70 | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | |
| | Heating | dB(A) | | 48 | | |
| Silent mode sound pressure level | | | 50 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | |
| Net weight | | kg | | Unit14 Panel 2.5 | | |
| Compressor type & Q'ty | | | | RMT5134MDE2x1 | | |
| Compressor motor (Starting method) | | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 4.5(Pre-charged up to the piping length of 30m)Outdoor unit | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | | Turbo fan x1 | | |
| Fan motor (Starting method) | | W | | 50 < Direct line start > | | |
| Air flow | | m ³ /min | | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | |
| Available external static pressure | | Pa | | 0 | | |
| Outside air intake | | | | Possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net x1(Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | | 20(Crank case heater) | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | |
| | Room temperature control | | | Thermostat by electronics | | |
| | Operation display | | | - | | |
| Safety equipments | | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52(3/8") x 0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7(1/2") x 0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | m | | - | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | | Max.100 | | |
| | Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP25(O.D.32) Hole size φ 20 x 3pcs | | | |
| Drain pump, max lift height | | mm | | Built-in drain pump , 850 | | |
| Recommended breaker size | | A | | - | | |
| L.R.A. (Locked rotor ampere) | | A | | 5.0 | | |
| Interconnecting wires | | Size x Core number | | φ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| IP number | | | | IPX0 | | |
| Standard accessories | | | | Mounting kit, Drain hose | | |
| Option parts | | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

| Model | | | FDTC100VVSXPVH | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|-----------------------------------|------------------------|------------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| | | | Indoor unit FDTC50VH (2 units) | Outdoor unit FDC100VSX | | | | | | | | | | | | | | | | | | | | | | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Nominal cooling capacity (range) | | kW | | | | | | | | | | | | | | | | | | | | | | | |
| | Nominal heating capacity (range) | | kW | | | | | | | | | | | | | | | | | | | | | | | |
| | Power consumption | Cooling | kW | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | kW | | | | | | | | | | | | | | | | | | | | | | | |
| | Max power consumption | | kW | | | | | | | | | | | | | | | | | | | | | | | |
| | Running current | Cooling | A | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | A | | | | | | | | | | | | | | | | | | | | | | | |
| | Inrush current, max current | | A | | | | | | | | | | | | | | | | | | | | | | | |
| | Power factor | Cooling | % | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | % | | | | | | | | | | | | | | | | | | | | | | | |
| | EER | | Cooling | | | | | | | | | | | | | | | | | | | | | | | |
| | COP | | Heating | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound power level | Cooling | dB(A) | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | dB(A) | | | | | | | | | | | | | | | | | | | | | | | |
| Sound pressure level | Cooling | dB(A) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Heating | dB(A) | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | dB(A) | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height x Width x Depth) | | | mm | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | | kg | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor type & Q'ty | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor motor (Starting method) | | | kW | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant oil (Amount, type) | | | ℓ | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant (Type, amount, pre-charge length) | | | kg | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant control | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | | W | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | | Cooling Heating | m ³ /min | | | | | | | | | | | | | | | | | | | | | | | |
| Available external static pressure | | | Pa | | | | | | | | | | | | | | | | | | | | | | | |
| Outside air intake | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air filter, Quality / Quantity | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | | W | | | | | | | | | | | | | | | | | | | | | | | |
| Operation control | Remote control | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Room temperature control | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Operation display | | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | | | | | | | | | | | | | | | | | | | | | | |
| | | Gas line | | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | | m | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refrigerant line (one way) length | | m | | | | | | | | | | | | | | | | | | | | | | | |
| | Vertical height diff. between O/U and I/U | | m | | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drain pump, max lift height | | | mm | | | | | | | | | | | | | | | | | | | | | | | |
| Recommended breaker size | | | A | | | | | | | | | | | | | | | | | | | | | | | |
| L.R.A. (Locked rotor ampere) | | | A | | | | | | | | | | | | | | | | | | | | | | | |
| Interconnecting wires | | Size x Core number | | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Item</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>—</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | | Item | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| Item | Indoor air temperature | | Outdoor air temperature | | | Standards | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Optional). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | | Model | | FDTC125VNXPVH | | |
|--|---|--|--|---|------------------------------|----------------------------------|
| | | | | Indoor unit | FDTC60VH (2 units) | Outdoor unit |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | | kW | | 12.5 [5.0(Min.)-14.0(Max.)] | |
| | Nominal heating capacity (range) | | kW | | 14.0 [4.0(Min.)-17.0(Max.)] | |
| | Power consumption | Cooling | kW | | 4.10 | |
| | | Heating | kW | | 4.10 | |
| | Max power consumption | | | | 6.56 | |
| | Running current | Cooling | A | | 18.2 / 19.0 | |
| | | Heating | A | | 18.2 / 19.0 | |
| | Inrush current, max current | | | | 5 , 24 | |
| | Power factor | Cooling | % | | 98 | |
| | | Heating | % | | 98 | |
| | EER | Cooling | | | 3.05 | |
| | COP | Heating | | | 3.41 | |
| | Sound power level | Cooling | dB(A) | | 60 | |
| | | Heating | dB(A) | | 70 | |
| Sound pressure level | Cooling | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | | 48 | | |
| | Heating | | | 50 | | |
| Silent mode sound pressure level | | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | Unit14 Panel 2.5 | | 105 | |
| Compressor type & Q'ty | | — | | RMT5134MDE2x1 | | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Turbo fan x1 | | Propeller fan x2 | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling Heating | m ³ /min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | 100 | |
| Available external static pressure | | Pa | 0 | | 0 | |
| Outside air intake | | Possible | | — | | |
| Air filter, Quality / Quantity | | Pocket plastic net x1(Washable) | | — | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | — | | 20(Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8") x 0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2") x 0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | | m | Max.100 | | |
| | Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) |
| Drain hose | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 x 3pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | — | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IPX24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDTC125VSPVH | | |
|--|-----------------------------------|--|--|---|--------------------------------|--------------|
| | | | | Indoor unit | FDTC60VH (2 units) | Outdoor unit |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.10 | | |
| | | Heating | | 4.10 | | |
| | Max power consumption | | 8.20 | | | |
| | Running current | Cooling | A | 6.0 / 6.4 | | |
| | | Heating | | 6.0 / 6.4 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.05 | | |
| | COP | Heating | | 3.41 | | |
| | Sound power level | Cooling | dB(A) | 60 | 70 | |
| | | Heating | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | 48 | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | mm | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | | 1300x970x370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | Unit14 Panel 2.5 | | 105 | | |
| Compressor type & Q'ty | | - | | RMT5134MDE3x1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5(Pre-charged up to the piping length of 30m)Outdoor unit | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Turbo fanx1 | | Propeller fan x2 | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | | 86x2 < Direct line start > | | |
| Air flow | Cooling Heating | m ³ /min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | 100 | |
| Available external static pressure | | Pa | 0 | | 0 | |
| Outside air intake | | | Possible | | - | |
| Air filter, Quality / Quantity | | | Pocket plastic netx1(Washable) | | - | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | | - | | 20(Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8") x 0.8 ① ϕ 9.52(3/8") x 0.8 O/U ϕ 9.52 (3/8") | | | |
| | | Gas line | I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2") x 0.8 ① ϕ 15.88(5/8") x 1.0 O/U ϕ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP25(O.D.32) | | Hole size ϕ 20 x 3pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 850 | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | ϕ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IPX24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | |
| Heating | | 20°C | - | 7°C | 6°C | |
| | | | | | Standards | |
| | | | | | ISO5151-T1 | |
| | | | | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

(c) Triple type

| Item | | Model | | FDTC140VNXTVH | | |
|--|---|--|---|-------------------------|----------------------------------|--------------|
| | | | | Indoor unit | FDTC50VH (3 units) | Outdoor unit |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.20 | | |
| | | Heating | | 4.34 | | |
| | Max power consumption | | 5.64 | | | |
| | Running current | Cooling | A | 18.6 / 19.5 | | |
| | | Heating | | 19.3 / 20.1 | | |
| | Inrush current, max current | | 5 , 26 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.33 | | |
| | COP | Heating | | 3.69 | | |
| | Sound power level | Cooling | dB(A) | 59 | 72 | |
| | | Heating | | | | |
| Sound pressure level | Cooling | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | 49 | | | |
| | Heating | | 52 | | | |
| Silent mode sound pressure level | | - | | | | |
| Exterior dimensions (Height x Width x Depth) | mm | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | 1300x970x370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | Unit14 Panel 2.5 | 105 | | | |
| Compressor type & Q'ty | | - | RMT5134MDE2x1 | | | |
| Compressor motor (Starting method) | kW | - | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | - | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5(Pre-charged up to the piping length of 30m)Outdoor unit | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Turbo fan x1 | Propeller fan x2 | | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | 86 x 2 < Direct line start > | | | |
| Air flow | Cooling Heating | m ³ /min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | 100 | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x1(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | - | 20(Crank case heater) | | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8") x 0.8 ① φ 9.52(3/8") x 0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2") x 0.8 ① φ 15.88(5/8") x 1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 x 3pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 850 | | | - | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IPX24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | |
| Heating | | 20°C | - | 7°C | 6°C | |
| | | Standards | | | | |
| | | ISO5151-T1 | | | | |
| | | ISO5151-H1 | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-TA1G"x1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

| Item | | | Model | FDTC140VSXTVH | | |
|--|---|------------------------|--|---|-------------------------------|----------------------------------|
| | | | | Indoor unit FDTC50VH (3 units) | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.20 | | |
| | | Heating | | 4.34 | | |
| | Max power consumption | | | 6.94 | | |
| | Running current | Cooling | A | 6.2 / 6.5 | | |
| | | Heating | | 6.4 / 6.7 | | |
| | Inrush current, max current | | | 5 , 15 | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.33 | | |
| | COP | Heating | | 3.69 | | |
| | Sound power level | Cooling | dB(A) | 59 | 72 | |
| Heating | | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | 49 | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | Unit14 Panel 2.5 | 105 | | |
| Compressor type & Q'ty | | | - | RMT5134MDE3×1 | | |
| Compressor motor (Starting method) | | kW | - | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | - | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan×1 | Propeller fan ×2 | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | 86×2 < Direct line start > | | |
| Air flow | Cooling Heating | m ³ /min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | 100 | | |
| Available external static pressure | | Pa | 0 | 0 | | |
| Outside air intake | | | Possible | - | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | - | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | |
| Electric heater | | W | - | 20(Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52(3/8") × 0.8 ① φ 9.52(3/8") × 0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7(1/2") × 0.8 ① φ 15.88(5/8") × 1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | | m | - | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.100 | | |
| | Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) |
| Drain hose | | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 × 3pcs | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | - | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IPX24 | |
| Standard accessories | | | Mounting kit, Drain hose | | Edging | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① Pipe of O/U-Branch, ② Pipe of Branch-I/U | | | | | | |

**(2) Duct connected-High static pressure type (FDU)
Single type**

| Item | | Model | FDU71VNXVH | | |
|---|-----------------------------------|--|--|---|--|
| | | | Indoor unit FDU71VH | Outdoor unit FDC71VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 [3.2(Min.)-8.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 8.0 [3.6(Min.)-9.0(Max.)] | | |
| | Power consumption | Cooling | kW | 2.05 | |
| | | Heating | | 2.01 | |
| | Max power consumption | | 3.28 | | |
| | Running current | Cooling | A | 9.1 / 9.5 | |
| | | Heating | | 9.1 / 9.5 | |
| | Inrush current, max current | | 5 , 17 | | |
| | Power factor | Cooling | % | 98 | |
| | | Heating | | 96 | |
| | EER | Cooling | | 3.46 | |
| | COP | Heating | | 3.98 | |
| Sound power level | Cooling | dB(A) | 65 | 66 | |
| | Heating | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | 750x880(+88)x340 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | 60 | |
| Compressor type & Q'ty | | | - | RMT5118MDE2 (Twin rotary type)x1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.675 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | Propeller fan x1 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | |
| | Heating | | | | |
| Available external static pressure | Pa | | Standard : 35 Max : 200 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | - | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | - | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | - | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU100VNXVH | | |
|---|-----------------------------------|--|--|---|----|
| | | | Indoor unit FDU100VH | Outdoor unit FDC100VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | 2.68 | |
| | | Heating | | 3.02 | |
| | Max power consumption | | 4.83 | | |
| | Running current | Cooling | A | 12.0 / 12.5 | |
| | | Heating | | 13.5 / 14.1 | |
| | Inrush current, max current | | 5 , 25 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.73 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 65 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | |
| | Heating | | | 48 | |
| Silent mode sound pressure level | | | 50 | - | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | - | RMT5134MDE2 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | - | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, drain hose | Edging | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | - | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU100VSXVH | | | | |
|---|--|--|--|---|------------|------|------|
| | | | Indoor unit FDU100VH | Outdoor unit FDC100VSX | | | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-16.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 2.68 | | | |
| | | Heating | | 3.02 | | | |
| | Max power consumption | | 6.04 | | | | |
| | Running current | Cooling | A | 4.0 / 4.2 | | | |
| | | Heating | | 4.5 / 4.7 | | | |
| | Inrush current, max current | | 5 , 16 | | | | |
| | Power factor | Cooling | % | 97 | | | |
| | | Heating | | 97 / 98 | | | |
| | EER | Cooling | | 3.73 | | | |
| | COP | Heating | | 3.71 | | | |
| | Sound power level | Cooling | dB(A) | 65 | 70 | | |
| Heating | | | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | | | |
| | Heating | | | 48 | | | |
| Silent mode sound pressure level | | | 50 | — | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | | 54 | 105 | | | |
| Compressor type & Q'ty | | | — | RMT5134MDE3(Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | 86 x 2 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | | | |
| | Heating | | 100 | | | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | 0 | | | |
| Outside air intake | | | Possible | — | | | |
| Air filter, Quality / Quantity | | | Procure locally | — | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | | | |
| Electric heater | W | | — | 20 (Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | | | |
| | Connecting method | | Flare piping | | | | |
| | Attached length of piping | m | — | | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | | | |
| Recommended breaker size | A | — | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | | | | |
| IP number | | IPX0 IP24 | | | | | |
| Standard accessories | | Mounting kit, Drain hose Edging | | | | | |
| Option parts | | Motion sensor : LB-KIT | | | | | |
| Notes | (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | |
| | Item | Indoor air temperature | Outdoor air temperature | External static pressure of indoor unit | Standards | | |
| Operation | | DB | WB | 60Pa | ISO5151-T1 | | |
| | Cooling | 27°C | 19°C | | | 35°C | 24°C |
| | Heating | 20°C | — | | | 7°C | 6°C |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. | | | | | | | |
| (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | |
| (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | | |

| Item | | Model | FDU125VNXVH | | |
|---|-----------------------------------|--|--|---|----|
| | | | Indoor unit FDU125VH | Outdoor unit FDC125VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-17.0(Max.)] | | |
| | Power consumption | Cooling | kW | 3.49 | |
| | | Heating | | 3.77 | |
| | Max power consumption | | 6.03 | | |
| | Running current | Cooling | A | 15.5 / 16.2 | |
| | | Heating | | 16.8 / 17.6 | |
| | Inrush current, max current | | | 5 , 29 | |
| | Power factor | Cooling | % | 98 | |
| | | Heating | | 98 / 97 | |
| | EER | Cooling | | 3.58 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 67 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | |
| | Heating | | | 48 | |
| Silent mode sound pressure level | | | - | 50 | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | - | RMT5134MDE2 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | Flare piping | |
| | Attached length of piping | m | - | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | - | | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | - | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU125VSXVH | | |
|---|---|--|--|---|----|
| | | | Indoor unit FDU125VH | Outdoor unit FDC125VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 3.49 | |
| | | Heating | | 3.77 | |
| | Max power consumption | | 7.54 | | |
| | Running current | Cooling | A | 5.2 / 5.5 | |
| | | Heating | | 5.6 / 5.9 | |
| | Inrush current, max current | | 5 , 18 | | |
| | Power factor | Cooling | % | 97 / 96 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.58 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 67 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | |
| | Heating | | | 48 | |
| Silent mode sound pressure level | | | 50 | — | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | — | RMT5134MDE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | — | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | 0 | |
| Outside air intake | | | Possible | — | |
| Air filter, Quality / Quantity | | | Procure locally | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | Flare piping | |
| | Attached length of piping | m | — | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, drain hose | Edging | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU140VNXVH | | |
|---|---|---|--|------------------------------------|--|
| | | | Indoor unit FDU140VH | Outdoor unit FDC140VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.28 | |
| | | Heating | | 4.42 | |
| | Max power consumption | | 6.19 | | |
| | Running current | Cooling | A | 19.2 / 20.1 | |
| | | Heating | | 19.8 / 20.7 | |
| | Inrush current, max current | | | 5 , 30 | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.27 | |
| | COP | Heating | | 3.62 | |
| | Sound power level | Cooling | dB(A) | 70 | |
| Heating | | 72 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | | 49 | | |
| Silent mode sound pressure level | | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5134MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | | |
| Standard accessories | | | Mounting kit, Drain hose | | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU140VSXVH | | |
|---|---|---|--|---|----|
| | | | Indoor unit FDU140VH | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.28 | |
| | | Heating | | 4.42 | |
| | Max power consumption | | 7.74 | | |
| | Running current | Cooling | A | 6.4 / 6.7 | |
| | | Heating | | 6.6 / 6.9 | |
| | Inrush current, max current | | 5 , 19 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.27 | |
| | COP | Heating | | 3.62 | |
| | Sound power level | Cooling | dB(A) | 70 | 72 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | | | 49 | |
| Silent mode sound pressure level | | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | — | RMT5134MDE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | — | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | 0 | |
| Outside air intake | | | Possible | — | |
| Air filter, Quality / Quantity | | | Procure locally | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88(5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x3 cores + earth cable / Terminal block(Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, drain hose | Edging | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | — | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

(3) Duct connected-Low/Middle static pressure type (FDUM)
(a) Single type

| Item | | Model | FDUM40ZSXVH | | |
|---|----------------------------------|---------------------|--|-------------------------|--|
| | | | Indoor unit FDUM40VH | Outdoor unit SRC40ZSX-S | |
| Power source | | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 4.0 [1.1(Min.) - 4.7(Max.)] | | |
| | Nominal heating capacity (range) | kW | 4.5 [0.6(Min.) - 5.4(Max.)] | | |
| | Power consumption | Cooling | kW | 0.952 | |
| | | Heating | | 1.07 | |
| | Max power consumption | | 2.60 | | |
| | Running current | Cooling | A | 4.4 / 4.6 | |
| | | Heating | | 4.9 / 5.1 | |
| | Inrush current, max current | | 5 , 12 | | |
| | Power factor | Cooling | % | 94 | |
| | | Heating | | 95 | |
| | EER | Cooling | | 4.20 | |
| | COP | Heating | | 4.21 | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 63 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | 50 | | |
| Silent mode sound pressure level | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 x 750 x 635 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 29 | | |
| Compressor type & Q'ty | | | — | | |
| Compressor motor (Starting method) | | kW | RMT5113MCE2 (Twin rotary type)x1 | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | Capillary tubes + Electronic expansion valve | | |
| Fan motor (Starting method) | | W | Centrifugal fan x1 | | |
| Air flow | | m ³ /min | Propeller fan x1 | | |
| Available external static pressure | | Pa | 100 < Direct line start > | | |
| Outside air intake | | | 34 < Direct line start > | | |
| Air filter, Quality / Quantity | | | 36 | | |
| Shock & vibration absorber | | | 33 | | |
| Electric heater | | W | 0 | | |
| Operation control | | | Possible | | |
| Remote control | | | Procure locally | | |
| Room temperature control | | | Rubber sleeve (for fan motor) | | |
| Operation display | | | Rubber sleeve(for compressor) | | |
| Safety equipments | | | — | | |
| Installation data | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| | Gas line | | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | |
| Connecting method | | | Flare piping | | |
| Attached length of piping | | m | — | | |
| Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| Refrigerant line (one way) length | | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | | |
| Drain pump, max lift height | | mm | Hole size φ 20 x 5pcs | | |
| Recommended breaker size | | A | Built-in drain pump , 600 | | |
| L.R.A. (Locked rotor ampere) | | A | — | | |
| Interconnecting wires | | Size x Core number | 4.8 | | |
| IP number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| Standard accessories | | | IPX0 | | |
| Option parts | | | IPX4 | | |
| | | | Mounting kit, Drain hose | | |
| | | | Drain elbow, Drain hole grommet | | |
| | | | Filter set : UM-FL1EF , Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| | | Model | FDUM50ZSXVH | | |
|---|----------------------------------|---------------------|--|-------------------------|--|
| Item | | | Indoor unit FDUM50VH | Outdoor unit SRC50ZSX-S | |
| Power source | | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 5.0 [1.1(Min.) - 5.6(Max.)] | | |
| | Nominal heating capacity (range) | kW | 5.4 [0.6(Min.) - 6.3(Max.)] | | |
| | Power consumption | Cooling | kW | 1.38 | |
| | | Heating | | 1.45 | |
| | Max power consumption | | 2.90 | | |
| | Running current | Cooling | A | 6.3 / 6.6 | |
| | | Heating | | 6.6 / 6.9 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 95 | |
| | | Heating | | 96 | |
| | EER | Cooling | | 3.62 | |
| | COP | Heating | | 3.72 | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 63 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | 50 | | |
| Silent mode sound pressure level | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 x 750 x 635 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 29 | | |
| Compressor type & Q'ty | | | — | | |
| Compressor motor (Starting method) | | kW | RMT5113MCE2 (Twin rotary type)x1 | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | Capillary tubes + Electronic expansion valve | | |
| Fan motor (Starting method) | | W | Centrifugal fan x1 | | |
| Air flow | | m ³ /min | Propeller fan x1 | | |
| Available external static pressure | | Pa | 100 < Direct line start > | | |
| Outside air intake | | | 34 < Direct line start > | | |
| Air filter, Quality / Quantity | | | 40 | | |
| Shock & vibration absorber | | | 33 | | |
| Electric heater | | W | 0 | | |
| Operation control | | | Possible | | |
| Remote control | | | Procure locally | | |
| Room temperature control | | | Rubber sleeve (for fan motor) | | |
| Operation display | | | Rubber sleeve(for compressor) | | |
| Safety equipments | | | — | | |
| Installation data | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| | Gas line | | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | |
| Connecting method | | | Flare piping | | |
| Attached length of piping | | m | — | | |
| Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| Refrigerant line (one way) length | | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | | |
| Drain pump, max lift height | | mm | Hole size φ 20 x 5pcs | | |
| Recommended breaker size | | A | Built-in drain pump , 600 | | |
| L.R.A. (Locked rotor ampere) | | A | — | | |
| Interconnecting wires Size x Core number | | | 5 | | |
| IP number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| Standard accessories | | | IPX0 | | |
| Option parts | | | IPX4 | | |
| | | | Mounting kit, drain hose | | |
| | | | Drain elbow, Drain hole grommet | | |
| | | | Filter set : UM-FL1EF , Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM60ZSXVH | | |
|---|--|--|---|-----------------------------------|---|--|
| | | | | Indoor unit FDUM60VH | Outdoor unit SRC60ZSX-S | |
| Power source | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 5.6 [1.1(Min.) - 6.3(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 6.7 [0.6(Min.) - 7.1(Max.)] | | |
| | Power consumption | Cooling | kW | | 1.54 | |
| | | Heating | kW | | 1.75 | |
| | Max power consumption | | | 2.90 | | |
| | Running current | Cooling | A | | 6.8 / 7.1 | |
| | | Heating | A | | 7.8 / 8.2 | |
| | Inrush current, max current | | | 5 , 15 | | |
| | Power factor | Cooling | % | | 98 / 99 | |
| | | Heating | % | | 98 / 97 | |
| | EER | Cooling | | 3.64 | | |
| | COP | Heating | | 3.83 | | |
| | Sound power level | Cooling | dB(A) | | 60 | |
| Heating | | dB(A) | | 65 | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 36 Hi : 31 Me : 28 Lo : 25 | | |
| | Heating | dB(A) | | 64 | | |
| Silent mode sound pressure level | | | — | | Cooling:42 / Heating:43 | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | | 640 x 800 (+71) x 290 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | | 45 | |
| Compressor type & Q'ty | | | — | | RMT5113MCE2 (Twin rotary type)x1 | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.45 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | Capillary tubes + Electronic expansion valve | | | | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | | Propeller fan x1 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | | 34 < Direct line start > | |
| Air flow | Cooling | m³/min | | P-Hi : 20 Hi : 15 Me : 13 Lo : 10 | | |
| | Heating | m³/min | | 41.5 | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | | — | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | |
| | | Gas line | mm | | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | m | | — | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | | Max.30 | | |
| Vertical height diff. between O/U and I/U | m | | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 x 5pcs | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | | — | |
| Recommended breaker size | A | | — | | | |
| L.R.A. (Locked rotor ampere) | A | | 5 | | | |
| Interconnecting wires | Size x Core number | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IPX4 | |
| Standard accessories | | | Mounting kit, drain hose | | Drain elbow, Drain hole grommet | |
| Option parts | Filter set : UM-FL1EF , Motion sensor : LB-KIT | | | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM71VNXVH | | |
|---|-----------------------------------|--|--|---|--|
| | | | Indoor unit FDUM71VH | Outdoor unit FDC71VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 [3.2(Min.)-8.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 8.0 [3.6(Min.)-9.0(Max.)] | | |
| | Power consumption | Cooling | kW | 2.03 | |
| | | Heating | | 1.99 | |
| | Max power consumption | | 3.25 | | |
| | Running current | Cooling | A | 9.0 / 9.4 | |
| | | Heating | | 9.0 / 9.4 | |
| | Inrush current, max current | | 5 , 17 | | |
| | Power factor | Cooling | % | 98 | |
| | | Heating | | 96 | |
| | EER | Cooling | | 3.5 | |
| | COP | Heating | | 4.02 | |
| | Sound power level | Cooling | dB(A) | 65 | |
| Heating | | 66 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | |
| | Heating | | 51 | | |
| Silent mode sound pressure level | | | 48 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | 750x880(+88)x340 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | 60 | |
| Compressor type & Q'ty | | | — | RMT5118MDE2 (Twin rotary type)x1 | |
| Compressor motor (Starting method) | kW | | — | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.675 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | Propeller fan x1 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | |
| | Heating | | 60 | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | 0 | |
| Outside air intake | | | Possible | — | |
| Air filter, Quality / Quantity | | | Procure locally | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | — | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM100VNXVH | | | |
|---|-----------------------------------|-------------|--|--|---|--------------|--|
| | | | | Indoor unit FDUM100VH | Outdoor unit FDC100VNX | | |
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | | 2.68 | | |
| | | Heating | kW | | 3.02 | | |
| | Max power consumption | | | 4.83 | | | |
| | Running current | Cooling | A | | 12.0 / 12.5 | | |
| | | Heating | A | | 13.5 / 14.1 | | |
| | Inrush current, max current | | | 5 , 24 | | | |
| | Power factor | Cooling | % | | 97 | | |
| | | Heating | % | | 97 | | |
| | EER | Cooling | | | | 3.73 | |
| | COP | Heating | | | | 3.71 | |
| | Sound power level | Cooling | dB(A) | | 65 | | |
| Heating | | dB(A) | | 70 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | | |
| | Heating | dB(A) | | 48 | | | |
| Silent mode sound pressure level | | | | | 50 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 1368 x 740 | | 1300x970x370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | 105 | | |
| Compressor type & Q'ty | | | - | | RMT5134MDE2 (Twin rotary type) x1 | | |
| Compressor motor (Starting method) | kW | | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan x3 | | Propeller fan x2 | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | | 86 x 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | | |
| | Heating | m³/min | | 100 | | | |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | - | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | | Thermostat by electronics | | | |
| | Operation display | | | - | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | mm | | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | m | | - | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | | - | | |
| Recommended breaker size | A | | - | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM100VSXVH | | |
|---|-----------------------------------|--|--|---|----|
| | | | Indoor unit FDUM100VH | Outdoor unit FDC100VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 2.68 | |
| | | Heating | | 3.02 | |
| | Max power consumption | | 6.04 | | |
| | Running current | Cooling | A | 4.0 / 4.2 | |
| | | Heating | | 4.5 / 4.7 | |
| | Inrush current, max current | | | 5 , 15 | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 / 98 | |
| | EER | Cooling | | 3.73 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 65 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | |
| | Heating | | | 48 | |
| Silent mode sound pressure level | | | 50 | — | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | — | RMT5134MDE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | — | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | 0 | |
| Outside air intake | | | Possible | — | |
| Air filter, Quality / Quantity | | | Procure locally | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM125VNXVH | | |
|---|-----------------------------------|---------------------------------------|--|-----------------------------------|---|----|
| | | | | Indoor unit FDUM125VH | Outdoor unit FDC125VNX | |
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-17.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.49 | | |
| | | Heating | | 3.77 | | |
| | Max power consumption | | 6.03 | | | |
| | Running current | Cooling | A | 15.5 / 16.2 | | |
| | | Heating | | 16.8 / 17.6 | | |
| | Inrush current, max current | | 5 , 26 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 / 97 | | |
| | EER | Cooling | | 3.58 | | |
| | COP | Heating | | 3.71 | | |
| | Sound power level | Cooling | dB(A) | 67 | | 70 |
| Heating | | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | 48 | | |
| Sound pressure level | Cooling | | | | 50 | |
| | Heating | | | | — | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 × 1368 × 740 | | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 54 | | 105 | |
| Compressor type & Q'ty | | | — | | RMT5134MDE2 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×2 | |
| Fan motor (Starting method) | | W | 100 + 200 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | — | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | Edging | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM125VSVXH | | |
|---|---|--|--|---|--------------------------------|----|
| | | | | Indoor unit FDUM125VH | Outdoor unit FDC125VSX | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.49 | | |
| | | Heating | | 3.77 | | |
| | Max power consumption | | 7.54 | | | |
| | Running current | Cooling | A | 5.2 / 5.5 | | |
| | | Heating | | 5.6 / 5.9 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 97 / 96 | | |
| | | Heating | | 97 | | |
| | EER | Cooling | | 3.58 | | |
| | COP | Heating | | 3.71 | | |
| | Sound power level | Cooling | dB(A) | 67 | | 70 |
| Heating | | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | 48 | | |
| Sound pressure level | Cooling | dB(A) | | | 50 | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | - | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 1368 x 740 | | 1300x970x370 | | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 54 | | 105 | | |
| Compressor type & Q'ty | | - | | RMT5134MDE3 (Twin rotary type) x1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan x3 | | Propeller fan x2 | | |
| Fan motor (Starting method) | W | 100 + 200 < Direct line start > | | 86 x 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | Pa | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | Possible | | - | | |
| Air filter, Quality / Quantity | | Procure locally | | - | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VNXVH | | |
|---|-----------------------------------|--|--|---|--|
| | | | Indoor unit FDUM140VH | Outdoor unit FDC140VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.28 | |
| | | Heating | | 4.42 | |
| | Max power consumption | | 6.19 | | |
| | Running current | Cooling | A | 19.2 / 20.1 | |
| | | Heating | | 19.8 / 20.7 | |
| | Inrush current, max current | | | 5 , 26 | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.27 | |
| | COP | Heating | | 3.62 | |
| | Sound power level | Cooling | dB(A) | 70 | |
| Heating | | 72 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | | 49 | | |
| Silent mode sound pressure level | | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 × 1368 × 740 | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | 105 | |
| Compressor type & Q'ty | | | — | RMT5134MDE2 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | — | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | 0 | |
| Outside air intake | | | Possible | — | |
| Air filter, Quality / Quantity | | | Procure locally | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88 (5/8")x1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | — | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VSXVH | | |
|---|-----------------------------------|--|---|---|----|
| | | | Indoor unit FDUM140VH | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.28 | |
| | | Heating | | 4.42 | |
| | Max power consumption | | 7.74 | | |
| | Running current | Cooling | A | 6.4 / 6.7 | |
| | | Heating | | 6.6 / 6.9 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.27 | |
| | COP | Heating | | 3.62 | |
| | Sound power level | Cooling | dB(A) | 70 | 72 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 1368 x 740 | | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 54 | | 105 | |
| Compressor type & Q'ty | | - | | RMT5134MDE3 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan x3 | | Propeller fan x2 | |
| Fan motor (Starting method) | W | 100 + 200 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | Standard : 60 Max : 100 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | |
| Option parts | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

(b) Twin type

| Item | | Model | FDUM100VNXPVH | | |
|---|-----------------------------------|--|---|---|----|
| | | | Indoor unit FDUM50VH (2 units) | Outdoor unit FDC100VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | 2.66 | |
| | | Heating | | 3.02 | |
| | Max power consumption | | 4.83 | | |
| | Running current | Cooling | A | 11.9 / 12.4 | |
| | | Heating | | 13.5 / 14.1 | |
| | Inrush current, max current | | 5 , 24 | | |
| | Power factor | Cooling | % | 97 / 98 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.76 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 60 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 750 x 635 | | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 29 | | 105 | |
| Compressor type & Q'ty | | - | | RMT5134MDE2 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan x1 | | Propeller fan x2 | |
| Fan motor (Starting method) | W | 100 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1Gx1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM100VSXPVH | | |
|---|-----------------------------------|--|--|------------------------------------|--|
| | | | Indoor unit FDUM50VH (2 units) | Outdoor unit FDC100VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 2.66 | |
| | | Heating | | 3.02 | |
| | Max power consumption | | 6.04 | | |
| | Running current | Cooling | A | 4.0 / 4.2 | |
| | | Heating | | 4.5 / 4.7 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 96 | |
| | | Heating | | 97 / 98 | |
| | EER | Cooling | | 3.76 | |
| | COP | Heating | | 3.71 | |
| Sound power level | Cooling | dB(A) | 60 | 70 | |
| | Heating | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | | 48 | |
| Silent mode sound pressure level | | | 50 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 x 750 x 635 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 29 | | |
| Compressor type & Q'ty | | | RMT5134MDE3 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x1 | Propeller fan x2 | |
| Fan motor (Starting method) | | W | 100 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | |
| | Heating | | 100 | | |
| Available external static pressure | | Pa | Standard : 35 Max : 100 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | 1/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | 1/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 IP24 | | | |
| Standard accessories | | Mounting kit, Drain hose Edging | | | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM125VNXPVH | | |
|---|-----------------------------------|--|--|---|----|
| | | | Indoor unit FDUM60VH (2 units) | Outdoor unit FDC125VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-17.0(Max.)] | | |
| | Power consumption | Cooling | kW | 3.26 | |
| | | Heating | | 3.66 | |
| | Max power consumption | | 5.86 | | |
| | Running current | Cooling | A | 14.6 / 15.3 | |
| | | Heating | | 16.4 / 17.1 | |
| | Inrush current, max current | | 5 , 26 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.83 | |
| | COP | Heating | | 3.83 | |
| | Sound power level | Cooling | dB(A) | 60 | 70 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 36 Hi : 31 Me : 28 Lo : 25 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | 105 | |
| Compressor type & Q'ty | | | - | RMT5134MDE2 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | Propeller fan x2 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 15 Me : 13 Lo : 10 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve (for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | 1/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | 1/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | - | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.'
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM125VSPVH | | |
|---|-----------------------------------|--|--|---|--|
| | | | Indoor unit FDUM60VH (2 units) | Outdoor unit FDC125VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 3.26 | |
| | | Heating | | 3.66 | |
| | Max power consumption | | 7.32 | | |
| | Running current | Cooling | A | 4.9 / 5.2 | |
| | | Heating | | 5.4 / 5.7 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 96 / 95 | |
| | | Heating | | 98 | |
| | EER | Cooling | | 3.83 | |
| | COP | Heating | | 3.83 | |
| Sound power level | Cooling | dB(A) | 60 | 70 | |
| | Heating | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 36 Hi : 31 Me : 28 Lo : 25 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | 105 | |
| Compressor type & Q'ty | | | - | RMT5134MDE3 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | Propeller fan x2 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 15 Me : 13 Lo : 10 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | - | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | - | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VNXPVH | | |
|---|-----------------------------------|--|---|---|----|
| | | | Indoor unit FDUM71VH (2 units) | Outdoor unit FDC140VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.36 | |
| | | Heating | | 4.35 | |
| | Max power consumption | | 6.10 | | |
| | Running current | Cooling | A | 19.5 / 20.4 | |
| | | Heating | | 19.5 / 20.4 | |
| | Inrush current, max current | | 5 , 26 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.21 | |
| | COP | Heating | | 3.68 | |
| | Sound power level | Cooling | dB(A) | 65 | 72 |
| Heating | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | | |
| Sound pressure level | Cooling | | 49 | | |
| | Heating | | 52 | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 950 x 635 | | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 34 | | 105 | |
| Compressor type & Q'ty | | - | | RMT5134MDE2 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan x2 | | Propeller fan x2 | |
| Fan motor (Starting method) | W | 130 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")x1.0 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | |
| Option parts | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-H1 |
| Heating | 20°C | - | 7°C | 6°C | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VSXPVH | | |
|---|-----------------------------------|--|---|------------------------------------|----|
| | | | Indoor unit FDUM71VH (2 units) | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.36 | |
| | | Heating | | 4.35 | |
| | Max power consumption | | 7.63 | | |
| | Running current | Cooling | A | 6.5 / 6.8 | |
| | | Heating | | 6.5 / 6.8 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.21 | |
| | COP | Heating | | 3.68 | |
| | Sound power level | Cooling | dB(A) | 65 | 72 |
| Heating | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | | |
| Sound pressure level | Cooling | | 49 | | |
| | Heating | | 52 | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 950 x 635 | | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 34 | | 105 | |
| Compressor type & Q'ty | | - | RMT5134MDE3 (Twin rotary type) x1 | | |
| Compressor motor (Starting method) | kW | - | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan x2 | | Propeller fan x2 | |
| Fan motor (Starting method) | W | 130 < Direct line start > | | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")x1.0 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | |
| Option parts | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Cooling | 20°C | - | 7°C | 6°C | | ISO5151-H1 |
| Heating | | | | | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

(c) Triple type

| Item | | Model | FDUM140VNXTVH | | |
|---|-----------------------------------|--|--|---|----|
| | | | Indoor unit FDUM50VH (3 units) | Outdoor unit FDC140VNX | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.21 | |
| | | Heating | | 4.69 | |
| | Max power consumption | | 6.57 | | |
| | Running current | Cooling | A | 18.9 / 19.8 | |
| | | Heating | | 21.0 / 22.0 | |
| | Inrush current, max current | | 5 , 26 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | | 3.33 | |
| | COP | Heating | | 3.41 | |
| | Sound power level | Cooling | dB(A) | 60 | 72 |
| Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | | | |
| Silent mode sound pressure level | | | - | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 750 x 635 | 1300x970x370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 29 | 105 | |
| Compressor type & Q'ty | | | - | RMT5134MDE2 (Twin rotary type) x1 | |
| Compressor motor (Starting method) | kW | | - | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan x1 | Propeller fan x2 | |
| Fan motor (Starting method) | W | | 100 < Direct line start > | 86 <Direct line start> | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | |
| | Heating | | 100 | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | 0 | |
| Outside air intake | | | Possible | - | |
| Air filter, Quality / Quantity | | | Procure locally | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve (for compressor) | |
| Electric heater | W | | - | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | - | |
| Recommended breaker size | A | | - | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | |
| Option parts | | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-TA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.'
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VSXTVH | | |
|---|-----------------------------------|--|--|------------------------|--|
| | | | Indoor unit FDUM50VH (3 units) | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.21 | |
| | | Heating | | 4.69 | |
| | Max power consumption | | 8.21 | | |
| | Running current | Cooling | A | 6.3 / 6.6 | |
| | | Heating | | 7.0 / 7.4 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 96 / 97 | |
| | | Heating | | 97 / 96 | |
| | EER | Cooling | | 3.33 | |
| | COP | Heating | | 3.41 | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 72 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | 49 | | |
| Silent mode sound pressure level | | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 x 750 x 635 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 29 | | |
| Compressor type & Q'ty | | | RMT5134MDE3 (Twin rotary type) x1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | Electronic expansion valve | | |
| Fan motor (Starting method) | | W | Centrifugal fan x1 Propeller fan x2 | | |
| Air flow | | m³/min | 100 < Direct line start > | | |
| Available external static pressure | | Pa | 86 x 2 < Direct line start > | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.100 | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm x 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 IP24 | | | |
| Standard accessories | | Mounting kit, Drain hose Edging | | | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Operation | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Cooling | 20°C | - | 7°C | 6°C | | ISO5151-H1 |
| Heating | | | | | | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units are combined and run together.
- (7) Branching pipe set "DIS-TA1G"x1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U
- (8) Static pressure of option air filter "UM-FL1EF" is 5Pa initially.
- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

(4) Ceiling suspended type (FDE)
(a) Single type

| Item | | Model | FDE40ZSXVH | | | |
|---|----------------------------------|------------------------|--|-------------------------|------------|-----------|
| | | | Indoor unit FDE40VH | Outdoor unit SRC40ZSX-S | | |
| Power source | | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 4.0 [1.1(Min.) - 4.7(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 4.5 [0.6(Min.) - 5.4(Max.)] | | | |
| | Power consumption | Cooling | kW | 1.02 | | |
| | | Heating | | 1.10 | | |
| | Max power consumption | | 2.60 | | | |
| | Running current | Cooling | A | 4.8 / 5.0 | | |
| | | Heating | | 5.1 / 5.4 | | |
| | Inrush current, max current | | 5 , 12 | | | |
| | Power factor | Cooling | % | 92 / 93 | | |
| | | Heating | | 94 / 93 | | |
| | EER | Cooling | | 3.92 | | |
| | COP | Heating | | 4.09 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| Heating | | 63 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | | |
| | Heating | | 50 | | | |
| Silent mode sound pressure level | | | 49 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 x 1070 x 690 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | |
| Net weight | | kg | 28 | | | |
| Compressor type & Q'ty | | | RMT5113MCE2 (Twin rotary type)x1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.45 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | | |
| Fan type & Q'ty | | | Capillary tubes + Electronic expansion valve | | | |
| Fan motor (Starting method) | | W | Centrifugal fan x2 | | | |
| Air flow | | m ³ /min | Propeller fan x1 | | | |
| Available external static pressure | | Pa | 30 < Direct line start > | | | |
| Outside air intake | | | 34 < Direct line start > | | | |
| Air filter, Quality / Quantity | | | 36 | | | |
| Shock & vibration absorber | | | 33 | | | |
| Electric heater | | W | 0 | | | |
| Operation control | | | Not possible | | | |
| Remote control | | | Pocket plastic net x2(Washable) | | | |
| Room temperature control | | | Rubber sleeve (for fan motor) | | | |
| Operation display | | | Rubber sleeve(for compressor) | | | |
| Safety equipments | | | — | | | |
| Installation data | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | Gas line | | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | | |
| Connecting method | | | Flare piping | | | |
| Attached length of piping | | m | Flare piping | | | |
| Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| Refrigerant line (one way) length | | m | Max.30 | | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | | |
| Drain hose | | | Hose connectable with VP20(O.D.26) | | | |
| Drain pump, max lift height | | mm | Hole size φ 20 x 5pcs | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 4.8 | | | |
| Interconnecting wires Size x Core number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | | |
| Standard accessories | | | IPX4 | | | |
| Option parts | | | Mounting kit, Drain hose | | | |
| | | | Drain elbow, Drain hole grommet | | | |
| | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDE50ZSXVH | | | |
|---|----------------------------------|------------------------|---|-------------------------|------------|-----------|
| | | | Indoor unit FDE50VH | Outdoor unit SRC50ZSX-S | | |
| Power source | | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 5.0 [1.1(Min.) - 5.6(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 5.4 [0.6(Min.) - 6.3(Max.)] | | | |
| | Power consumption | Cooling | kW | 1.52 | | |
| | | Heating | | 1.46 | | |
| | Max power consumption | | 2.90 | | | |
| | Running current | Cooling | A | 7.0 / 7.4 | | |
| | | Heating | | 7.0 / 7.3 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 94 / 93 | | |
| | | Heating | | 91 | | |
| | EER | Cooling | | 3.29 | | |
| | COP | Heating | | 3.70 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| Heating | | 63 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | | |
| | Heating | | 50 | | | |
| Silent mode sound pressure level | | | 49 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1070 × 690 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | |
| Net weight | | kg | 28 | | | |
| Compressor type & Q'ty | | | — | | | |
| Compressor motor (Starting method) | | kW | RMT5113MCE2 (Twin rotary type)×1 | | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | | |
| Fan type & Q'ty | | | Capillary tubes + Electronic expansion valve | | | |
| Fan motor (Starting method) | | W | Centrifugal fan ×2 | | | |
| Air flow | | m ³ /min | Propeller fan ×1 | | | |
| Available external static pressure | | Pa | 30 < Direct line start > | | | |
| Outside air intake | | | 34 < Direct line start > | | | |
| Air filter, Quality / Quantity | | | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | |
| Shock & vibration absorber | | | 40 | | | |
| Electric heater | | W | 33 | | | |
| Remote control | | | 0 | | | |
| Room temperature control | | | Not possible | | | |
| Operation display | | | Pocket plastic net ×2(Washable) | | | |
| Safety equipments | | | Rubber sleeve (for fan motor) | | | |
| Refrigerant piping size (O.D.) | | mm | Rubber sleeve(for compressor) | | | |
| Connecting method | | | — | | | |
| Attached length of piping | | m | — | | | |
| Insulation for piping | | | — | | | |
| Refrigerant line (one way) length | | m | — | | | |
| Vertical height diff. between O/U and I/U | | m | — | | | |
| Drain hose | | | — | | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5 | | | |
| Interconnecting wires Size x Core number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | | |
| Standard accessories | | | IPX4 | | | |
| Option parts | | | Mounting kit, Drain hose | | | |
| | | | Drain elbow, Drain hole grommet | | | |
| | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| | | Model | FDE60ZSXVH | | |
|---|----------------------------------|---------------------|--|-------------------------|--|
| Item | | | Indoor unit FDE60VH | Outdoor unit SRC60ZSX-S | |
| Power source | | | 1 Phase, 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 5.6 [1.1(Min.) - 6.3(Max.)] | | |
| | Nominal heating capacity (range) | kW | 6.7 [0.6(Min.) - 7.1(Max.)] | | |
| | Power consumption | Cooling | kW | 1.75 | |
| | | Heating | | 1.86 | |
| | Max power consumption | | 2.90 | | |
| | Running current | Cooling | A | 8.0 / 8.4 | |
| | | Heating | | 8.7 / 9.1 | |
| | Inrush current, max current | | 5 , 15 | | |
| | Power factor | Cooling | % | 95 | |
| | | Heating | | 93 | |
| | EER | Cooling | | 3.20 | |
| | COP | Heating | | 3.60 | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 65 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | |
| | Heating | | 64 | | |
| Silent mode sound pressure level | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 x 1320 x 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | 33 | | |
| Compressor type & Q'ty | | | — | | |
| Compressor motor (Starting method) | | kW | — | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.5 in outdoor unit (Incl. the amount for the piping of : 15m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | Capillary tubes + Electronic expansion valve | | |
| Fan motor (Starting method) | | W | Centrifugal fan x4 | | |
| Air flow | | m ³ /min | Propeller fan x1 | | |
| Available external static pressure | | Pa | 50 < Direct line start > | | |
| Outside air intake | | | 34 < Direct line start > | | |
| Air filter, Quality / Quantity | | | 41.5 | | |
| Shock & vibration absorber | | | 39 | | |
| Electric heater | | W | 0 | | |
| Operation control | | | Not possible | | |
| Remote control | | | Pocket plastic net x2(Washable) | | |
| Room temperature control | | | Rubber sleeve (for fan motor) | | |
| Operation display | | | Rubber sleeve(for compressor) | | |
| Safety equipments | | | — | | |
| Refrigerant piping size (O.D.) | | mm | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Connecting method | | | I/U φ 6.35 (1/4") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| Attached length of piping | | m | I/U φ 12.7 (1/2") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | |
| Insulation for piping | | | Flare piping | | |
| Refrigerant line (one way) length | | m | — | | |
| Vertical height diff. between O/U and I/U | | m | Necessary (both Liquid & Gas lines) | | |
| Drain hose | | | Max.30 | | |
| Drain pump, max lift height | | mm | Max.20 (Outdoor unit is higher) Max.20 (Outdoor unit is lower) | | |
| Recommended breaker size | | A | Hose connectable with VP20(O.D.26) | | |
| L.R.A. (Locked rotor ampere) | | A | Hole size φ 20 x 5pcs | | |
| Interconnecting wires | | Size x Core number | 5 | | |
| IP number | | | 1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| Standard accessories | | | IPX0 | | |
| Option parts | | | IPX4 | | |
| Motion sensor | | | Mounting kit, Drain hose | | |
| | | | Drain elbow, Drain hole grommet | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | | FDE71VNXVH | | |
|---|--|--|---|--|-----------------------|----|
| | | | | Indoor unit FDE71VH | Outdoor unit FDC71VNX | |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 [3.2(Min.)-8.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 8.0 [3.6(Min.)-9.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.11 | | |
| | | Heating | | 2.11 | | |
| | Max power consumption | | 3.38 | | | |
| | Running current | Cooling | A | 9.7 / 10.1 | | |
| | | Heating | | 9.3 / 9.7 | | |
| | Inrush current, max current | | 5 , 17 | | | |
| | Power factor | Cooling | % | 95 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.36 | | |
| | COP | Heating | | 3.79 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 66 |
| Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 51 | | |
| Sound pressure level | Cooling | | - | | 48 | |
| | Heating | | - | | - | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 × 1320 × 690 | | 750×880(+88)×340 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 33 | | 60 | | |
| Compressor type & Q'ty | | - | | RMT5118MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 60 | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | - | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | - | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | - | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | - | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | - | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | - | 7°C | 6°C | |
| | | Standards | | Standards | | |
| | | ISO5151-T1 | | ISO5151-H1 | | |
| | (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| | (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| | (4) Select the breaker size according to the own national standard. | | | | | |
| | (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | |

| Item | | Model | FDE100VNXVH | | | |
|--|-----------------------------------|---|--|--|------|------------|
| | | | Indoor unit FDE100VH | Outdoor unit FDC100VNX | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.55 | | |
| | | Heating | | 2.68 | | |
| | Max power consumption | | 4.61 | | | |
| | Running current | Cooling | A | 11.3 / 11.8 | | |
| | | Heating | | 11.8 / 12.3 | | |
| | Inrush current, max current | | 5 , 24 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.92 | | |
| | COP | Heating | | 4.18 | | |
| | Sound power level | Cooling | dB(A) | 64 | | |
| Heating | | 70 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | | | |
| | Heating | | 48 | | | |
| Silent mode sound pressure level | | | 50 | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 250 × 1620 × 690 | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 43 | 105 | | |
| Compressor type & Q'ty | | | — | RMT5134MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | | 80 < Direct line start > | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | | | |
| | Heating | | 100 | | | |
| Available external static pressure | Pa | | 0 | 0 | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | | |
| Electric heater | W | | — | 20(Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | |
| Drain hose | | Hose connectable with VP20(O.D.26) Hole size φ 20 x 3 pcs | | | | |
| Drain pump, max lift height | mm | | — | — | | |
| Recommended breaker size | A | | — | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | | FDE140VSXVH | | |
|--|-----------------------------------|--|---|--|-------------------|----|
| | | | | Indoor unit FDE140VH | Outdoor FDC140VSX | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.40 | | |
| | | Heating | | 4.69 | | |
| | Max power consumption | | 8.72 | | | |
| | Running current | Cooling | A | 6.4 / 6.8 | | |
| | | Heating | | 6.8 / 7.2 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.18 | | |
| | COP | Heating | | 3.41 | | |
| | Sound power level | Cooling | dB(A) | 65 | | 72 |
| Heating | | P-Hi : 49 Hi : 45 Me : 40 Lo : 36 | | 49 | | |
| Sound pressure level | Cooling | | | | 52 | |
| | Heating | | | | — | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 250 × 1620 × 690 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 43 | | 105 | | |
| Compressor type & Q'ty | | — | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | 90 < Direct line start > | | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 34 Hi : 29 Me : 23 Lo : 18 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | — | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | — | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | — | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | — | 7°C | 6°C | |
| | | Standards | | | | |
| | | ISO5151-T1 | | | | |
| | | ISO5151-H1 | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |

(b) Twin type

| Item | | Model | | FDE71VNXPVH | | | |
|--|-----------------------------------|--|---|--|---|--------------|--|
| | | | | Indoor unit FDE40VH (2 units) | Outdoor unit FDC71VNX | | |
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 7.1 [3.2(Min.)-8.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 8.0 [3.6(Min.)-9.0(Max.)] | | | |
| | Power consumption | Cooling | kW | | 2.05 | | |
| | | Heating | kW | | 2.35 | | |
| | Max power consumption | | | 3.84 | | | |
| | Running current | Cooling | A | | 9.1 / 9.5 | | |
| | | Heating | A | | 10.4 / 10.9 | | |
| | Inrush current, max current | | | 5 , 17 | | | |
| | Power factor | Cooling | % | | 98 | | |
| | | Heating | % | | 98 | | |
| | EER | Cooling | | | | 3.46 | |
| | COP | Heating | | | | 3.40 | |
| | Sound power level | Cooling | dB(A) | | 60 | | |
| Heating | | dB(A) | | 66 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | | |
| | Heating | dB(A) | | 51 | | | |
| Silent mode sound pressure level | | | | | 48 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 210 × 1070 × 690 | | 750×880(+88)×340 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 28 | | 60 | | |
| Compressor type & Q'ty | | | — | | RMT5118MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | | 30 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | m³/min | | 60 | | | |
| Available external static pressure | Pa | | 0 | | 50 | | |
| Outside air intake | | | Not possible | | 0 | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | — | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | | — | | 20(Crank case heater) | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | | Thermostat by electronics | | | |
| | Operation display | | | — | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | mm | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | m | | — | | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | | — | | — | | |
| Recommended breaker size | A | | — | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | — | | |
| Option parts | | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards | |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | | |

| Item | | Model | | FDE100VNXPVH | | |
|--|----------------------------------|------------------------|-------|---|------------------------|-----------|
| | | | | Indoor unit FDE50VH (2 units) | Outdoor unit FDC100VNX | |
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | | 3.00 | |
| | | Heating | kW | | 3.39 | |
| | Max power consumption | | | 5.58 | | |
| | Running current | Cooling | A | | 13.3 / 13.9 | |
| | | Heating | A | | 15.0 / 15.7 | |
| | Inrush current, max current | | | 5 , 24 | | |
| | Power factor | Cooling | % | | 98 | |
| | | Heating | % | | 98 | |
| | EER | Cooling | | 3.33 | | |
| | COP | Heating | | 3.30 | | |
| | Sound power level | Cooling | dB(A) | | 60 | |
| Heating | | dB(A) | | 70 | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | |
| | Heating | dB(A) | | 48 | | |
| Silent mode sound pressure level | | | 50 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | | 210 × 1070 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | | 28 | | |
| Compressor type & Q'ty | | | | RMT5134MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | | Electronic expansion valve | | |
| Fan motor (Starting method) | | W | | Centrifugal fan x2 | | |
| Air flow | | m³/min | | Propeller fan x2 | | |
| Available external static pressure | | Pa | | 30 < Direct line start > | | |
| Outside air intake | | | | 86 x2 < Direct line start > | | |
| Air filter, Quality / Quantity | | | | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | |
| Shock & vibration absorber | | | | 100 | | |
| Electric heater | | W | | 0 | | |
| Remote control | | | | Not possible | | |
| Room temperature control | | | | Pocket plastic net x2(Washable) | | |
| Operation display | | | | Rubber sleeve(for fan motor) | | |
| Safety equipments | | | | Rubber sleeve(for compressor) | | |
| Refrigerant piping size (O.D.) | | mm | | 20(Crank case heater) | | |
| Connecting method | | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | |
| Attached length of piping | | m | | Thermostat by electronics | | |
| Insulation for piping | | | | - | | |
| Refrigerant line (one way) length | | m | | Overload protection for fan motor | | |
| Vertical height diff. between O/U and I/U | | m | | Frost protection thermostat | | |
| Drain hose | | mm | | Internal thermostat for fan motor | | |
| Recommended breaker size | | A | | Abnormal discharge temperature protection | | |
| L.R.A. (Locked rotor ampere) | | A | | Max.100 | | |
| Interconnecting wires | | Size x Core number | | Max.30 (Outdoor unit is higher) | | |
| IP number | | | | Max.15 (Outdoor unit is lower) | | |
| Standard accessories | | | | Hose connectable with VP20(O.D.26) | | |
| Option parts | | | | Hole size φ 20 x 3 pcs | | |
| Notes | | | | - | | |
| (1) The data are measured at the following conditions. | | | | Motion sensor : LB-E | | |
| | | | | The pipe length is 7.5m. | | |
| Operation | Cooling | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | |
| Heating | 20°C | | 7°C | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | FDE100VSPVH | | | |
|--|-----------------------------------|--|---|--|-----------|------------|
| | | | Indoor unit FDE50VH (2 units) | Outdoor unit FDC100VSX | | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.00 | | |
| | | Heating | | 3.39 | | |
| | Max power consumption | | 6.98 | | | |
| | Running current | Cooling | A | 4.4 / 4.6 | | |
| | | Heating | | 4.9 / 5.2 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.33 | | |
| | COP | Heating | | 3.30 | | |
| | Sound power level | Cooling | dB(A) | 60 | 70 | |
| Heating | | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 x 1070 x 690 | | 1300x970x370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 28 | | 105 | | |
| Compressor type & Q'ty | | - | | RMT5134MDE3 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan x2 | | Propeller fan x2 | | |
| Fan motor (Starting method) | W | 30 < Direct line start > | | 86 x2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | 100 | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | | | |
| Air filter, Quality / Quantity | | Pocket plastic net x2(Washable) | | | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | - | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | - | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | Standards | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | FDE125VNXPVH | | | |
|--|-----------------------------------|--|--|--|------|------------|
| | | | Indoor unit FDE60VH (2 units) | Outdoor unit FDC125VNX | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-17.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.97 | | |
| | | Heating | | 3.70 | | |
| | Max power consumption | | 6.50 | | | |
| | Running current | Cooling | A | 17.6 / 18.4 | | |
| | | Heating | | 16.4 / 17.2 | | |
| | Inrush current, max current | | 5 , 26 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.15 | | |
| | COP | Heating | | 3.78 | | |
| | Sound power level | Cooling | dB(A) | 60 | 70 | |
| Heating | | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 210 × 1320 × 690 | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 33 | 105 | | |
| Compressor type & Q'ty | | | - | RMT5134MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | - | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | - | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 100 | | | |
| Available external static pressure | Pa | | 0 | 0 | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | | |
| Electric heater | W | | - | 20(Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | |
| Drain hose | | Hose connectable with VP20(O.D.26) Hole size φ 20 x 3 pcs | | | | |
| Drain pump, max lift height | mm | | - | | | |
| Recommended breaker size | A | | - | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDE125VSPVH | | | |
|--|-----------------------------------|--|---|--|--|--------------|--|
| | | | | Indoor unit FDE60VH (2 units) | Outdoor unit FDC125VSX | | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 14.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | | 3.97 | | |
| | | Heating | kW | | 3.70 | | |
| | Max power consumption | | | 8.12 | | | |
| | Running current | Cooling | A | | 5.8 / 6.2 | | |
| | | Heating | A | | 5.4 / 5.7 | | |
| | Inrush current, max current | | | 5 , 15 | | | |
| | Power factor | Cooling | % | | 98 | | |
| | | Heating | % | | 99 | | |
| | EER | Cooling | | | 3.15 | | |
| | COP | Heating | | | 3.78 | | |
| | Sound power level | Cooling | dB(A) | | 60 | | |
| Heating | | dB(A) | | 70 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | | |
| | Heating | dB(A) | | 48 | | | |
| Silent mode sound pressure level | | | | | 50 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 210 × 1320 × 690 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 33 | | 105 | | |
| Compressor type & Q'ty | | | - | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | 100 | | |
| | Heating | | | | | | |
| Available external static pressure | Pa | | 0 | | 0 | | |
| Outside air intake | | | Not possible | | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | | - | | 20(Crank case heater) | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | | Thermostat by electronics | | | |
| | Operation display | | | - | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | m | | - | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | | - | | - | | |
| Recommended breaker size | A | | - | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards | |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | | |

| Item | | Model | FDE140VNXPVH | | | |
|--|-----------------------------------|--|---|--|-----------|------------|
| | | | Indoor unit FDE71VH (2 units) | Outdoor unit FDC140VNX | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.67 | | |
| | | Heating | | 4.58 | | |
| | Max power consumption | | 6.94 | | | |
| | Running current | Cooling | A | 20.7 / 21.7 | | |
| | | Heating | | 20.3 / 21.2 | | |
| | Inrush current, max current | | 5 , 26 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.49 | | |
| | Sound power level | Cooling | dB(A) | 60 | 72 | |
| Heating | | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 x 1320 x 690 | | 1300x970x370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 33 | | 105 | | |
| Compressor type & Q'ty | | - | | RMT5134MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan x4 | | Propeller fan x2 | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | | 86 x2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 100 | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | - | | |
| Air filter, Quality / Quantity | | Pocket plastic net x2(Washable) | | - | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | - | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")x1.0 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | - | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mmx3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | Standards | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | FDE140VSPVH | | | |
|--|-----------------------------------|---|--|--------------------------------|--|----|
| | | | Indoor unit FDE71VH (2 units) | | Outdoor unit FDC140VSX | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.67 | | |
| | | Heating | | 4.58 | | |
| | Max power consumption | | 8.68 | | | |
| | Running current | Cooling | A | 6.8 / 7.2 | | |
| | | Heating | | 6.7 / 7.1 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.49 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 72 |
| Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 49 | | |
| Sound pressure level | Cooling | | | | 52 | |
| | Heating | | | | — | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 210 × 1320 × 690 | | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 33 | | 105 | |
| Compressor type & Q'ty | | | — | | RMT5134MDE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | Propeller fan ×2 | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | | 86 ×2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | Pa | | 0 | | 0 | |
| Outside air intake | | | Not possible | | — | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | | — | | 20(Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | — | 7°C | 6°C | |
| Standards | | | | | | |
| ISO5151-T1 | | | | | | |
| ISO5151-H1 | | | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

(c) Triple type

| Item | | Model | | FDE140VNXTVH | | |
|--|-----------------------------------|--|---|--|------------------------|----|
| | | | | Indoor unit FDE50VH (3 units) | Outdoor unit FDC140VNX | |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.66 | | |
| | | Heating | | 4.53 | | |
| | Max power consumption | | 6.86 | | | |
| | Running current | Cooling | A | 20.7 / 21.6 | | |
| | | Heating | | 20.1 / 21.0 | | |
| | Inrush current, max current | | 5 , 26 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.53 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 72 |
| Heating | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | 49 | | |
| Sound pressure level | Cooling | | | | 52 | |
| | Heating | | | | — | |
| Silent mode sound pressure level | | | | | — | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 × 1070 × 690 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 28 | | 105 | | |
| Compressor type & Q'ty | | — | | RMT5134MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×2 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | 30 < Direct line start > | | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | — | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | — | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | — | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | — | 7°C | 6°C | |
| | | Standards | | | | |
| | | ISO5151-T1 | | | | |
| | | ISO5151-H1 | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are three indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-TA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDE140VSXTVH | | |
|--|-----------------------------------|--|---|--|------------------------|----|
| | | | | Indoor unit FDE50VH (3 units) | Outdoor unit FDC140VSX | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.66 | | |
| | | Heating | | 4.53 | | |
| | Max power consumption | | 8.58 | | | |
| | Running current | Cooling | A | 6.9 / 7.2 | | |
| | | Heating | | 6.7 / 7.0 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.53 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 72 |
| Heating | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | 49 | | |
| Sound pressure level | Cooling | | | | 52 | |
| | Heating | | | | — | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 × 1070 × 690 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 28 | | 105 | | |
| Compressor type & Q'ty | | — | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×2 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | 30 < Direct line start > | | 86 ×2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | 100 | |
| | Heating | | | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | — | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | — | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | — | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | — | 7°C | 6°C | |
| | | Standards | | | | |
| | | ISO5151-T1 | | | | |
| | | ISO5151-H1 | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specification for one unit. Capacity and operation data are three indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-TA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

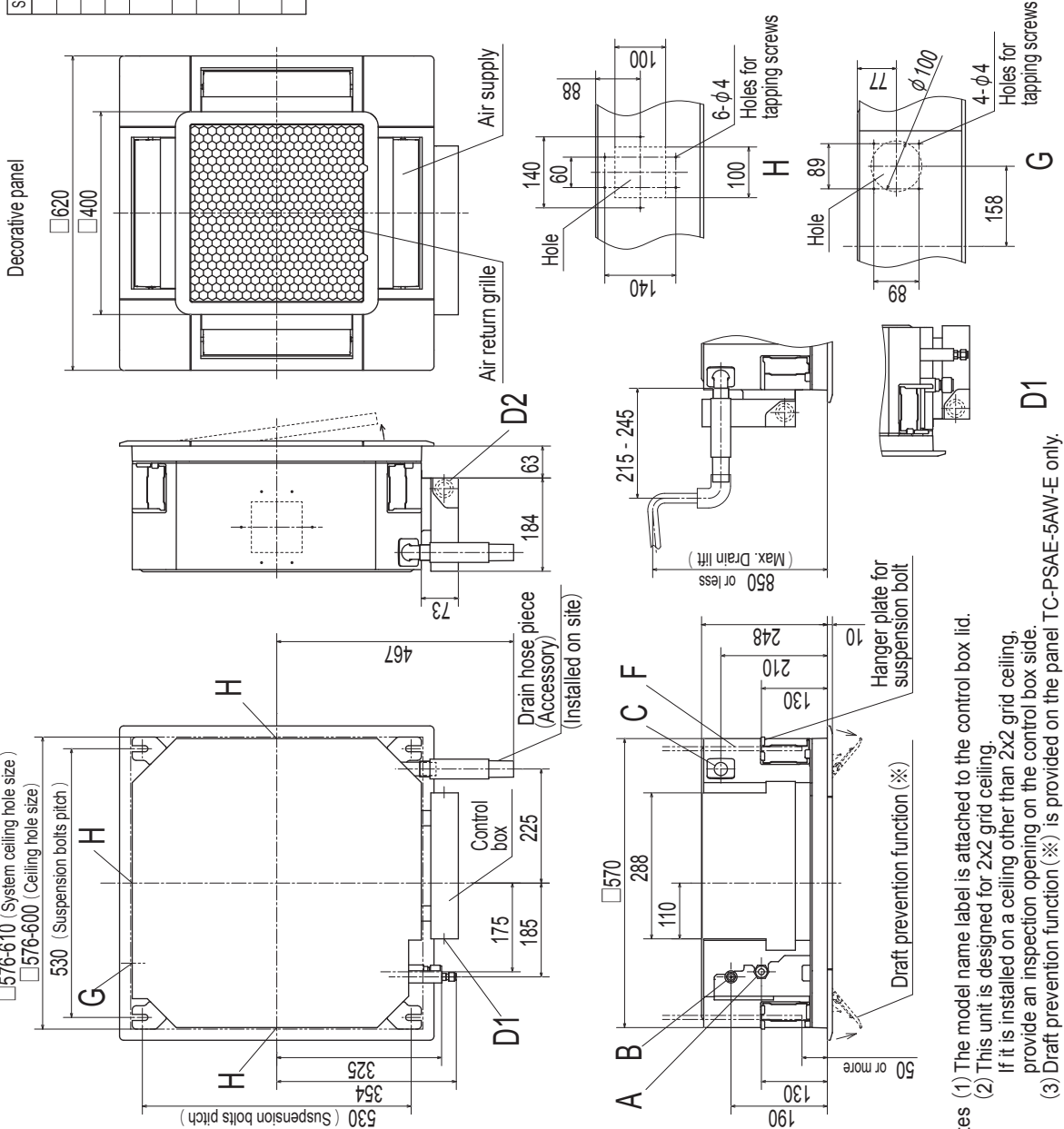
1.2 EXTERIOR DIMENSIONS

(1) Indoor units

(a) Ceiling cassette-4 way compact type (FDTC)

Models FDTC40VH, 50VH, 60VH

| Symbol | Content |
|--------|--|
| A | Gas piping φ12.7 (1/2") (Flare) |
| B | Liquid piping φ6.35 (1/4") (Flare) |
| C | Drain piping VP25 (O.D.32) |
| D1 | Power source connection Remote control code and signal wiring connection |
| D2 | Suspension bolts (M10 or M8) |
| F | Outside air opening for ducting (Knock out) |
| G | Air outlet opening for ducting φ125 (Knock out) |
| H | Inspection opening |
| J | 450×450 |

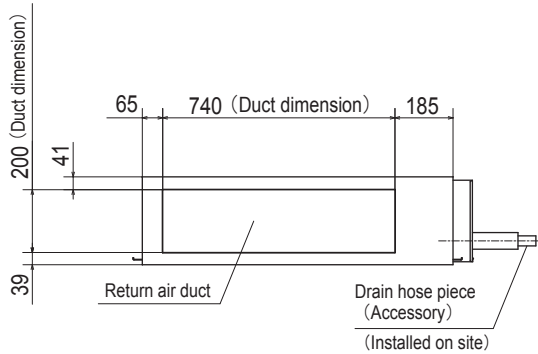


Unit: mm

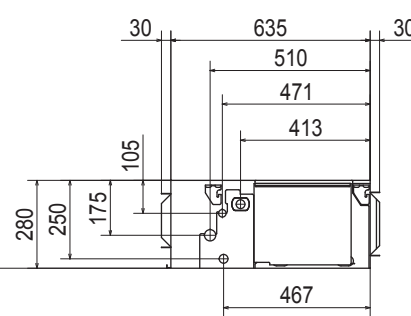
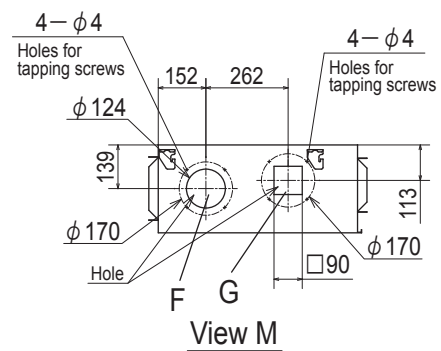
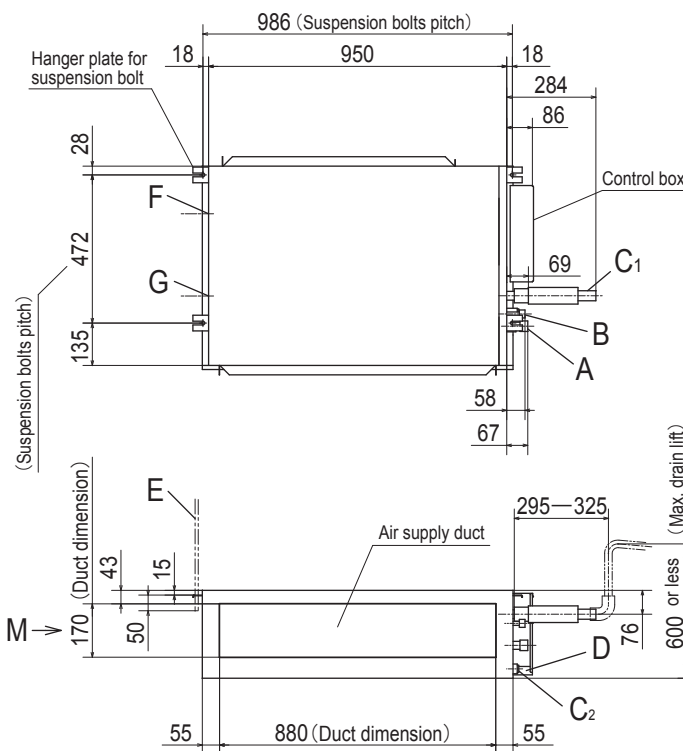
- Notes
- (1) The model name label is attached to the control box lid.
 - (2) This unit is designed for 2x2 grid ceiling. If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection opening on the control box side.
 - (3) Draft prevention function (*) is provided on the panel TC-PSAE-5AW-E only.

(b) Duct connected-High static pressure type (FDU)

Model FDU71VH



| Symbol | Content | |
|--------|---------------------------------|-----------------------------|
| A | Gas piping | $\phi 15.88$ (5/8") (Flare) |
| B | Liquid piping | $\phi 9.52$ (3/8") (Flare) |
| C1 | Drain piping | VP25 (O.D.32) |
| C2 | Drain piping (Gravity drainage) | VP20 |
| D | Hole for wiring | |
| E | Suspension bolts | (M10) |
| F | Outside air opening for ducting | (Knock out) |
| G | Air outlet opening for ducting | (Knock out) |
| H | Inspection opening | (450×450) |

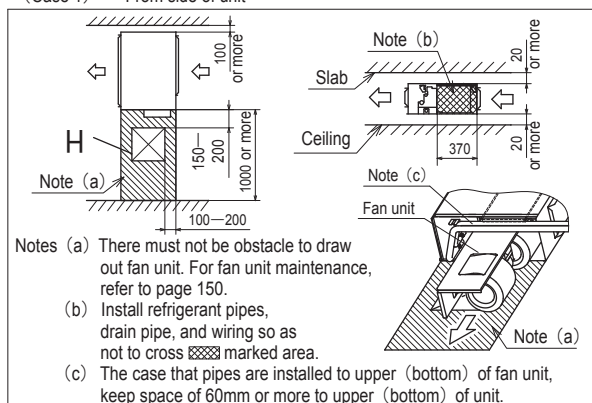


Unit:mm

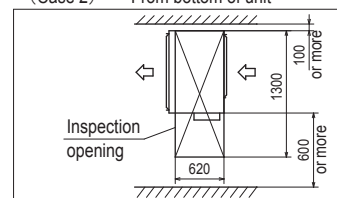
Space for installation and service

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



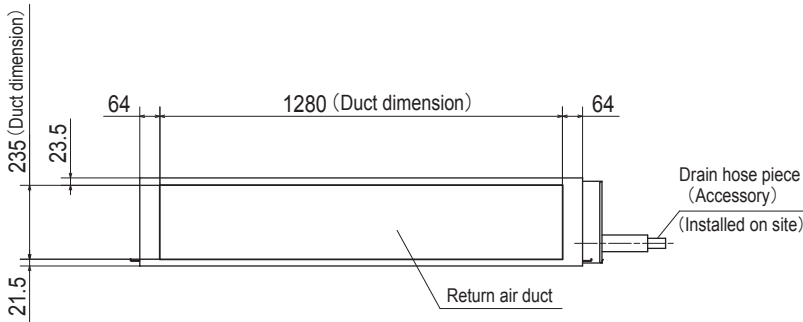
(Case 2) From bottom of unit



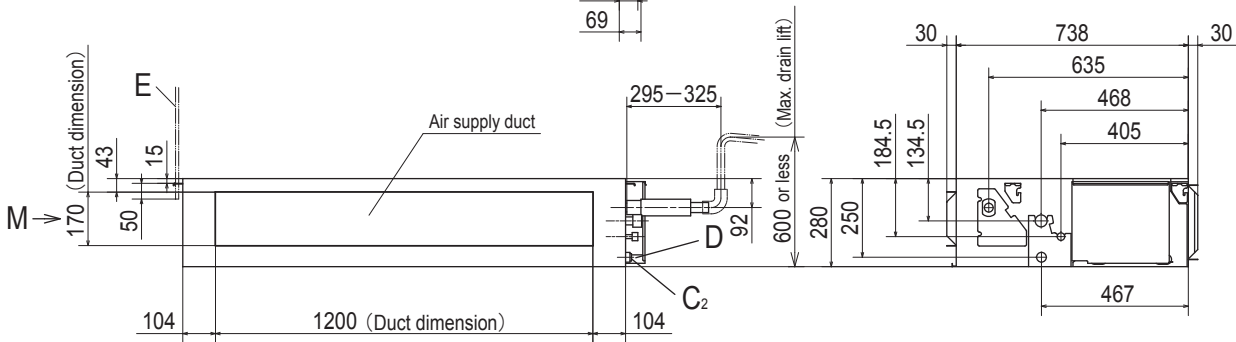
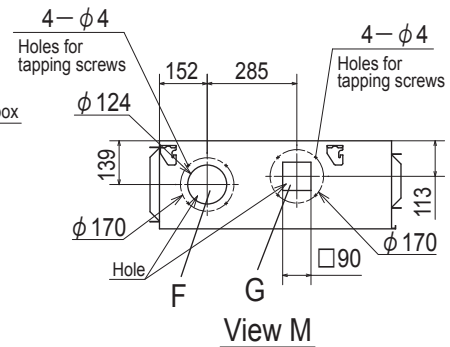
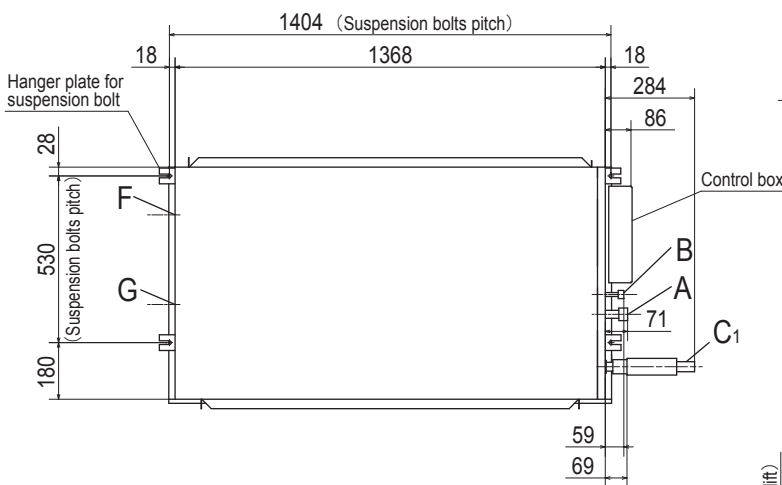
Note (1) The model name label is attached on the lid of the control box.

PJG000Z577

Models FDU100VH, 125VH, 140VH



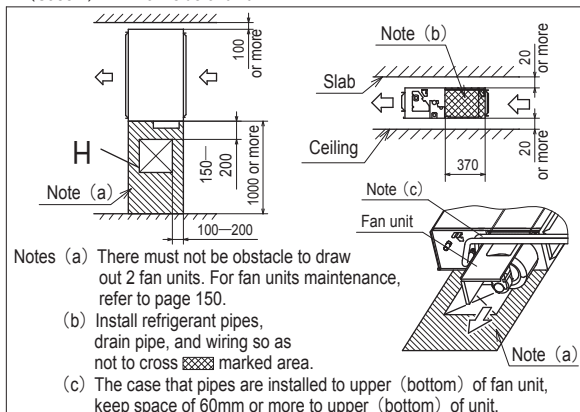
| Symbol | Content | |
|----------------|---------------------------------|------------------------|
| A | Gas piping | φ 15.88 (5/8") (Flare) |
| B | Liquid piping | φ 9.52 (3/8") (Flare) |
| C ₁ | Drain piping | VP25 (O.D.32) |
| C ₂ | Drain piping (Gravity drainage) | VP20 |
| D | Hole for wiring | |
| E | Suspension bolts | (M10) |
| F | Outside air opening for ducting | (Knock out) |
| G | Air outlet opening for ducting | (Knock out) |
| H | Inspection opening | (450×450) |



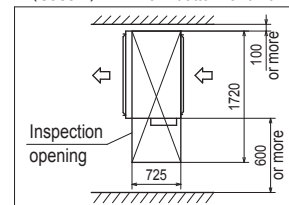
Unit:mm

Space for installation and service

Select either of two cases to keep space for installation and services.



(Case 2) From bottom of unit

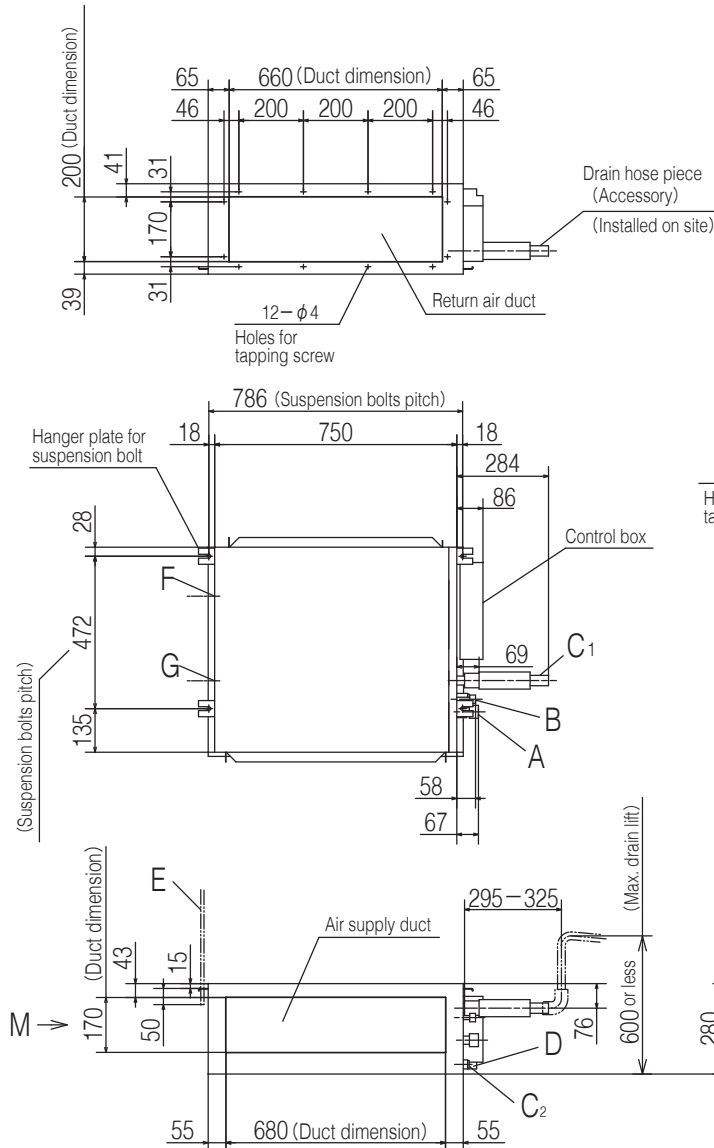


Note (1) The model name label is attached on the lid of the control box.

PJG000Z579

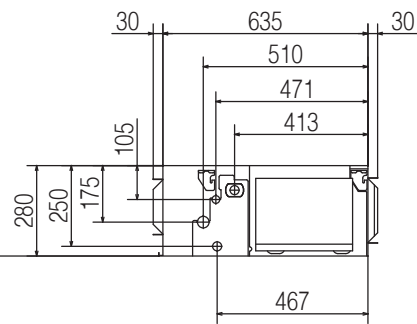
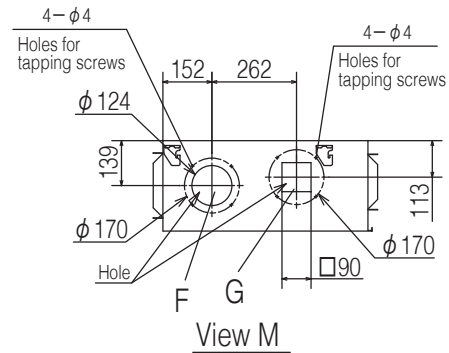
(c) Duct connected-Low / Middle static pressure type (FDUM)

Models FDUM40VH, 50VH



| Symbol | Content | |
|--------|---------------------------------|----------------------|
| A | Gas piping | φ 12.7(1/2") (Flare) |
| B | Liquid piping | φ 6.35(1/4") (Flare) |
| C1 | Drain piping | VP25 (O.D.32) |
| C2 | Drain piping (Gravity drainage) | VP20 |
| D | Hole for wiring | |
| E | Suspension bolts | (M10) |
| F | Outside air opening for ducting | (φ 150) (Knock out) |
| G | Air outlet opening for ducting | (φ 125) (Knock out) |
| H | Inspection opening | (450×450) |

Note (1) The model name label is attached on the lid of the control box.

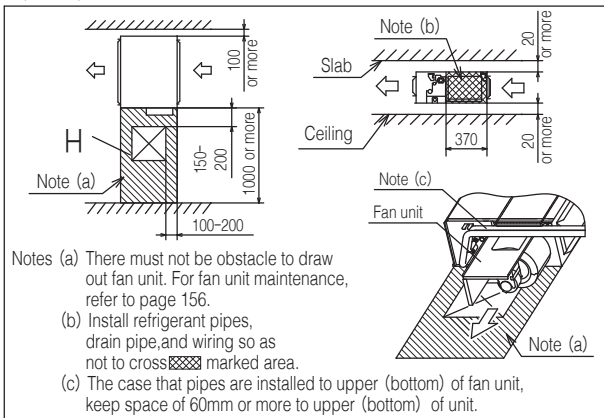


Unit:mm

Space for installation and service

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit

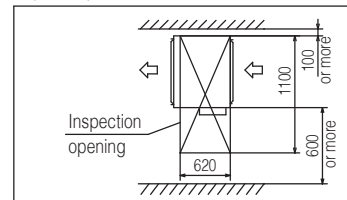


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to page 156.

(b) Install refrigerant pipes, drain pipe, and wiring so as not to cross marked area.

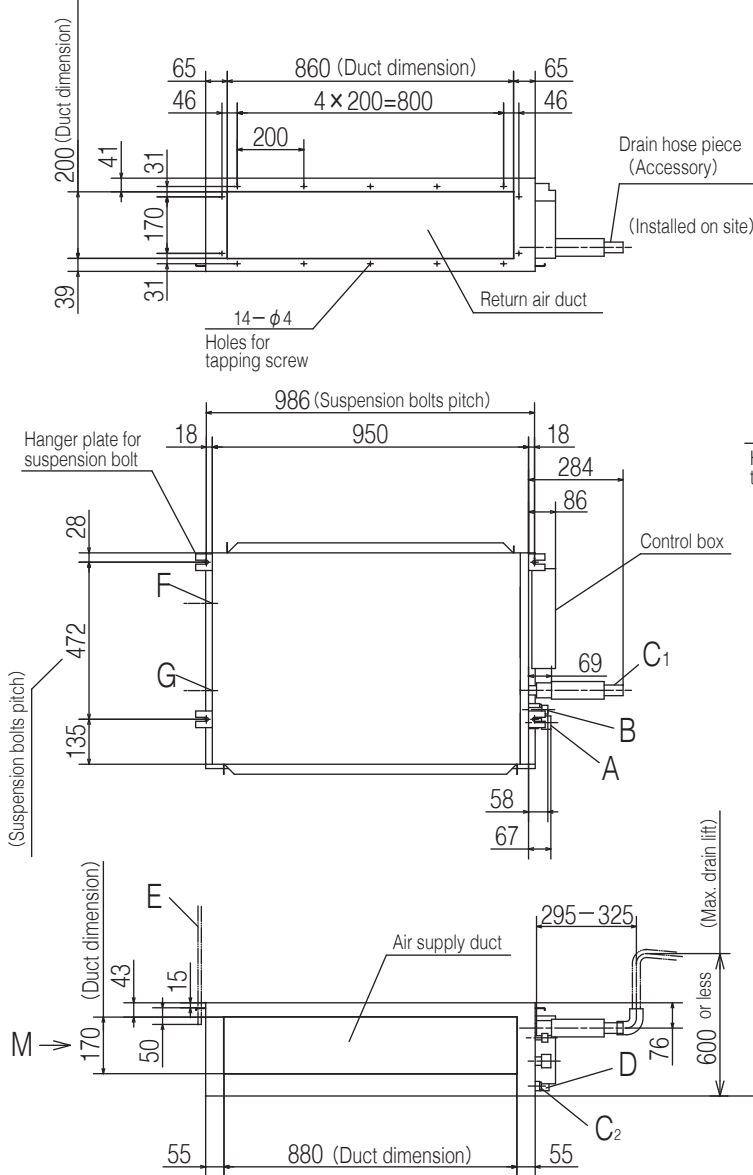
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

(Case 2) From bottom of unit



PJG000Z485

Models FDUM60VH, 71VH



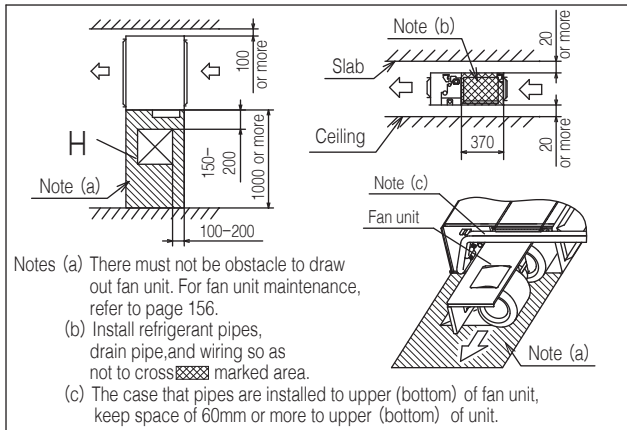
| Symbol | Content | | |
|--------|---------------------------------|-----------------------|------------------------|
| | Model | 60 | 71 |
| A | Gas piping | φ 12.7 (1/2") (Flare) | φ 15.88 (5/8") (Flare) |
| B | Liquid piping | φ 6.35 (1/4") (Flare) | φ 9.52 (3/8") (Flare) |
| C1 | Drain piping | VP25 (O.D.32) | |
| C2 | Drain piping (Gravity drainage) | VP20 | |
| D | Hole for wiring | | |
| E | Suspension bolts | (M10) | |
| F | Outside air opening for ducting | (φ 150) (Knock out) | |
| G | Air outlet opening for ducting | (φ 125) (Knock out) | |
| H | Inspection opening | (450×450) | |

Note (1) The model name label is attached on the lid of the control box.

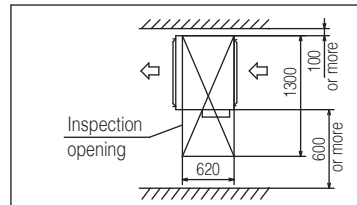
Space for installation and service

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit

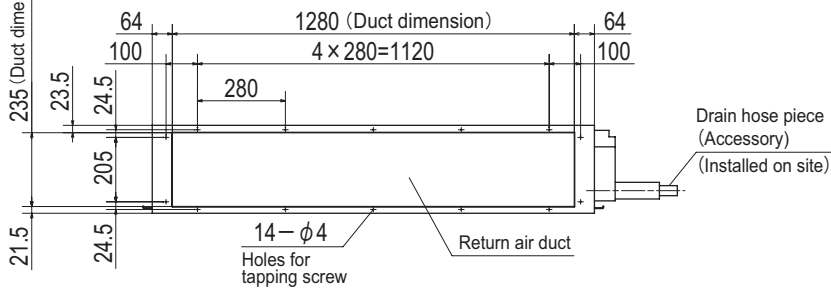


(Case 2) From bottom of unit

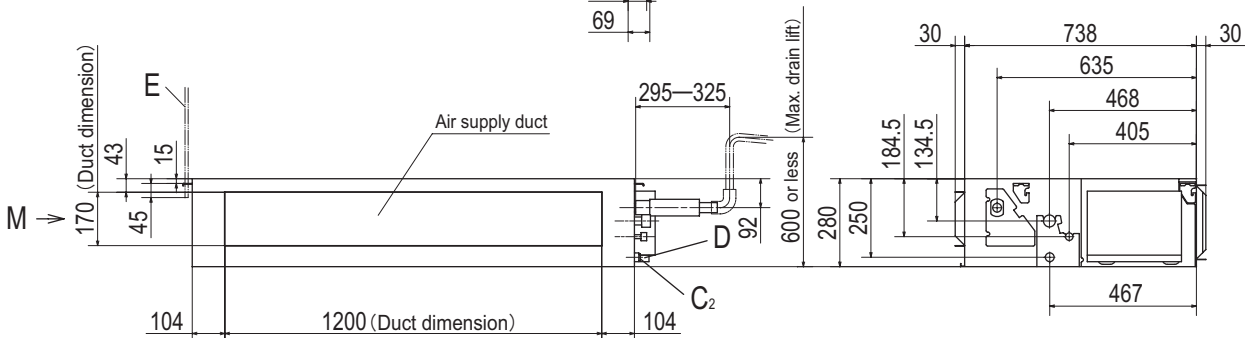
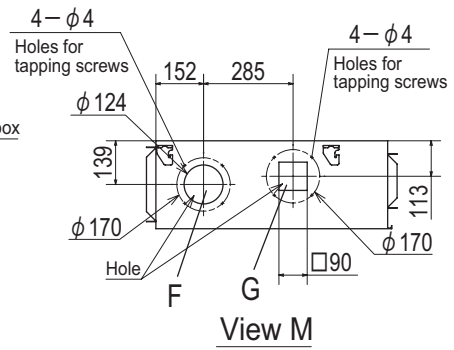
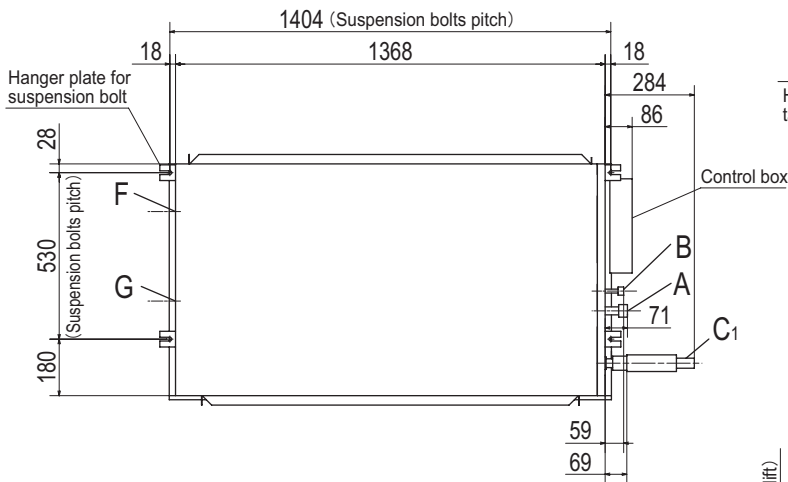


PJG000Z486

Models FDUM100VH, 125VH, 140VH



| Symbol | Content | |
|----------------|---------------------------------|------------------------|
| A | Gas piping | φ 15.88 (5/8") (Flare) |
| B | Liquid piping | φ 9.52 (3/8") (Flare) |
| C ₁ | Drain piping | VP25 (O.D.32) |
| C ₂ | Drain piping (Gravity drainage) | VP20 |
| D | Hole for wiring | |
| E | Suspension bolts | (M10) |
| F | Outside air opening for ducting | (φ 150) (Knock out) |
| G | Air outlet opening for ducting | (φ 125) (Knock out) |
| H | Inspection opening | (450×450) |

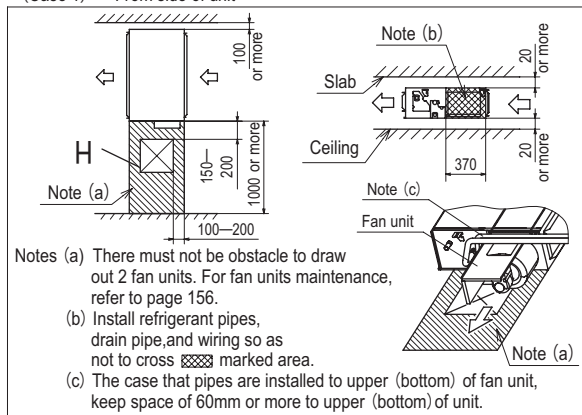


Unit:mm

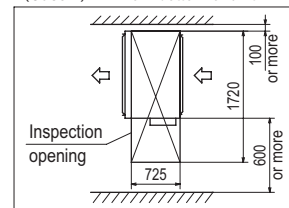
Space for installation and service

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



(Case 2) From bottom of unit

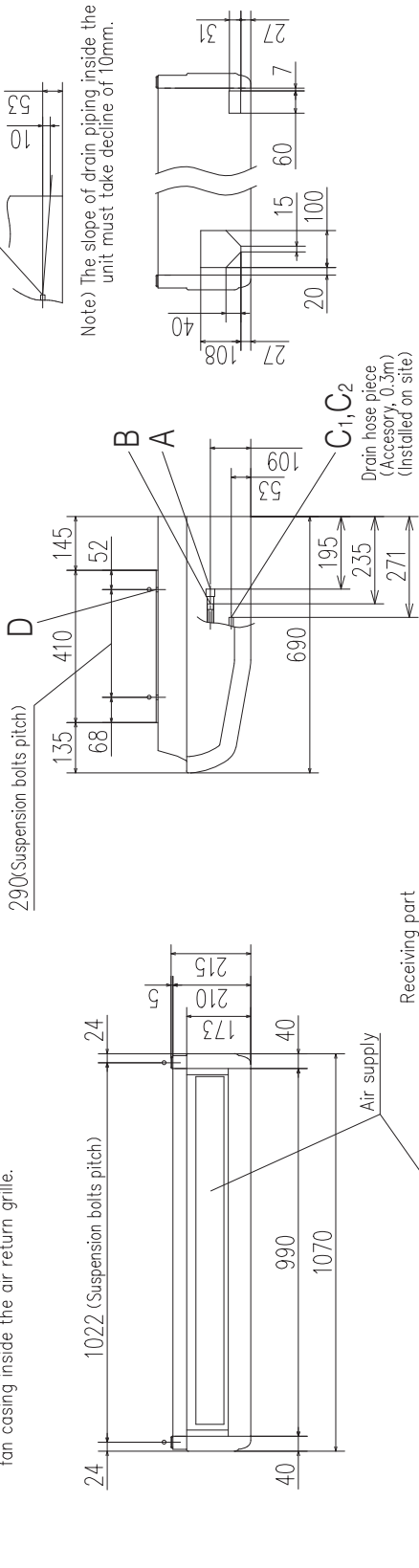


Note (1) The model name label is attached on the lid of the control box.

PJG000Z487

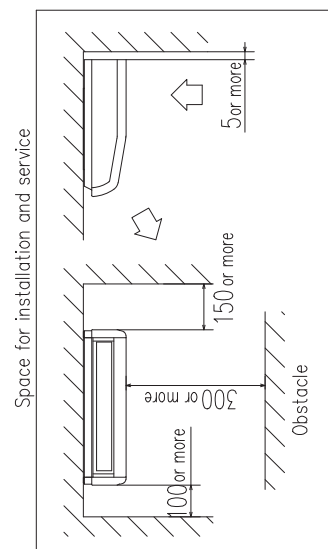
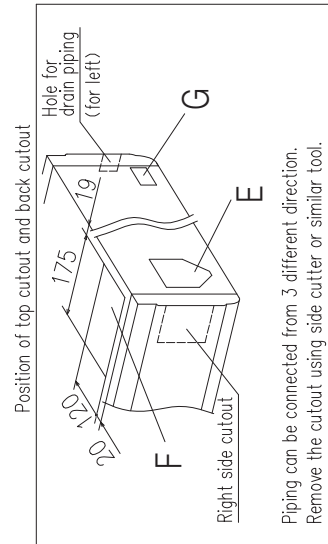
(d) Ceiling suspended type (FDE)
Models FDE40VH, 50VH

Note (1) The model name label is attached on the fan casing inside the air return grille.



| Symbol | Content |
|--------|--|
| A | Gas piping φ12.7 (1/2") (Flare) |
| B | Liquid piping φ6.35 (1/4") (Flare) |
| C-1,2 | Drain piping VP20 |
| D | Hole for suspension bolts (M10 or M8) |
| E | Back cutout PE cover |
| F | Top cutout Plate cover |
| G | Hole for drain piping (for left back) (Knock out) |

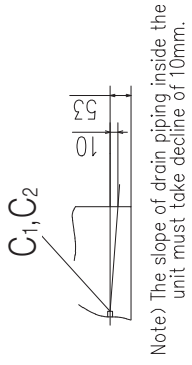
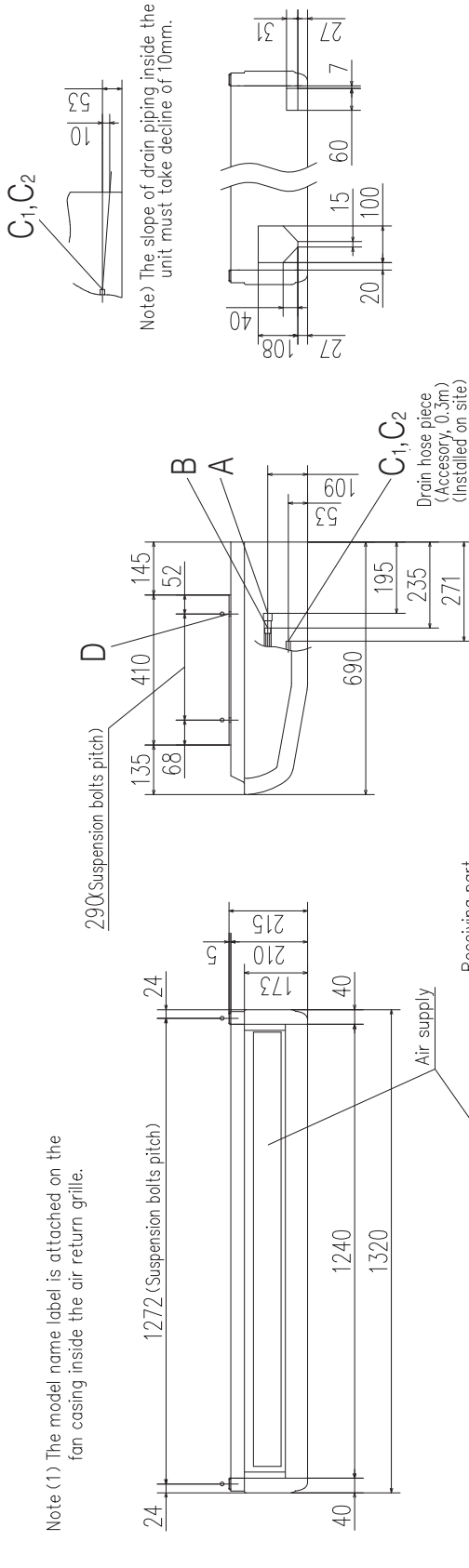
Unit:mm



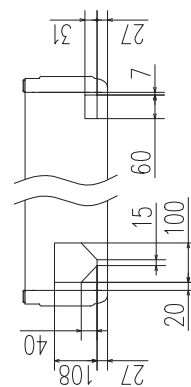
PFA004Z084

Models FDE60VH, 71VH

Note (1) The model name label is attached on the fan casing inside the air return grille.



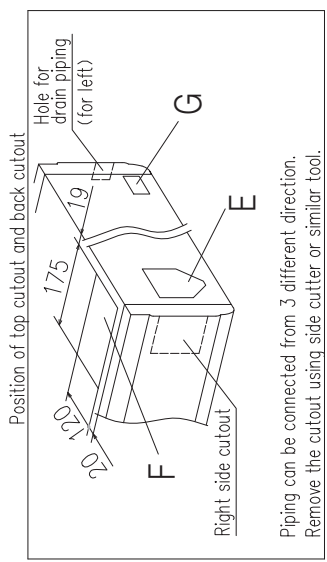
Note) The slope of drain piping inside the unit must take decline of 10mm.



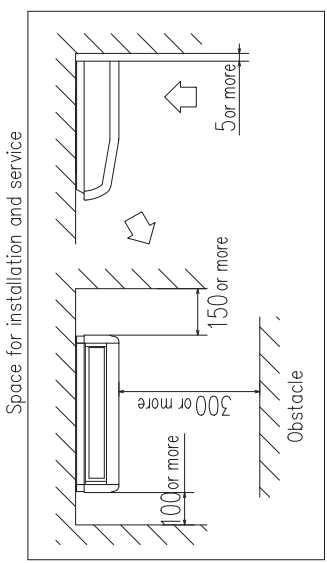
Drain hose piece (Accessory, 0.3m) (Installed on site)

| Symbol | Model | Content |
|--------|---------------------------------------|--|
| A | FDE60 | FDE71 |
| A | Gas piping | φ12.7 (1/2") (Flare) φ15.88 (5/8") (Flare) |
| B | Liquid piping | φ6.35 (1/4") (Flare) φ9.52 (3/8") (Flare) |
| C.1.2 | Drain piping | VP20 |
| D | Hole for suspension bolts | (M10 or M8) |
| E | Back cutout | PE cover |
| F | Top cutout | Plate cover |
| G | Hole for drain piping (for left back) | (knock out) |

Unit:mm



Piping can be connected from 3 different direction. Remove the cutout using side cutter or similar tool.

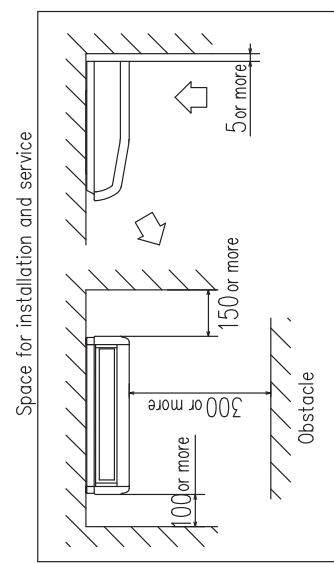
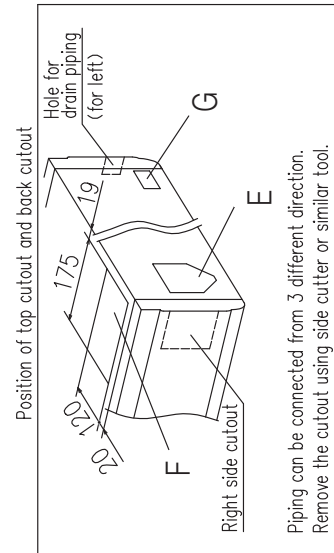
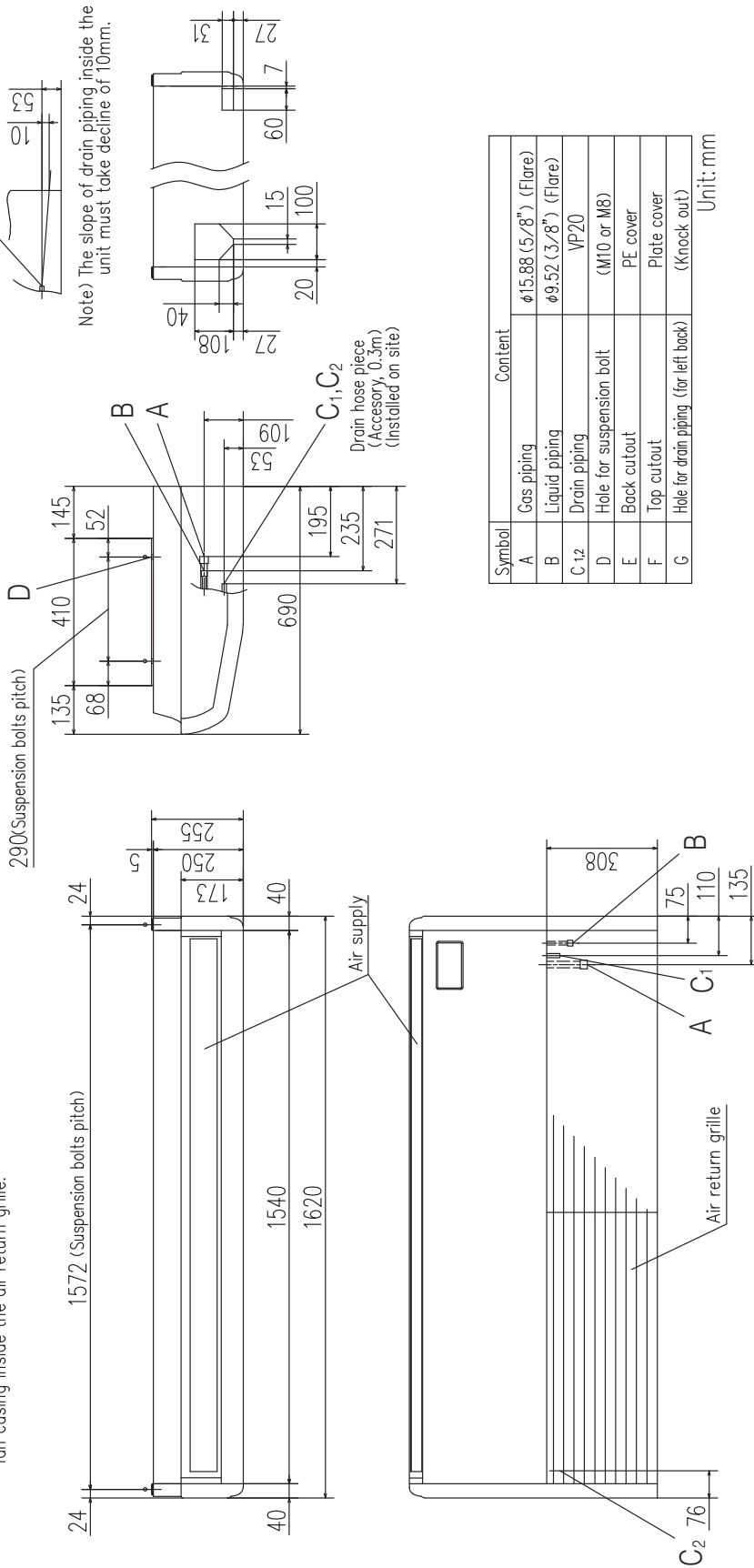


Make a space of 4500 or more between the units when installing more than one.

PFA004Z085

Models FDE100VH, 125VH, 140VH

Note (1) The model name label is attached on the fan casing inside the air return grille.

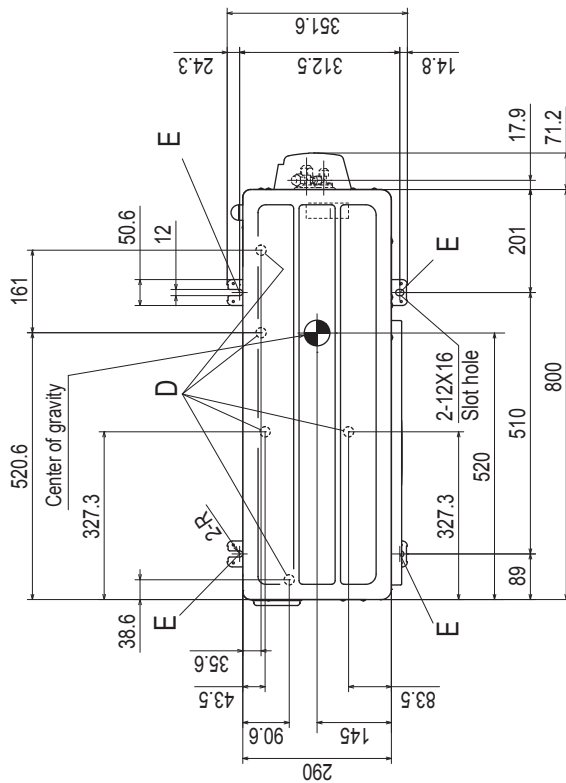


PFA004Z086

(2) Outdoor units

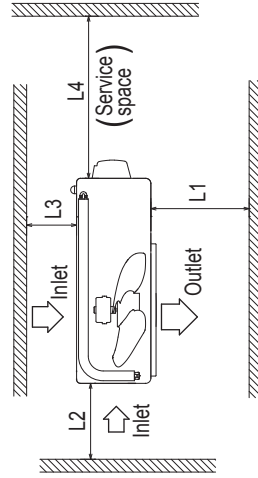
Models SRC40ZSX-S, 50ZSX-S, 60ZSX-S

| Symbol | Content |
|--------|--|
| A | Service valve connection (Gas side) $\phi 12.7(1/2")$ (Flare) |
| B | Service valve connection (Liquid side) $\phi 6.35(1/4")$ (Flare) |
| C | Pipe/cable draw-out hole |
| D | Drain discharge hole $\phi 20 \times 5$ places |
| E | Anchor bolt hole M10-12 \times 4 places |



Notes

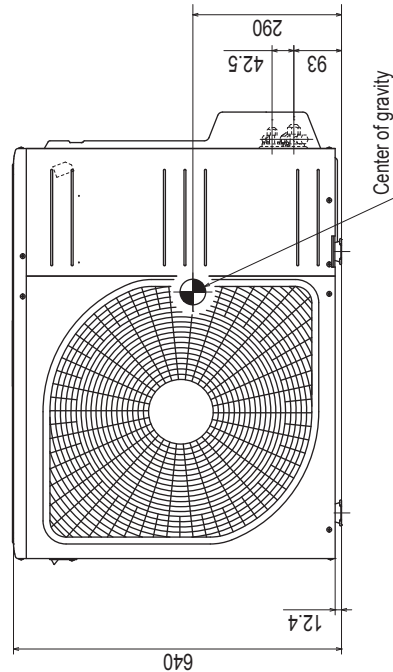
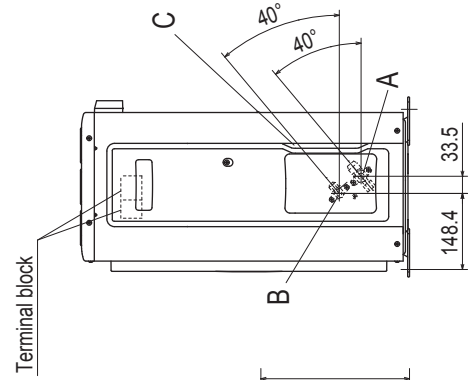
- (1) The unit must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) If the unit is installed in the location where there is a possibility of strong winds, place the unit such that the direction of air from the outlet gets perpendicular to the wind direction.
- (4) Leave 200mm or more space above the unit.
- (5) The wall height on the outlet side should be 1200mm or less.
- (6) The model name label is attached on the front side of the unit.



Minimum installation space

| Examples installation | I | II | III | IV |
|-----------------------|------|------|------|------|
| Size L1 | Open | 280 | 280 | 180 |
| Size L2 | 100 | 75 | Open | Open |
| Size L3 | 100 | 80 | 80 | 80 |
| Size L4 | 250 | Open | 250 | Open |

Unit:mm



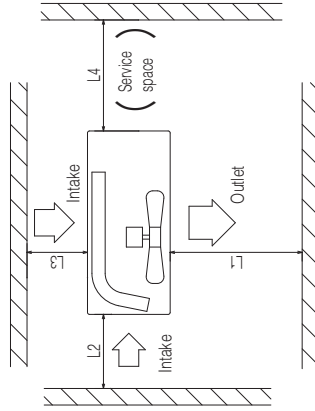
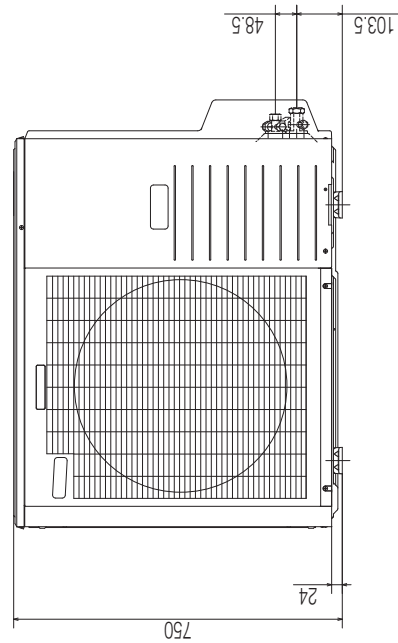
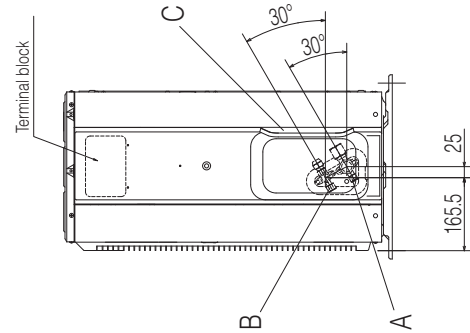
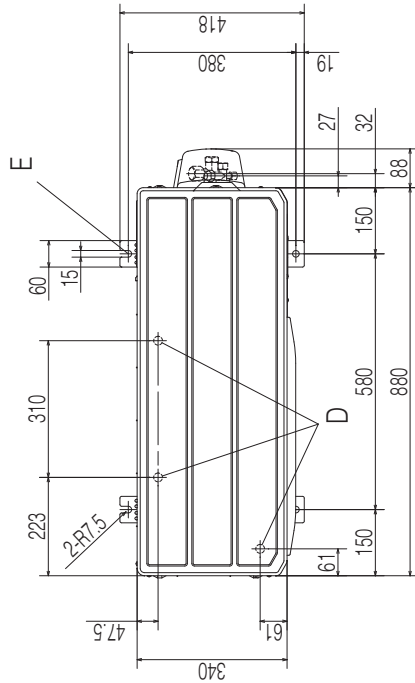
RCT000Z020

Model FDC71VNX

Notes

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the unit's height.
- (6) The model name label is attached on the lower right corner of the front panel.

| Symbol | Content |
|--------|---|
| A | Service valve connection (gas side) $\phi 15.88$ (5/8") (Flare) |
| B | Service valve connection (liquid side) $\phi 9.52$ (3/8") (Flare) |
| C | Pipe/cable draw-out hole |
| D | Drain discharge hole $\phi 20 \times 3$ places |
| E | Anchor bolt hole M10 x 4 places |



Minimum installation space

| Examples of installation Dimensions | I | II | III |
|-------------------------------------|------|------|------|
| L1 | Open | Open | 500 |
| L2 | 300 | 250 | Open |
| L3 | 100 | 150 | 100 |
| L4 | 250 | 250 | 250 |

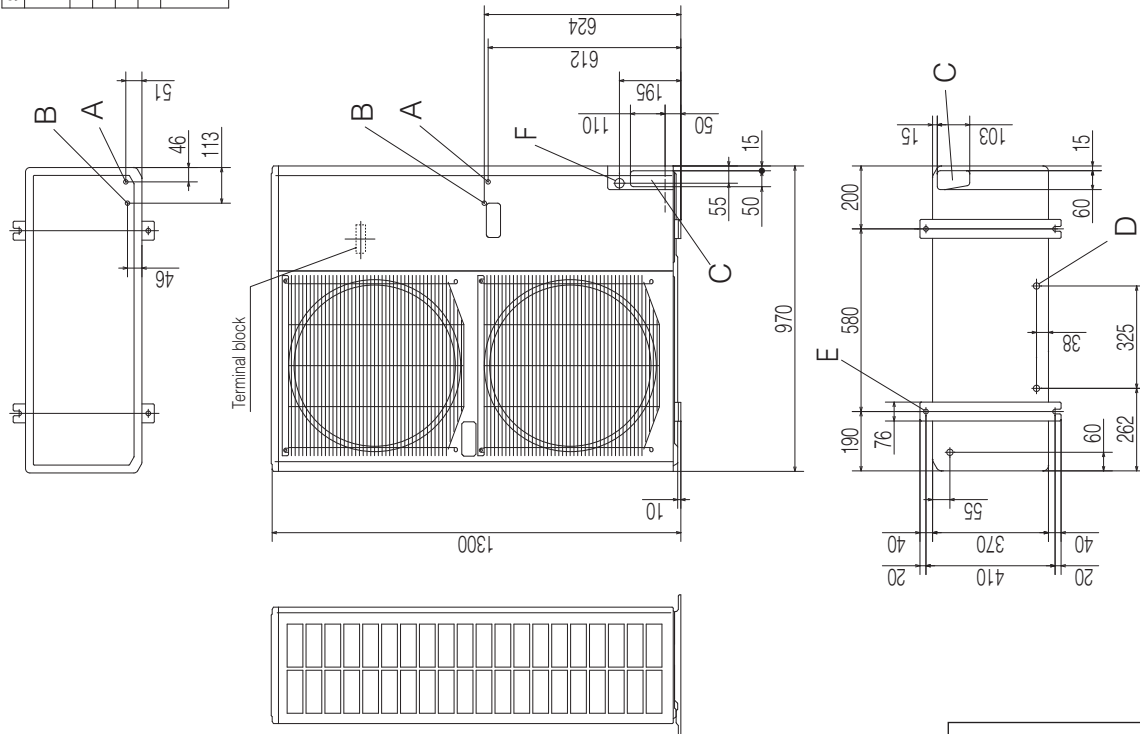
Unit:mm

**Models FDC100VNX, 125VNX, 140VNX
100VSX, 125VSX, 140VSX**

Notes

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.
- (7) Connect the Service valve with local pipe by using the pipe of the attachment. (Gas side only)

| Symbol | Content |
|--------|---|
| A | Service valve connection of the attached connecting pipe (gas side) $\phi 15.88$ (5/8") (Flare) |
| B | Service valve connection (liquid side) $\phi 9.52$ (3/8") (Flare) |
| C | Pipe/cable draw-out hole $\phi 20 \times 3$ places |
| D | Drain discharge hole M10 \times 4 places |
| E | Anchor bolt hole $\phi 30$ (front) $\phi 45$ (side) $\phi 50$ (back) |
| F | Cable draw-out hole |



| Examples of installation Dimensions | I | | II | | III | |
|-------------------------------------|-----|------|------|------|------|------|
| | L1 | Open | Open | Open | 500 | 500 |
| L2 | 300 | 300 | 5 | 5 | Open | Open |
| L3 | 150 | 150 | 300 | 300 | 150 | 150 |
| L4 | 5 | 5 | 5 | 5 | 5 | 5 |

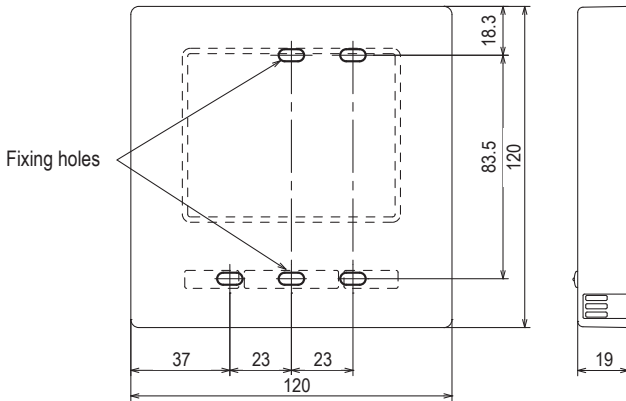
Unit:mm

(3) Remote control (Option parts)

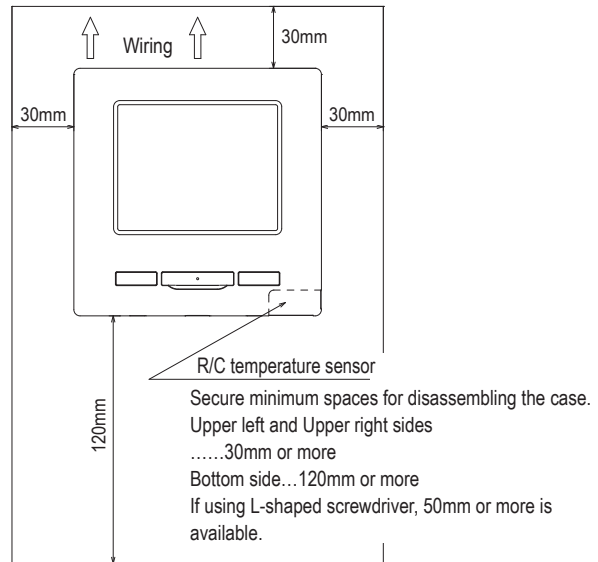
(a) Wired remote control

Model RC-EX3A

Dimensions (Viewed from front)



Installation space



• Do not install the remote control at following places.

- 1) It could cause break-down or deformation of remote control.
 - Where it is exposed to direct sunlight
 - Where the ambient temperature becomes 0 °C or below, or 40 °C or above
 - Where the surface is not flat
 - Where the strength of installation area is insufficient
- 2) Moisture may be attached to internal parts of the remote control, resulting in a display failure.
 - Place with high humidity where condensation occurs on the remote control
 - Where the remote control gets wet
- 3) Accurate room temperature may not be detected using the temperature sensor of the remote control.
 - Where the average room temperature cannot be detected
 - Place near the equipment to generate heat
 - Place affected by outside air in opening/closing the door
 - Place exposed to direct sunlight or wind from air-conditioner
 - Where the difference between wall and room temperature is large
- 4) When you are using the automatic grille up and down panel in the IU, you may not be able to confirm the up and down motion.
 - Where the IU cannot be visually confirmed

R/C cable:0.3mm²x2 cores

When the cable length is longer than 100 m, the max size for wires used in the R/C case is 0.5 mm². Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

| | |
|---------|--------------------------------|
| ≦ 200 m | 0.5 mm ² x 2 cores |
| ≦ 300m | 0.75 mm ² x 2 cores |
| ≦ 400m | 1.25 mm ² x 2 cores |
| ≦ 600m | 2.0 mm ² x 2 cores |

• When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

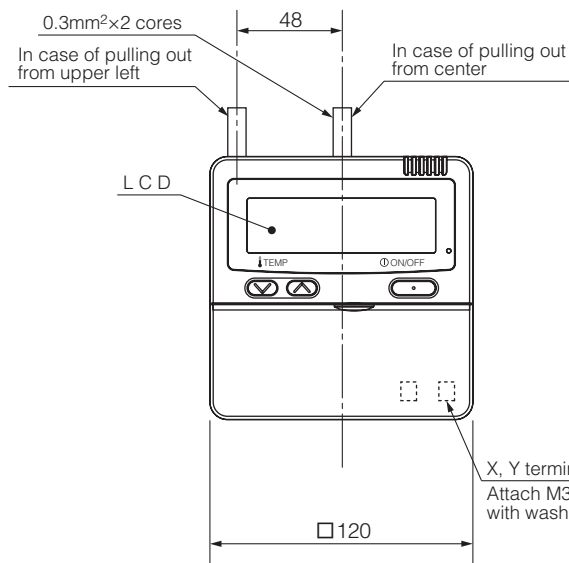
The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

Adapted RoHS directive

PJZ000Z333

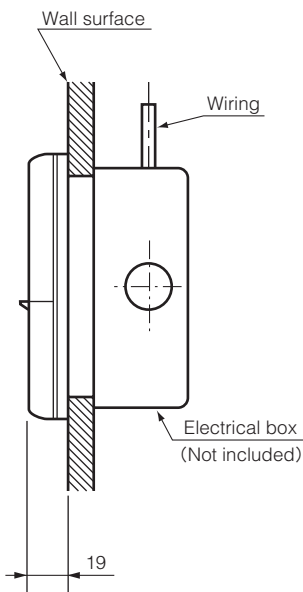
Model RC-E5

Exposed mounting

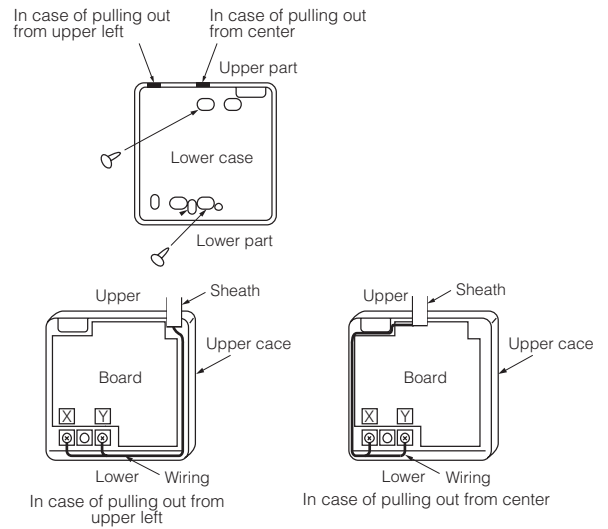


| | |
|-------------------------------------|------------------------------------|
| Exterior appearance (Munsell color) | Pearl white (N8.5) near equivalent |
|-------------------------------------|------------------------------------|

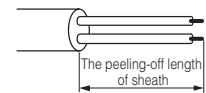
Embedded mounting



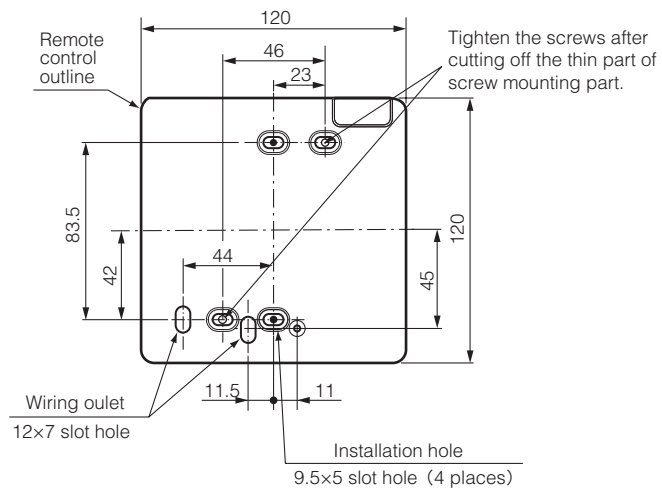
Wiring outlet
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.



| The peeling-off length of sheath | |
|--------------------------------------|--------------------------------------|
| Pulling out from upper left | Pulling out from center |
| X wiring : 215mm Y wiring : 195mm | X wiring : 170mm Y wiring : 190mm |



Remote control installation dimensions



- 1) Installation screw for remote control
M4 screw (2 pieces)

Unit:mm

Wiring specifications

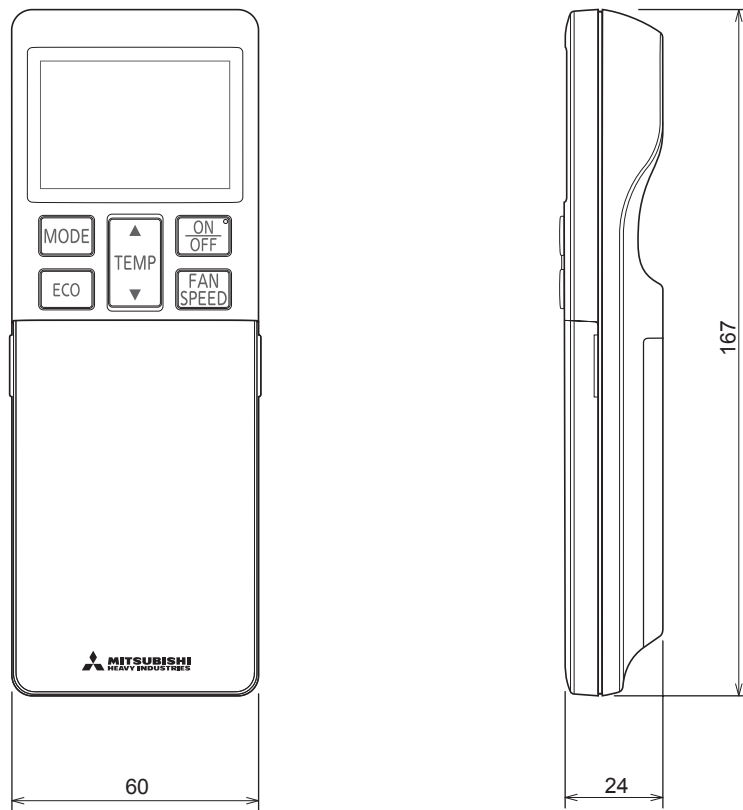
- 1) If the prolongation is over 100m, change to the size below.
But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

| Length | Wiring thickness |
|-------------|------------------------------|
| 100 to 200m | 0.5mm ² x2 cores |
| Under 300m | 0.75mm ² x2 cores |
| Under 400m | 1.25mm ² x2 cores |
| Under 600m | 2.0mm ² x2 cores |

PJZ000Z295

**(b) Wireless remote control
RCN-E2 (Option part)**

Unit: mm



1.3 ELECTRICAL WIRING

(1) Indoor units

(a) Ceiling cassette-4 way compact type (FDTC)

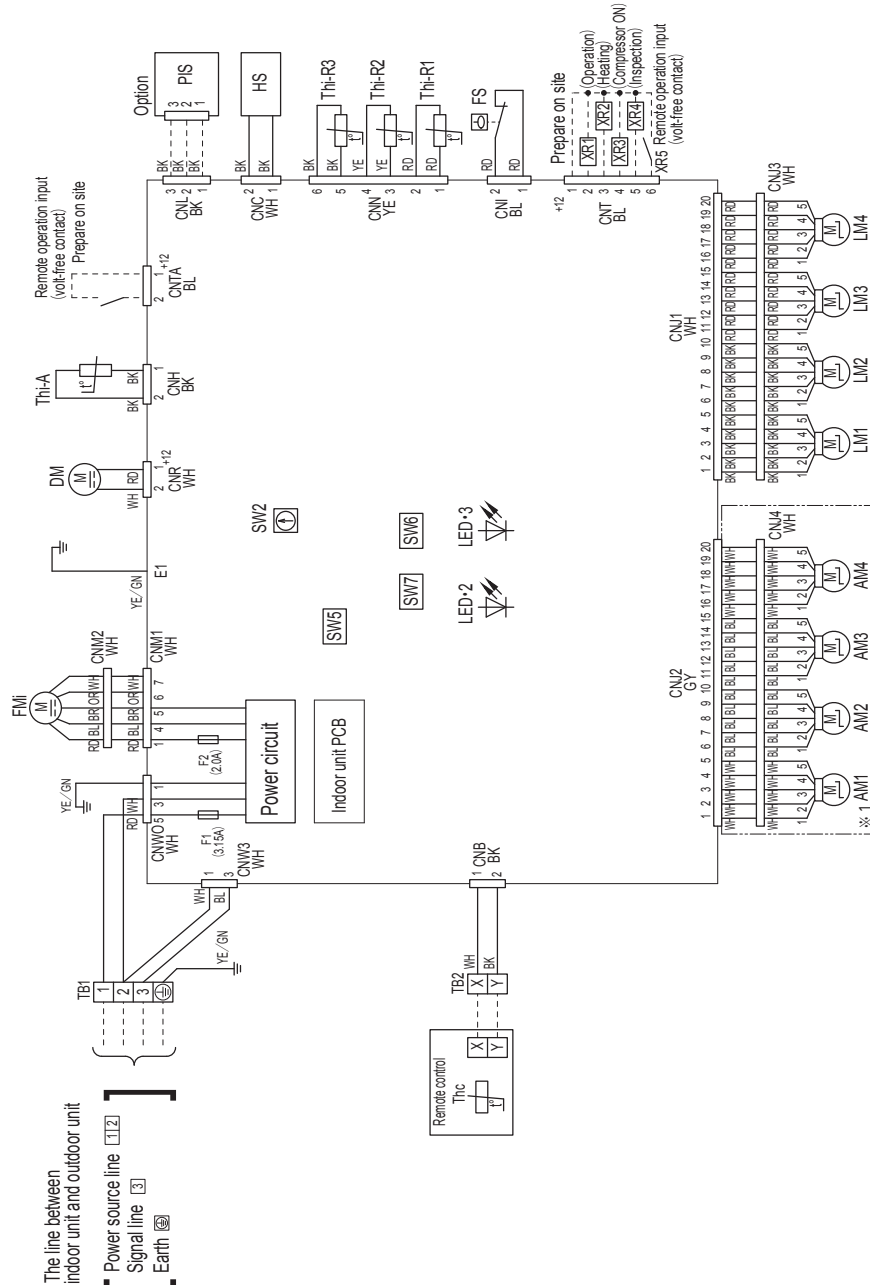
Models FDTC40VH, 50VH, 60VH

Meaning of marks

| Item | Description |
|------------|--|
| AM1-4 | Draft prevention function motor |
| CNB-Z | Connector |
| DM | Drain pump motor |
| F1.2 | Fuse |
| FMI | Fan motor |
| FS | Float switch |
| HS | Humidity sensor |
| LED-2 | Indication lamp (Green-Normal operation) |
| LED-3 | Indication lamp (Red-Inspection) |
| LM1-4 | Louver motor |
| PIS | Motion sensor |
| SW2 | Remote control communication address |
| SW5 | Plural units Master/Slave setting |
| SW6 | Model capacity setting |
| SW7-1 | Operation check, drain pump motor test run |
| TB1 | Terminal block (Power source) (□mark) |
| TB2 | Terminal block (Signal line) (□mark) |
| Thc | Temperature sensor (Remote control) |
| Thi-A | Temperature sensor (Return air) |
| Thi-R1,2,3 | Temperature sensor (Heat exchanger) |

Color marks

| Mark | Color | Mark | Color |
|------|--------|-------|--------------|
| BK | Black | WH | White |
| BL | Blue | YE | Yellow |
| BR | Brown | GY | Gray |
| OR | Orange | YE/GN | Yellow/Green |
| RD | Red | | |



- Notes
1. ----- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line.
 4. Do not put remote control line alongside power source line.
 5. Draft prevention function (※ 1) is provided on the panel TC-PSAE-5AW-E only.

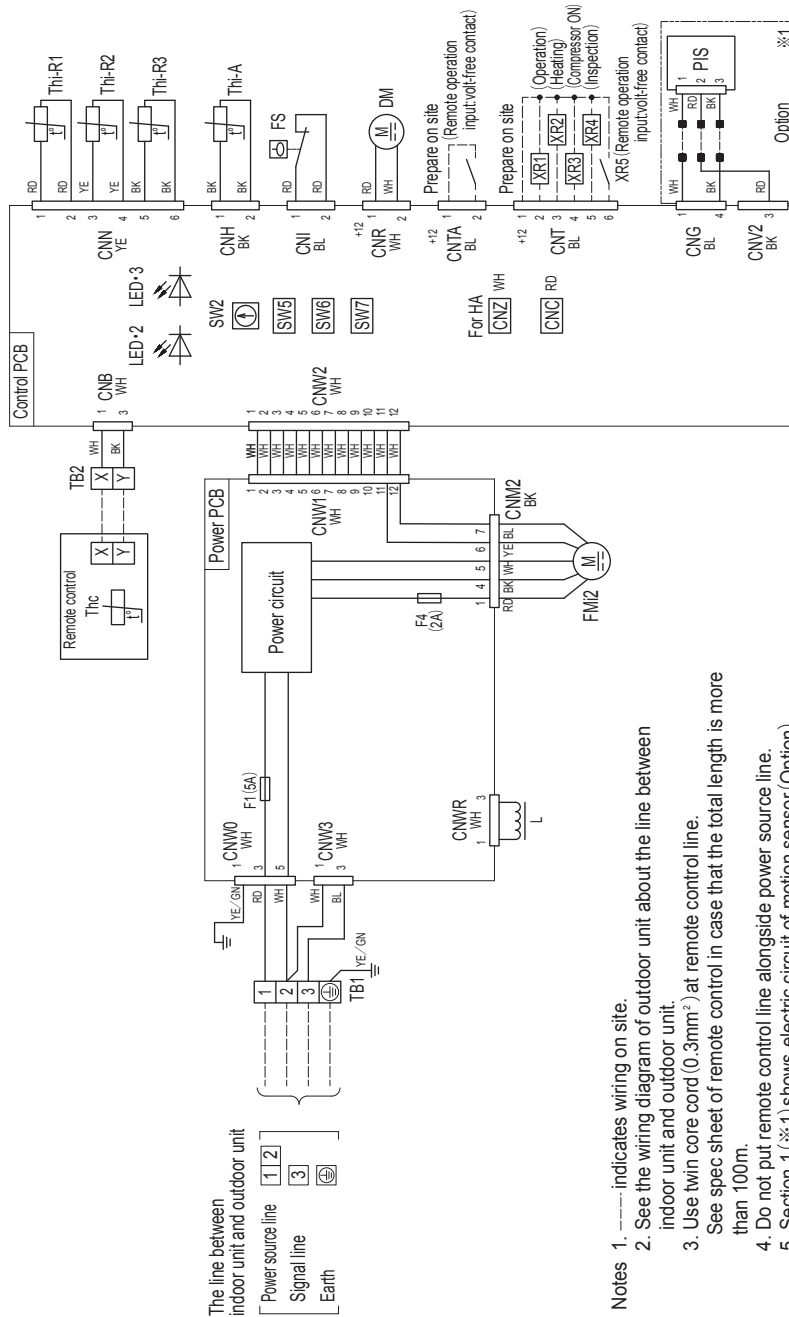
PJF000Z516

(b) Duct connected-High static pressure type (FDU)
Model FDU71VH

Meaning of marks

| Item | Description |
|------------|--|
| CNB-Z | Connector |
| DM | Drain pump motor |
| F1,4 | Fuse |
| FM2 | Fan motor |
| FS | Float switch |
| L | Reactor |
| LED-2 | Indication lamp (Green-Normal operation) |
| LED-3 | Indication lamp (Red-Inspection) |
| PIS | Motion sensor |
| SW2 | Remote control communication address |
| SW5 | Plural units Master / Slave setting |
| SW6 | Model capacity setting |
| SW7-1 | Operation check, drain pump motor test run |
| TB1 | Terminal block (Power source) (□mark) |
| TB2 | Terminal block (Signal line) (□mark) |
| Thc | Temperature sensor (Remote control) |
| Thi-A | Temperature sensor (Return air) |
| Thi-R1,2,3 | Temperature sensor (Heat exchanger) |
| □mark | Closed-end connector |

| Color Marks | Mark | Color |
|-------------|-------|----------------|
| | BK | Black |
| | BL | Blue |
| | RD | Red |
| | WH | White |
| | YE | Yellow |
| | YE/GN | Yellow / Green |



- Notes
1. ----- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).

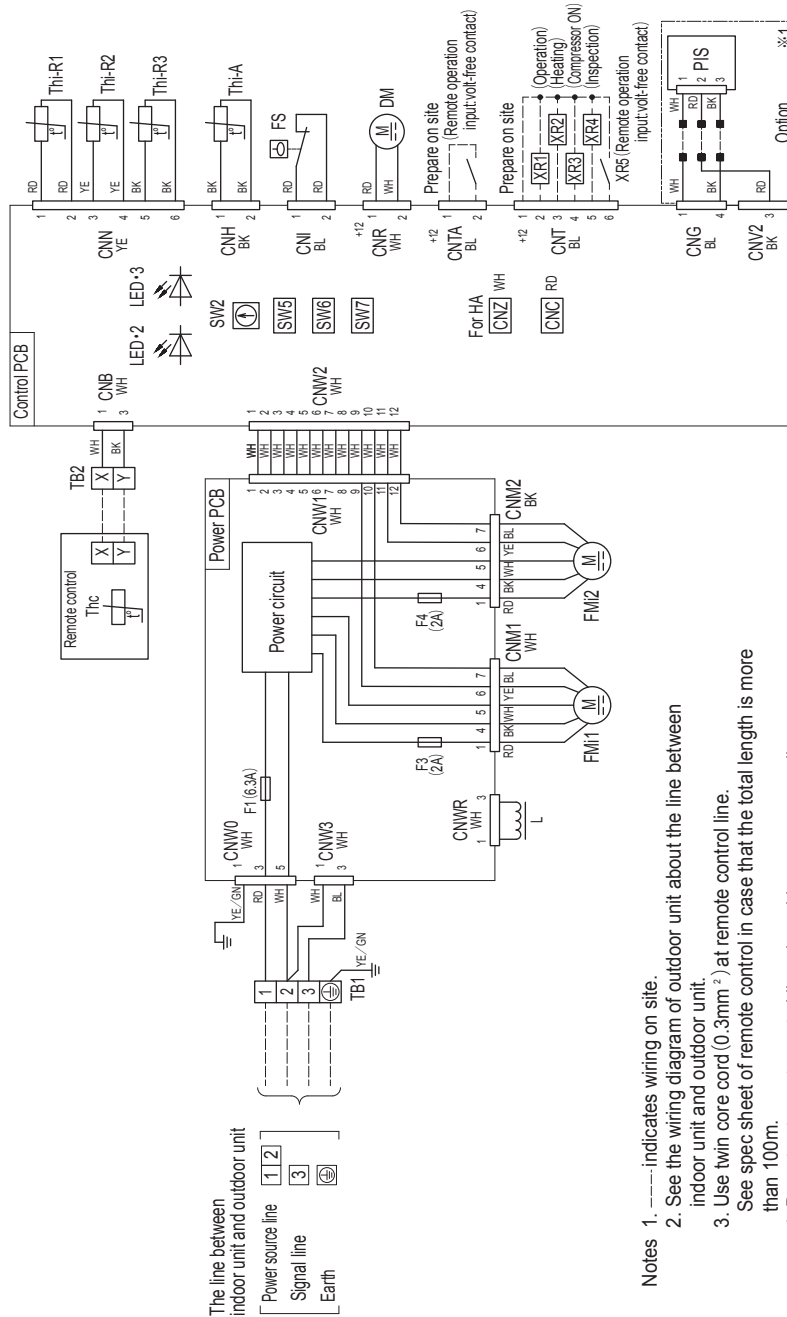
PJG000Z578

Models FDU100VH, 125VH, 140VH

Meaning of marks

| Item | Description |
|-----------|---|
| CNB-Z | Connector |
| DM | Drain pump motor |
| F1,3,4 | Fuse |
| FMI1,2 | Fan motor |
| FS | Float switch |
| L | Reactor |
| LED-2 | Indication lamp (Green-Normal operation) |
| LED-3 | Indication lamp (Red-Inspection) |
| PIS | Motion sensor |
| SW2 | Remote control communication address |
| SW5 | Plural units Master / Slave setting |
| SW6 | Model capacity setting |
| SW7-1 | Operation check/drain pump motor test run |
| TB1 | Terminal block (Power source) (□mark) |
| TB2 | Terminal block (Signal line) (□mark) |
| Thc | Temperature sensor (Remote control) |
| Th-A | Temperature sensor (Return air) |
| Th-R1,2,3 | Temperature sensor (Heat exchanger) |
| ■mark | Closed-end connector |

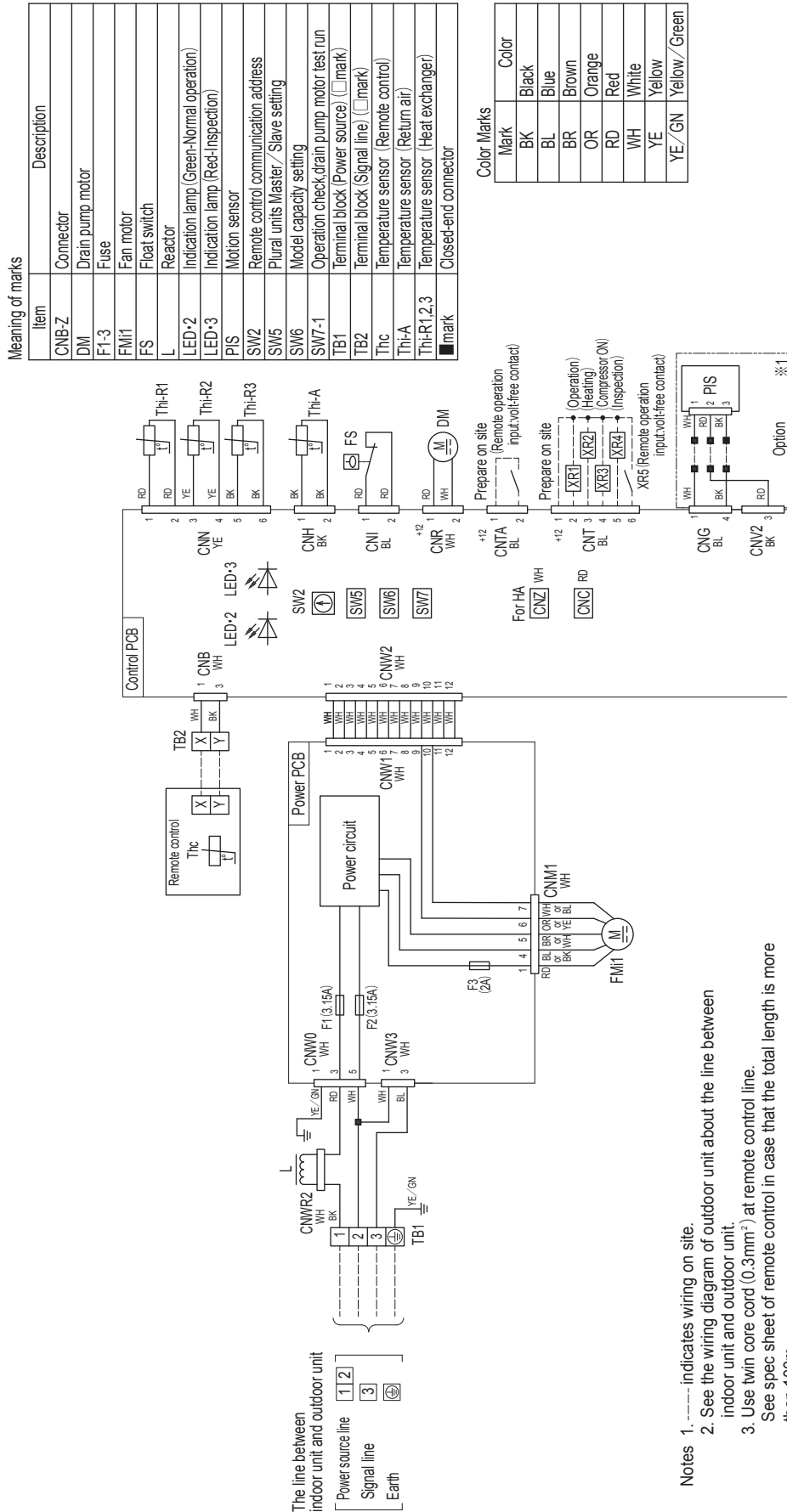
| Color Mark | Mark | Color |
|------------|-------|---------------|
| | BK | Black |
| | BL | Blue |
| | RD | Red |
| | WH | White |
| | YE | Yellow |
| | YE/GN | Yellow/ Green |



- Notes
1. --- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line. See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).

PJG000Z580

(c) Duct connected-Low / Middle static pressure type (FDUM)
 Models FDUM40VH, 50VH



- Notes
1. --- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).

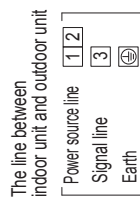
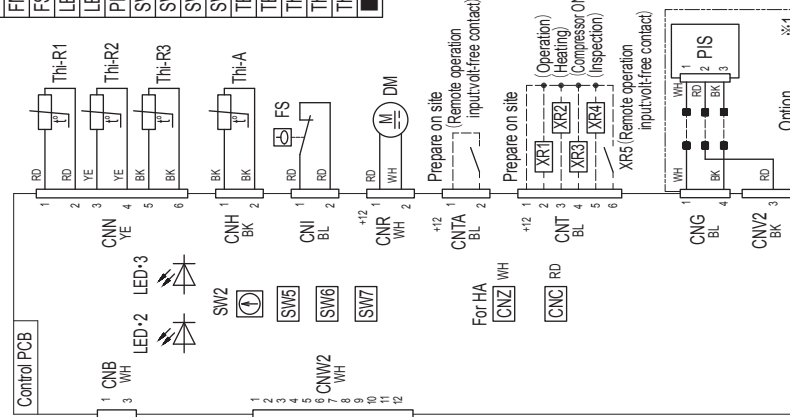
PJG000Z488

Model FDUM60VH, 71VH

Meaning of marks

| Item | Description |
|------------|--|
| CNB-Z | Connector |
| DM | Drain pump motor |
| F1.4 | Fuse |
| FM2 | Fan motor |
| FS | Float switch |
| LED-2 | Indication lamp (Green-Normal operation) |
| LED-3 | Indication lamp (Red-Inspection) |
| PIS | Motion sensor |
| SW2 | Remote control communication address |
| SW5 | Plural units Master / Slave setting |
| SW6 | Model capacity setting |
| SW7-1 | Operation check, drain pump motor test run |
| TB1 | Terminal block (Power source) (□mark) |
| TB2 | Terminal block (Signal line) (□mark) |
| Thc | Temperature sensor (Remote control) |
| Thi-A | Temperature sensor (Return air) |
| Thi-R1,2,3 | Temperature sensor (Heat exchanger) |
| ■mark | Closed-end connector |

| Mark | Color |
|-------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YE/GN | Yellow/Green |



The line between indoor unit and outdoor unit

- Notes
1. --- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line. See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).

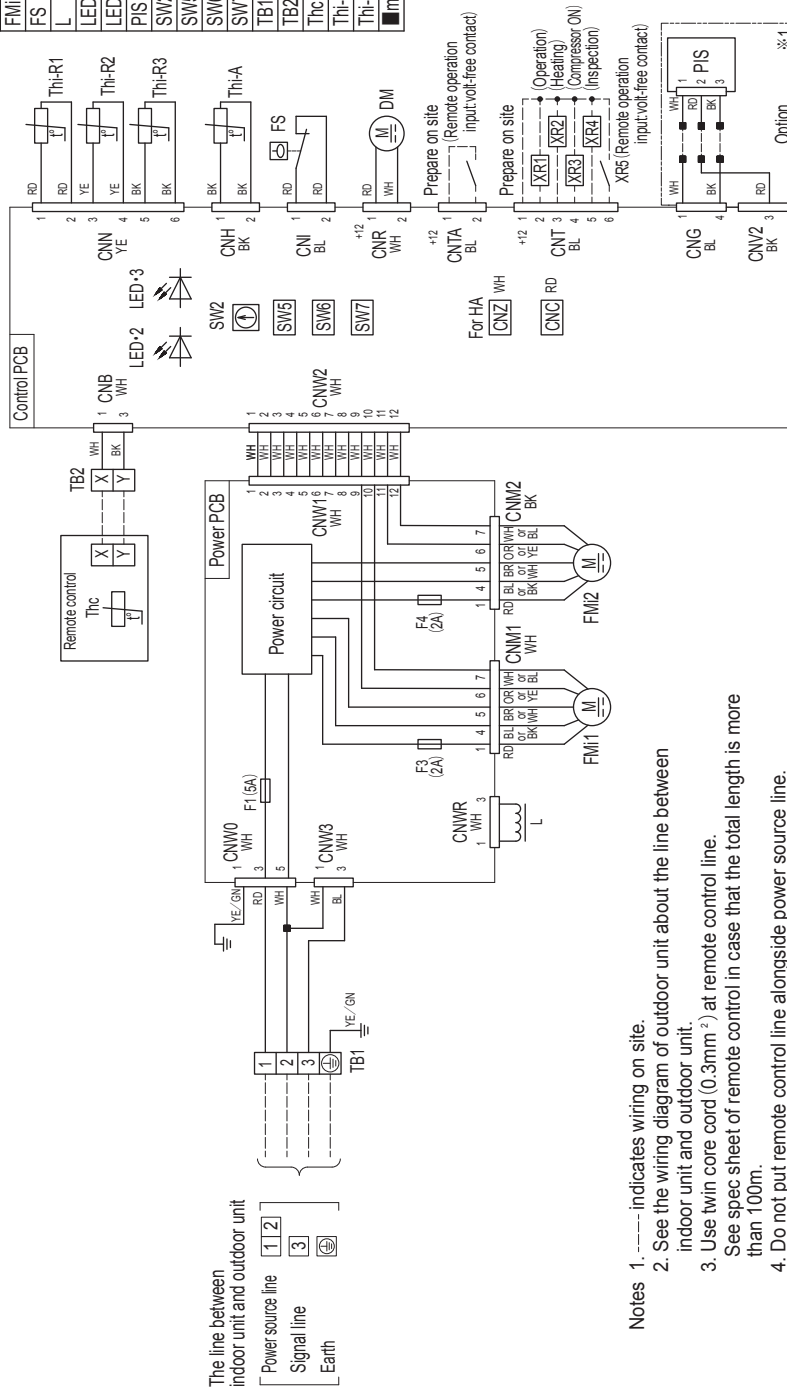
PJG000Z489

Models FDUM100VH, 125VH, 140VH

Meaning of marks

| Item | Description |
|--------------|---|
| CNB-Z | Connector |
| DM | Drain pump motor |
| F1.3.4 | Fuse |
| FM1.2 | Fan motor |
| FS | Float switch |
| L | Reactor |
| LED-2 | Indication lamp (Green-Normal operation) |
| LED-3 | Indication lamp (Red-Inspection) |
| PIS | Motion sensor |
| SW2 | Remote control communication address |
| SW5 | Plural units Master/ Slave setting |
| SW6 | Model capacity setting |
| SW7-1 | Operation check/drain pump motor test run |
| TB1 | Terminal block (Power source) (□mark) |
| TB2 | Terminal block (Signal line) (□mark) |
| Thc | Temperature sensor (Remote control) |
| Thi-A | Temperature sensor (Return air) |
| Thi-R1, 2, 3 | Temperature sensor (Heat exchanger) |
| ■mark | Closed-end connector |

| Color Marks | Color |
|-------------|---------------|
| Mark | Color |
| BK | Black |
| BL | Blue |
| BR | Brown |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YE/GN | Yellow/ Green |



The line between indoor unit and outdoor unit

Power source line [1][2]

Signal line [3]

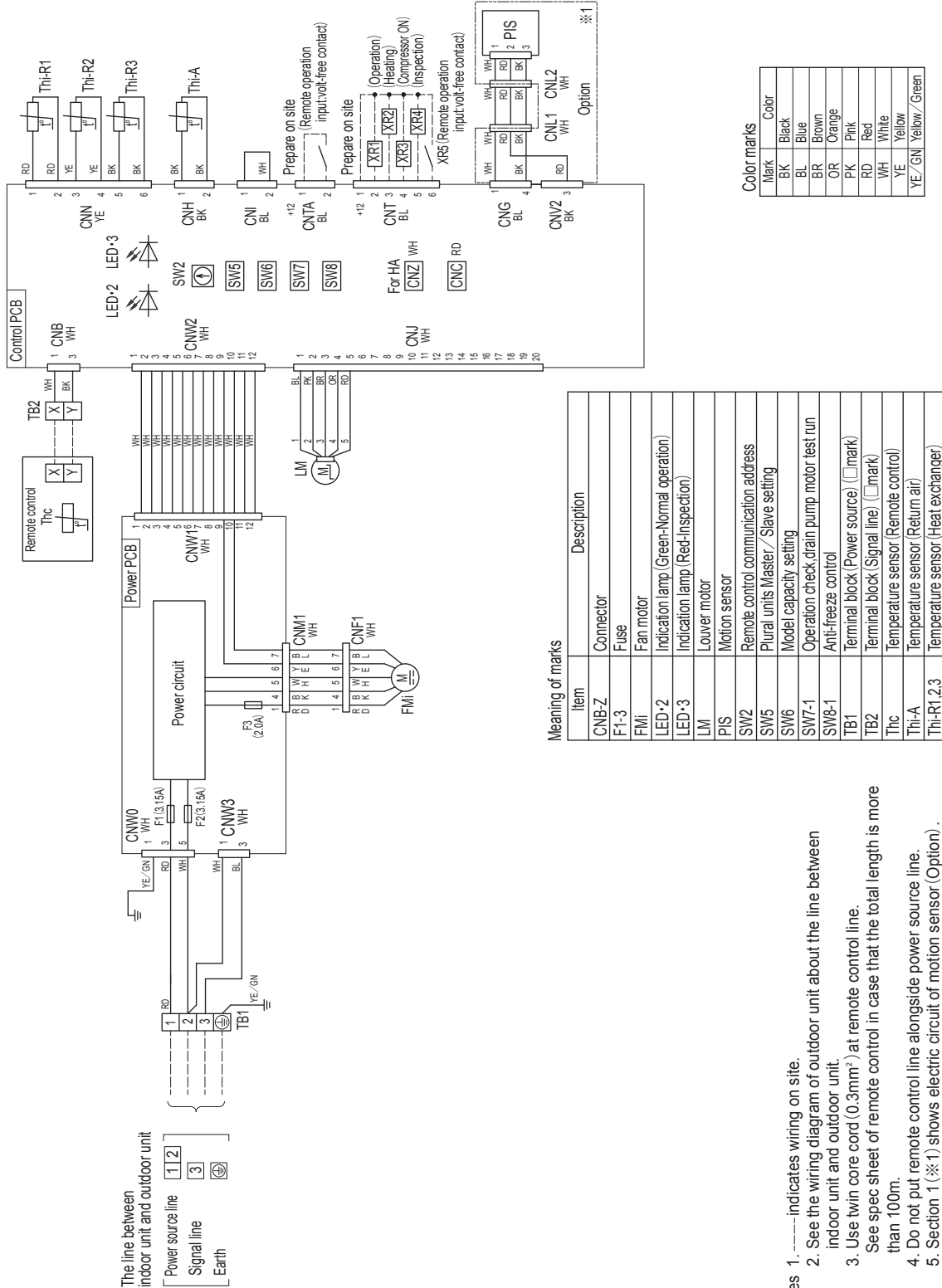
Earth [⊕]

- Notes
1. ----- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line. See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).

PJG000Z490

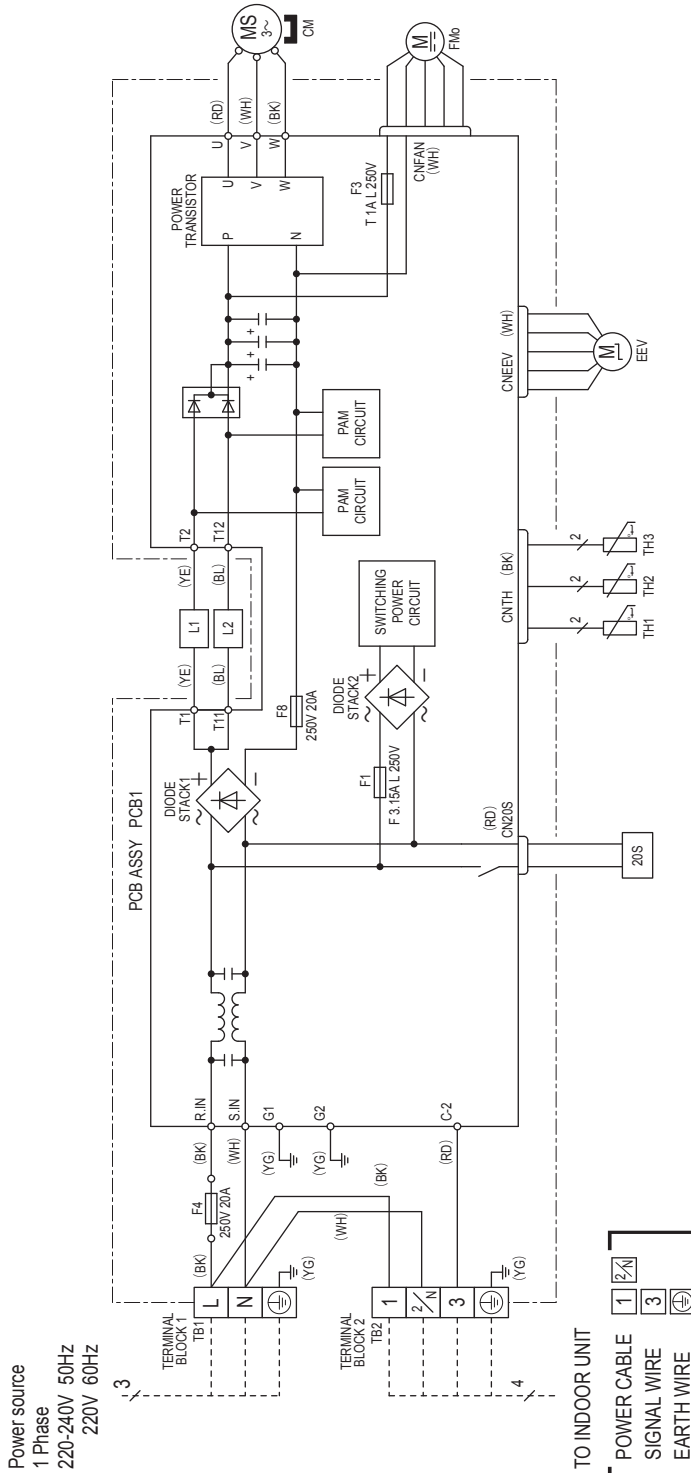
(d) Ceiling suspended type (FDE)

Models FDE40VH, 50VH, 60VH, 71VH, 100VH, 125VH, 140VH



PFA004Z087

(2) Outdoor units
 Models SRC40ZSX-S, 50ZSX-S, 60ZSX-S



Meaning of marks

| Item | Description |
|-------|-----------------------------------|
| 20S | Solenoid coil for 4-way valve |
| CN20S | Connector |
| CNEEV | |
| CNFAN | |
| CNTH | |
| CM | Compressor motor |
| EEV | Electric expansion valve (coil) |
| FMo | Fan motor |
| L1,2 | Reactor |
| TH1 | Heat exchanger temperature sensor |
| TH2 | Outdoor air temperature sensor |
| TH3 | Discharge pipe temperature sensor |

Color marks

| Mark | Color |
|------|----------------|
| BK | Black |
| BL | Blue |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow / Green |

Power cable, indoor-outdoor connecting wires

| Model name | MAX running current (A) | Power cable wire size x number* | Power cable length (m) | Connecting cable wire size x number* |
|------------|-------------------------|---------------------------------|------------------------|--------------------------------------|
| SRC40ZSX-S | 15 | 2.0mm ² x 3 | 13 | 1.5mm ² x 4 |
| SRC50ZSX-S | | | | |
| SRC60ZSX-S | | | | |

* The wire numbers include earth wire (Yellow / Green).
 * Switchgear or circuit breaker capacity should be chosen according to national or regional electricity regulations.
 * The power cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation failing outside of these conditions, please follow the national or regional electricity regulations.

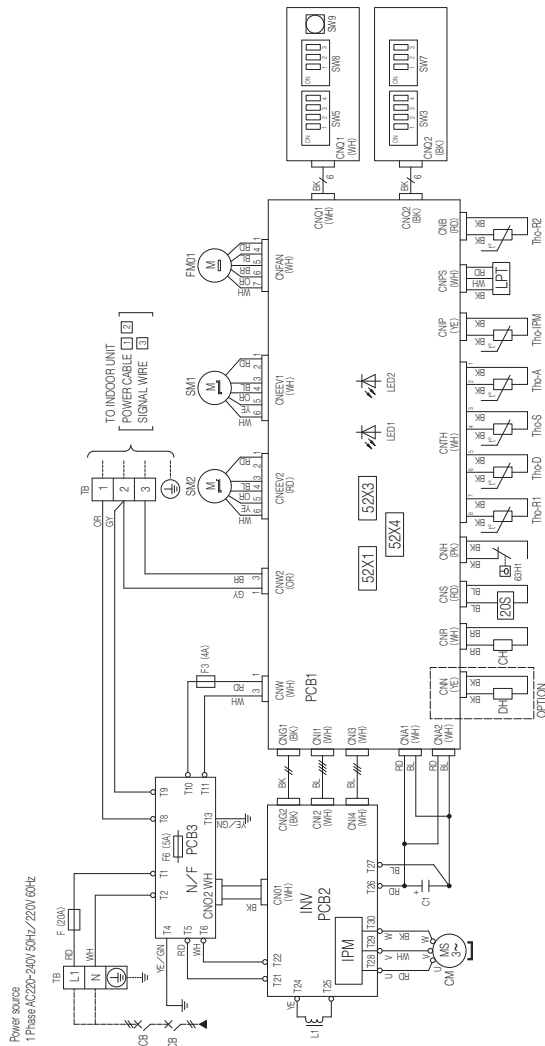
RWC000Z298

Model FDC71VNX

Meaning of marks

| Item | Description |
|----------|-------------------------------------|
| CM | Compressor motor |
| FM01 | Fan motor |
| CH | Crankcase heater |
| DH | Drain pan heater |
| 52X1 | Auxiliary relay (for CH) |
| 52X3 | Auxiliary relay (for 2OS) |
| 52X4 | Auxiliary relay (for DH) |
| 2OS | Solenoid valve for 4-way valve |
| SM1 | Expansion valve for cooling |
| SM2 | Expansion valve for heating |
| 63H1 | High pressure switch |
| Tho-A | Temperature sensor (Outdoor air) |
| Tho-D | Temperature sensor (Discharge pipe) |
| Tho-R1R2 | Temperature sensor (Heat exchanger) |
| Tho-S | Temperature sensor (Suction pipe) |
| Tho-IPM | Temperature sensor (IPM) |
| LPT | Low pressure sensor |
| IPM | Intelligent power module |
| TB | Terminal block |
| FF3 | Fuse |
| CnA-Z | Connector |
| SW9 | Pump down switch |
| SW3.5 | Local setting switch |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| L1 | Reactor |

| Mark | Color |
|-------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YE/GN | Yellow/Green |
| GY | Gray |
| PK | Pink |



Local setting switch SW3, SW4, SW5 (Set up at shipment OFF)

| | | |
|---------|------------------------|--|
| SW3-1 | Defrost control change | The defrost operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point. |
| SW3-2 | Show guard fan control | When this switch is turned ON, the outdoor fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON. |
| SW5-3,4 | Trial operation | Method of trial operation 1. Trial operation can be performed by using SW5-3. 2. Cooling trial operation will be performed when SW5-4 is OFF, and heating trial operation when SW5-4 is ON. 3. Be sure to turn OFF SW5-3 after the trial operation is finished. |

| Power cable, indoor-outdoor connecting wires | | | |
|--|----------------------|------------------------|-----------------------------------|
| Model | MAX over current (A) | Power cable length (m) | Indoor-outdoor wire size x number |
| FDC71 | 17 | 21 | φ 1.6mm x 3 |

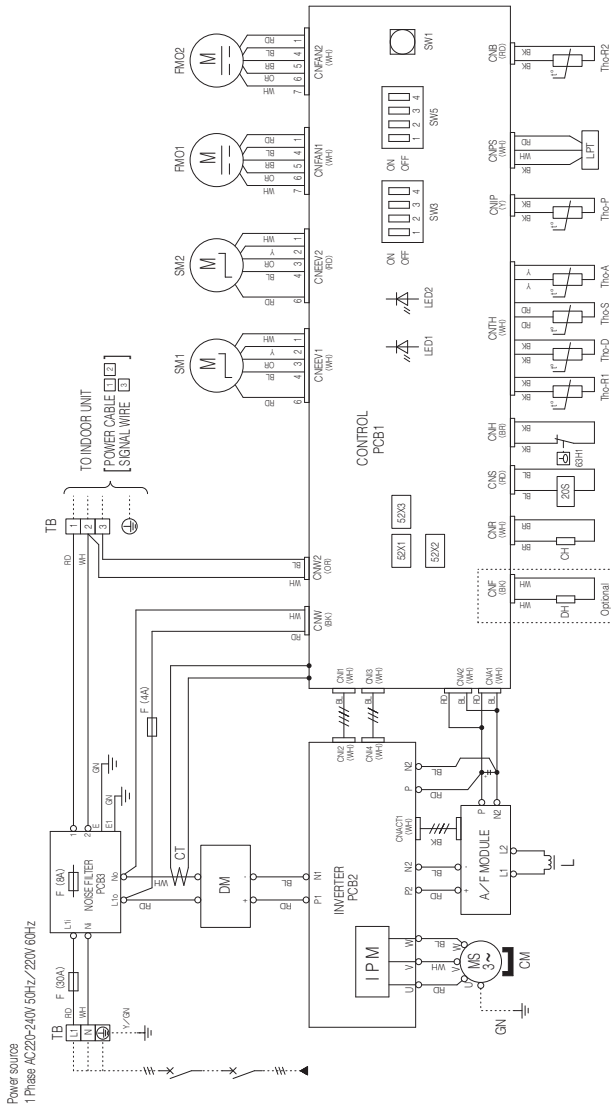
- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switching gear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.
- Don't operate SW3-3, SW5-1, SW5-2, SW7, SW8

PCA001Z605

Models FDC100VNX, 125VNX, 140VNX

| Color marks | | Meaning of marks | |
|-------------|--------------|------------------|--|
| Mark | Color | Item | Description |
| BK | Black | CrA-Z | Connector |
| BL | Blue | CH | Crankcase heater |
| BR | Brown | DH | Drain pan heater |
| GN | Green | CM | Compressor motor |
| GR | Gray | CT | Current sensor |
| P | Pink | DM | Diode module |
| OR | Orange | F | Fuse |
| RD | Red | FM01 | Fan motor |
| WH | White | IPM | Intelligent power module |
| Y | Yellow | L | Reactor |
| Y/GN | Yellow/Green | LED1 | Indication lamp (GREEN) |
| | | LED2 | Indication lamp (RED) |
| | | LPT | Low pressure sensor |
| | | SM1 | Expansion valve for cooling |
| | | SM2 | Expansion valve for heating |
| | | SW1 | Pump down switch |
| | | SW3.5 | Local setting switch |
| | | TB | Terminal block |
| | | Tho-A | Temperature sensor (Outdoor air) |
| | | Tho-D | Temperature sensor (Discharge pipe) |
| | | Tho-P | Temperature sensor (IPM) |
| | | Tho-R1,2 | Temperature sensor (Heat exchanger pipe) |
| | | Tho-S | Temperature sensor (Station pipe) |
| | | 20S | Solenoid valve for 4-way valve |
| | | 52X1 | Auxiliary relay (for CH) |
| | | 52X2 | Auxiliary relay (for DH) |
| | | 52X3 | Auxiliary relay (for 20S) |
| | | 63H1 | High pressure switch |

| Mark | Color |
|------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GN | Green |
| GR | Gray |
| P | Pink |
| OR | Orange |
| RD | Red |
| WH | White |
| Y | Yellow |
| Y/GN | Yellow/Green |



Local setting switch SW3 (Set up at shipment OFF)

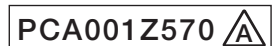
| SW3-1 | SW3-2 | SW3-3,4 |
|------------------------|------------------------|-----------------|
| Defrost control change | Snow guard fan control | Trial operation |

The defrost operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point.
When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON.
Method of trial operation
① Trial operation can be performed by using SW3-3,4.
② Compressor will be in the operation when SW3-3 is ON.
③ Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON.
④ Be sure to turn OFF SW3-3 after the trial operation is finished.

Power cable, indoor-outdoor connecting wires

| Model | MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm) |
|--------|----------------------|-------------------------------------|------------------------|-----------------------------------|----------------------|
| FDC100 | 24 | 5.5 | 25 | φ 1.6mm x 3 | φ 1.6 |
| FDC125 | 26 | | | | |
| FDC140 | | | | | |

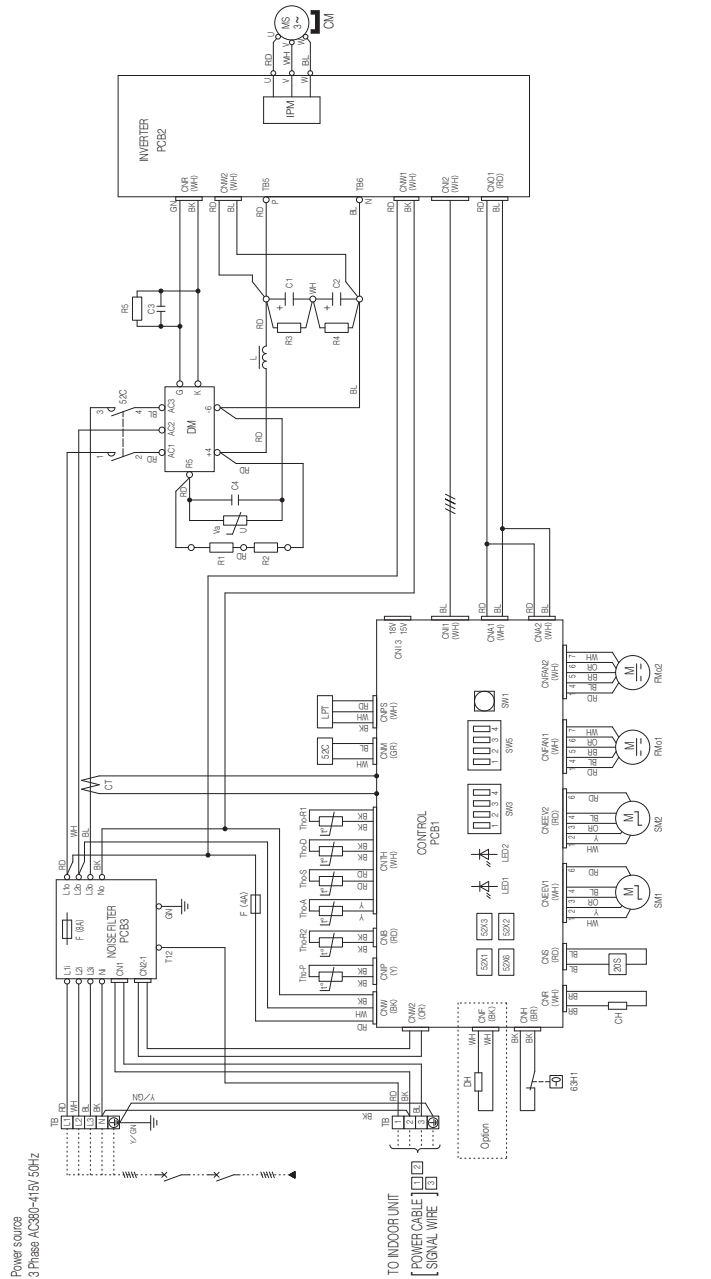
- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation failing outside of these conditions, please follow the internal cabling regulations. A dapt. fit to the regulation in effect in each country.



Models FDC100VSX, 125VSX, 140VSX

Meaning of marks

| Item | Description |
|----------|--|
| CH | Crankcase heater |
| CM | Compressor motor |
| CnA-Z | Connector |
| CT | Current sensor |
| DH | Drain pan heater |
| DM | Diode module |
| F | Fuse |
| FMo.1.2 | Fan motor |
| IPM | Intelligent power module |
| L | Reactor |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| LPT | Low pressure sensor |
| SM1 | Expansion valve for cooling |
| SM2 | Expansion valve for heating |
| SW1 | Pump down switch |
| SW3.5 | Local setting switch |
| TB | Terminal block |
| Tho-A | Temperature sensor (Outdoor air) |
| Tho-D | Temperature sensor (Discharger pipe) |
| Tho-R1.2 | Temperature sensor (Heat exchanger pipe) |
| Tho-S | Temperature sensor (Suction pipe) |
| Tho-P | Temperature sensor (IPM) |
| ZCS | Solenoid valve for 4-way valve |
| S2C | Relay |
| S2X1 | Auxiliary relay (for CH) |
| S2X2 | Auxiliary relay (for DH) |
| S2X3 | Auxiliary relay (for ZCS) |
| S2X6 | Auxiliary relay (for S2C) |
| 63H1 | High pressure switch |



Color marks

| Mark | Color |
|------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| CR | Orange |
| RD | Red |
| WH | White |
| Y | Yellow |
| Y/GN | Yellow/Green |
| GR | Gray |
| P | Pink |

Local setting switch SW3 (Set up at shipment OFF)

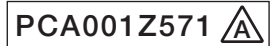
| SW3-1 | Defrost control change |
|---------|------------------------|
| SW3-2 | Snow guard fan control |
| SW3-3.4 | Trial operation |

The defrost operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point.
 When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON.
 Method of trial operation
 ① Trial operation can be performed by using SW3-3.4.
 ② Compressor will be in the operation when SW3-3 is ON.
 ③ Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON.
 ④ Be sure to turn OFF SW3-3 after the trial operation is finished.

Power cable, indoor-outdoor connecting wires

| Model | MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm) |
|--------|----------------------|-------------------------------------|------------------------|-----------------------------------|----------------------|
| FDC100 | 15 | 3.5 | 27 | φ 1.6mm x 3 | φ 1.6 |
| FDC125 | | | | | |
| FDC140 | | | | | |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.



1.4 NOISE LEVEL

Notes(1) The data are based on the following conditions.

Ambient air temperature: Indoor unit 27°CWB. Outdoor unit 35°CDB.

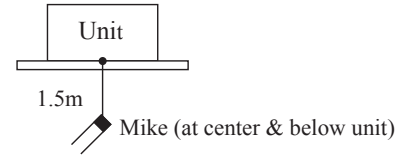
(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

(1) Indoor units

(a) Ceiling cassette-4 way compact type (FDTC)

Measured based on JIS B 8616
Mike position as right

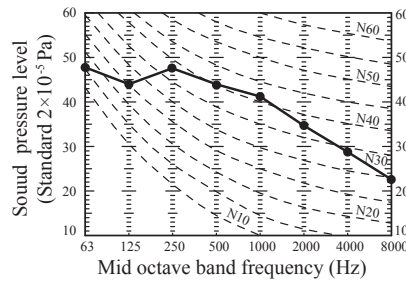
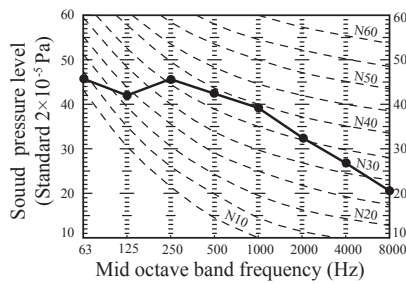


Model FDTC40VH,50VH

Noise level 44 dB (A) at P-Hi
40 dB (A) at Hi
35 dB (A) at Me
27 dB (A) at Lo

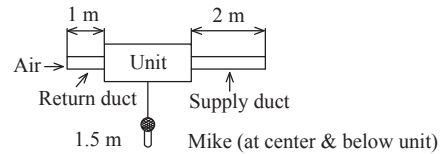
Model FDTC60VH

Noise level 46 dB (A) at P-Hi
42 dB (A) at Hi
38 dB (A) at Me
31 dB (A) at Lo



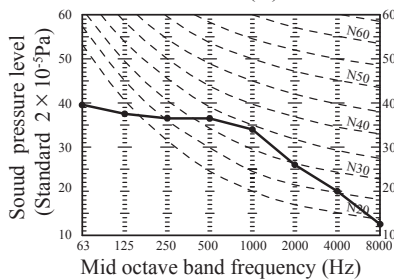
(b) Duct connected-High static pressure type (FDU)

Measured based on JIS B 8616
Mike position as right



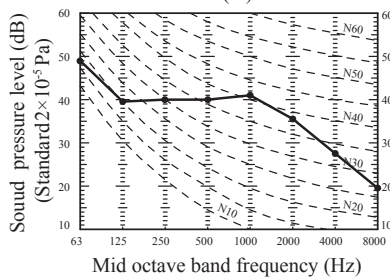
Model FDU71VH

Noise level 38 dB (A) at P-Hi
33 dB (A) at Hi
29 dB (A) at Me
25 dB (A) at Lo



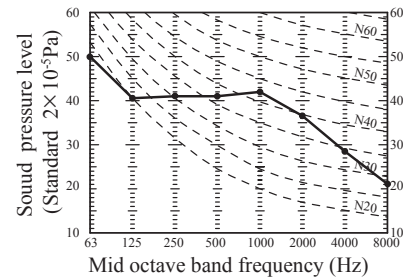
Model FDU100VH

Noise level 44 dB (A) at P-Hi
38 dB (A) at Hi
36 dB (A) at Me
30 dB (A) at Lo



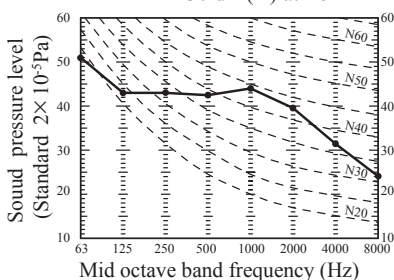
Model FDU125VH

Noise level 45 dB (A) at P-Hi
40 dB (A) at Hi
34 dB (A) at Me
29 dB (A) at Lo



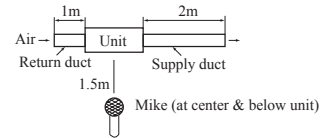
Model FDU140VH

Noise level 47 dB (A) at P-Hi
40 dB (A) at Hi
35 dB (A) at Me
30 dB (A) at Lo



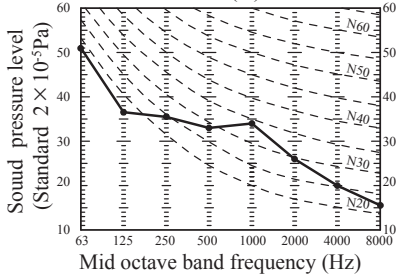
(c) Duct connected-Low/Middle static pressure type (FDUM)

Measured based on JIS B 8616
Mike position as right



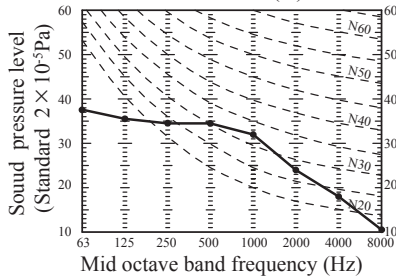
Models FDUM40VH, 50VH

Noise level 37 dB (A) at P-Hi
32 dB (A) at Hi
29 dB (A) at Me
26 dB (A) at Lo



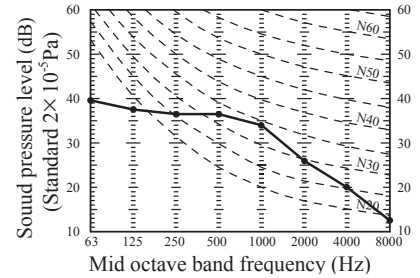
Model FDUM60VH

Noise level 36 dB (A) at P-Hi
31 dB (A) at Hi
28 dB (A) at Me
25 dB (A) at Lo



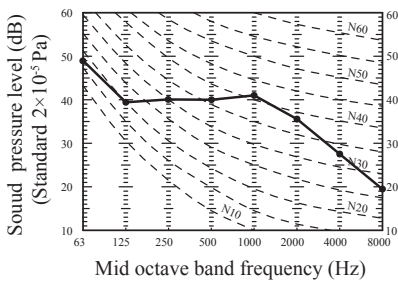
Model FDUM71VH

Noise level 38 dB (A) at P-Hi
33 dB (A) at Hi
29 dB (A) at Me
25 dB (A) at Lo



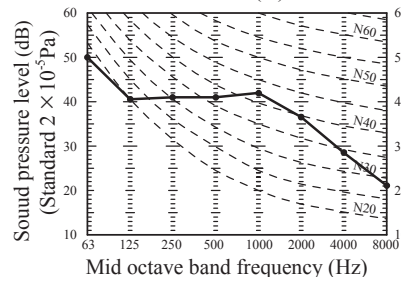
Model FDUM100VH

Noise level 44 dB (A) at P-Hi
38 dB (A) at Hi
36 dB (A) at Me
30 dB (A) at Lo



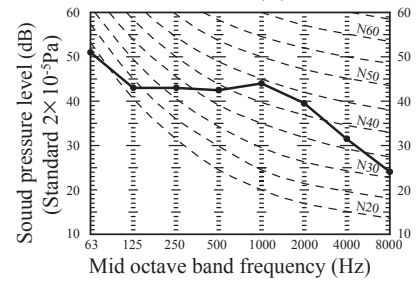
Model FDUM125VH

Noise level 45 dB (A) at P-Hi
40 dB (A) at Hi
34 dB (A) at Me
29 dB (A) at Lo



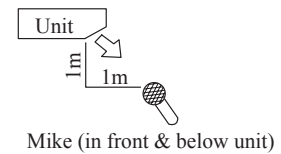
Model FDUM140VH

Noise level 47 dB (A) at P-Hi
40 dB (A) at Hi
35 dB (A) at Me
30 dB (A) at Lo



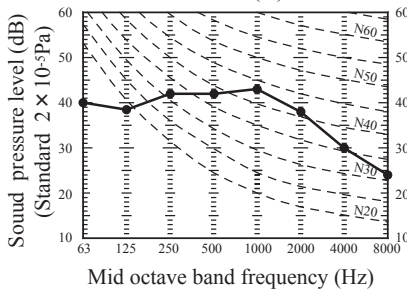
(d) Ceiling suspended type (FDE)

Measured based on JIS B 8616
Mike position as right



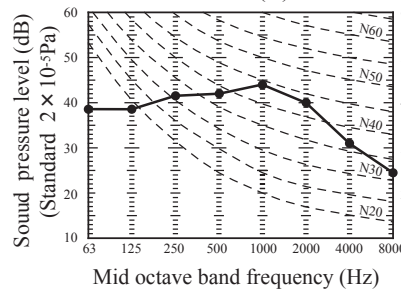
Models FDE40VH, 50VH

Noise level 46 dB (A) at P-Hi
38 dB (A) at Hi
36 dB (A) at Me
31 dB (A) at Lo



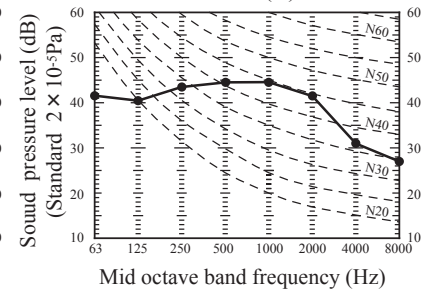
Models FDE60VH, 71VH

Noise level 47 dB (A) at P-Hi
41 dB (A) at Hi
37 dB (A) at Me
32 dB (A) at Lo



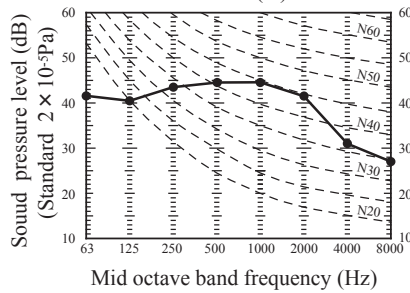
Model FDE100VH

Noise level 48 dB (A) at P-Hi
43 dB (A) at Hi
38 dB (A) at Me
34 dB (A) at Lo



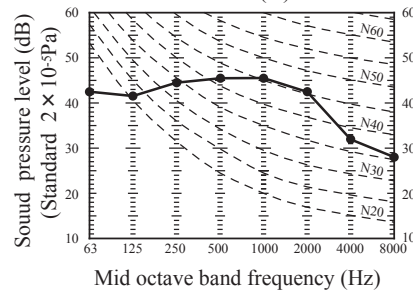
Model FDE125VH

Noise level 48 dB (A) at P-Hi
 45 dB (A) at Hi
 40 dB (A) at Me
 35 dB (A) at Lo



Model FDE140VH

Noise level 49 dB (A) at P-Hi
 45 dB (A) at Hi
 40 dB (A) at Me
 36 dB (A) at Lo



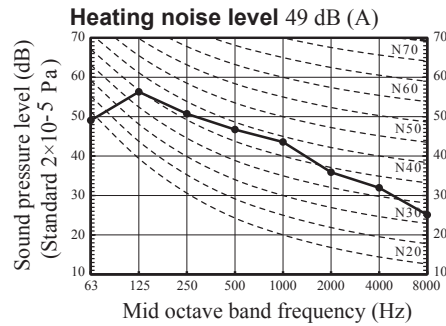
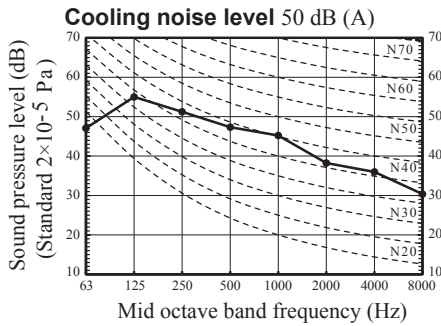
(2) Outdoor units

Measured based on JIS B 8616 or JIS C 9612

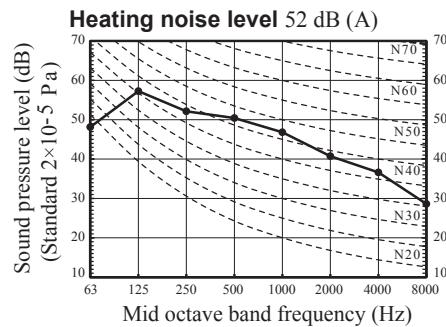
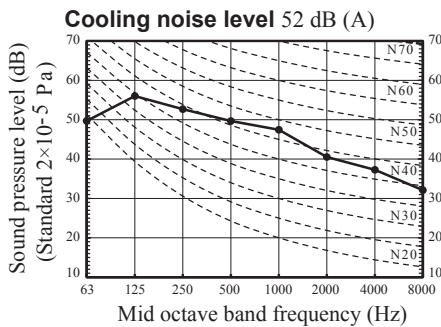
Mike position: at highest noise level in position as mentioned below.

Distance from front side 1m

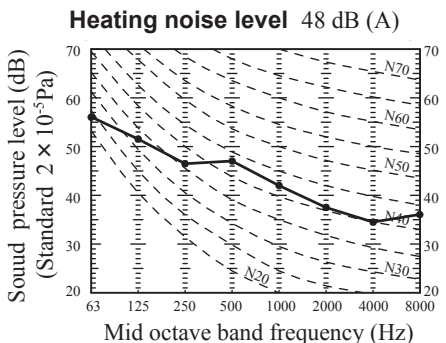
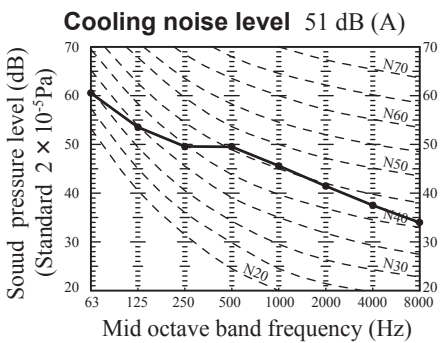
Models SRC40ZSX-S, 50ZSX-S



Model SRC60ZSX-S

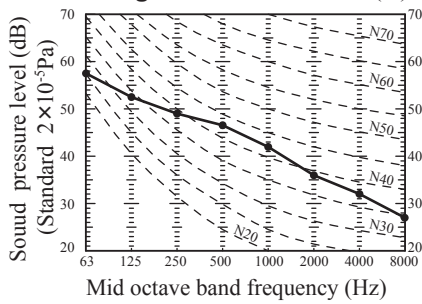


Model FDC71VNX

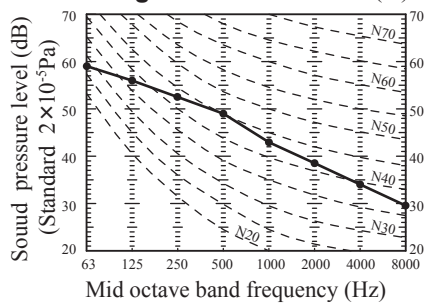


Models FDC100VNX,100VSX

Cooling noise level 48 dB (A)

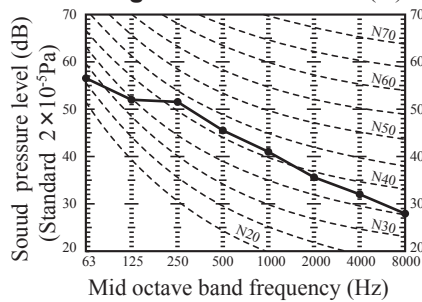


Heating noise level 50 dB (A)

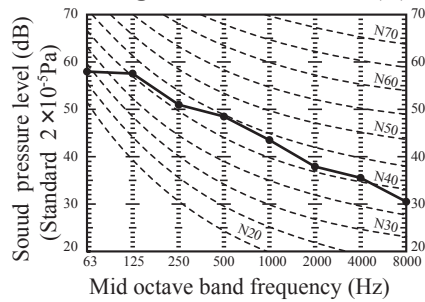


Models FDC125VNX,125VSX

Cooling noise level 48 dB (A)

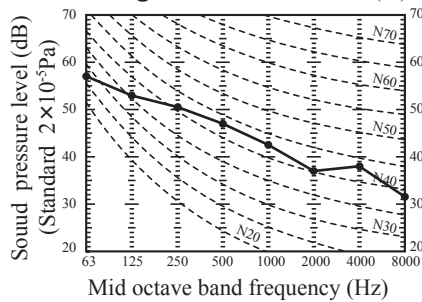


Heating noise level 50 dB (A)

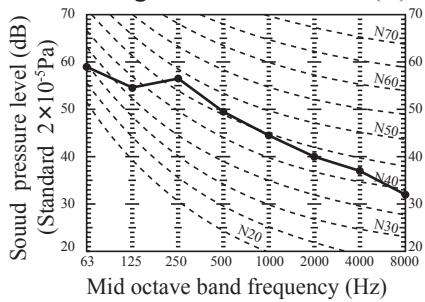


Models FDC140VNX,140VSX

Cooling noise level 49 dB (A)



Heating noise level 52 dB (A)



1.5 CHARACTERISTICS OF FAN

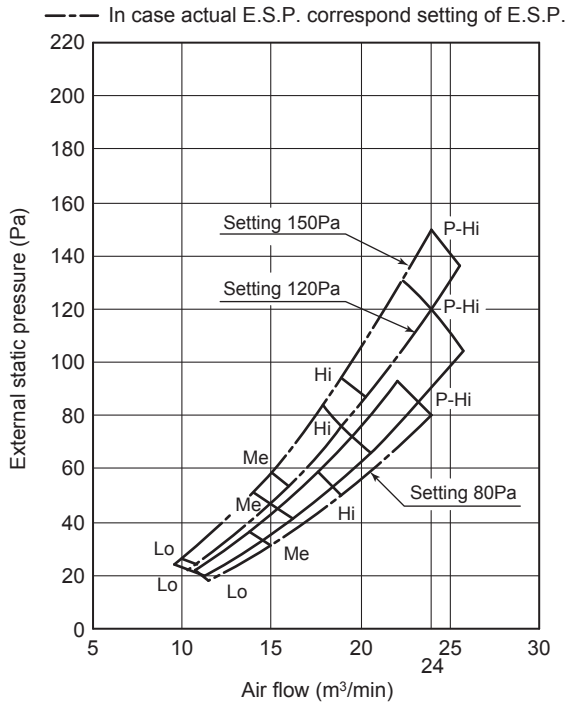
(1) Duct connected-High static pressure type (FDU)

- Characteristic FAN (1) shows air flow vs. External Static Pressure (E.S.P.) range where settings of E.S.P. are maximum E.S.P. (SW8-4 OFF : 150Pa, SW8-4 ON : 200Pa), rated E.S.P., and minimum E.S.P. (SW8-4 OFF : 80Pa, SW8-4 ON : 10Pa)
- Characteristic FAN (2) shows air flow vs E.S.P. curve when set fan tap is set P-Hi with each setting of E.S.P. by remote control.
- External Static Pressure (E.S.P.) can be set by wired remote control.
- You can set required E.S.P. by wired remote control which calculate it with the set air flow rate and pressure loss of the duct connected.

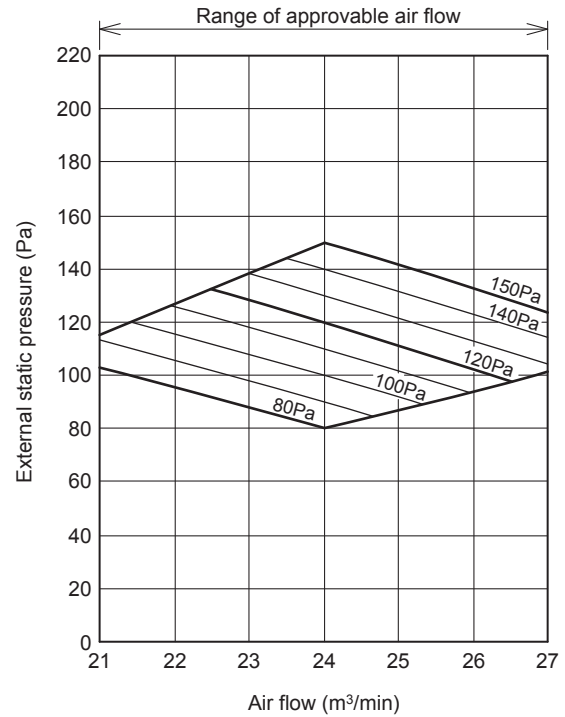
Model FDU71VH

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

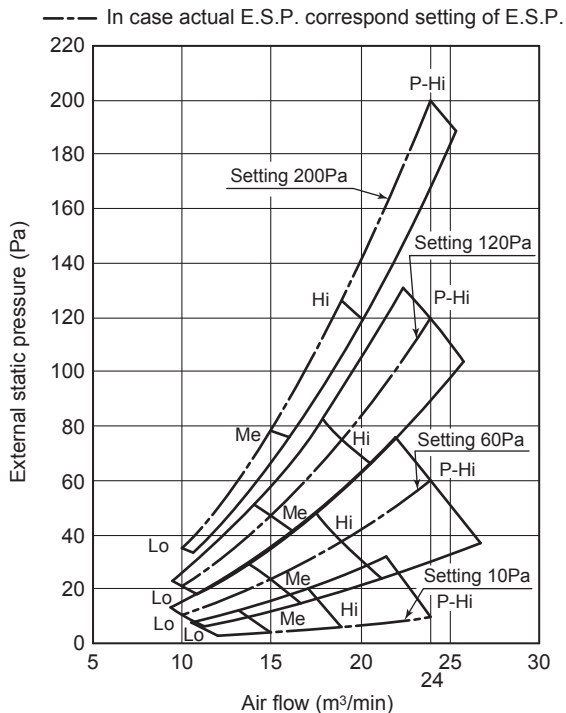


Characteristic FAN (2)

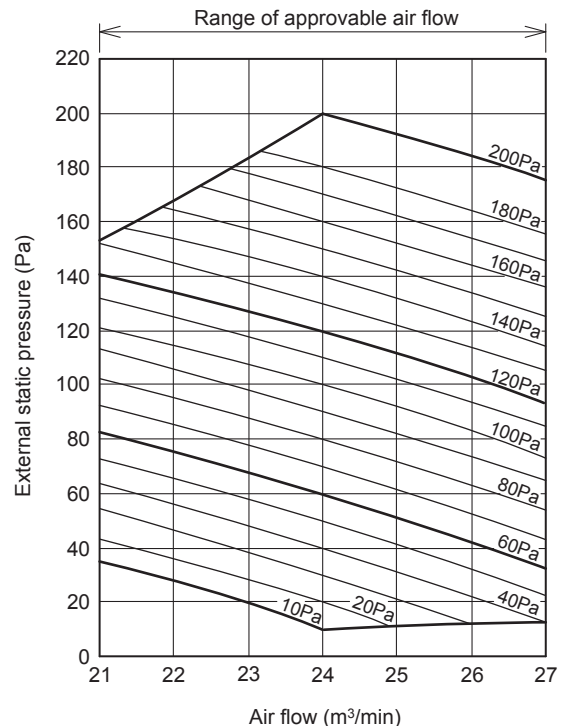


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



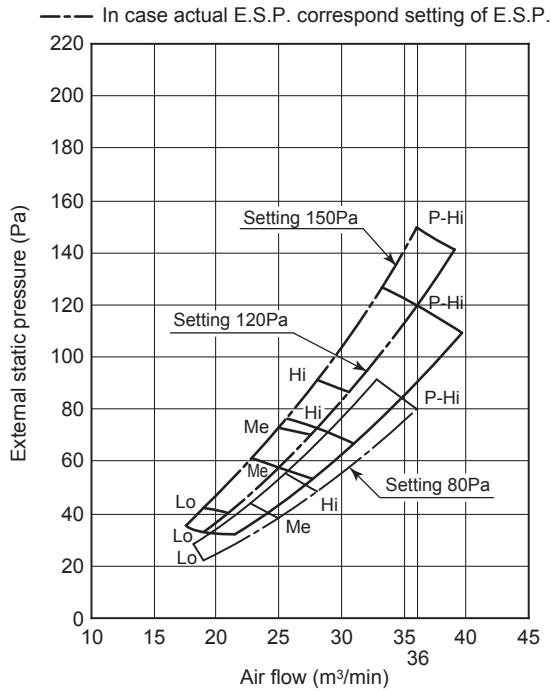
Characteristic FAN (2)



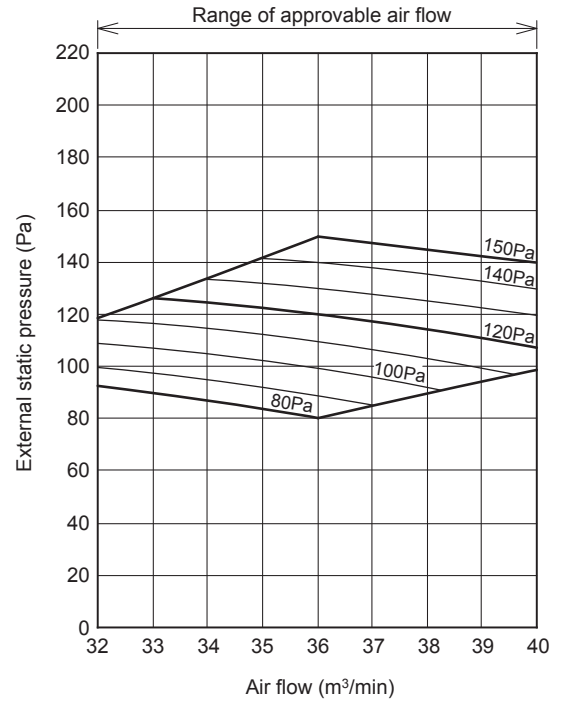
Model FDU100VH

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

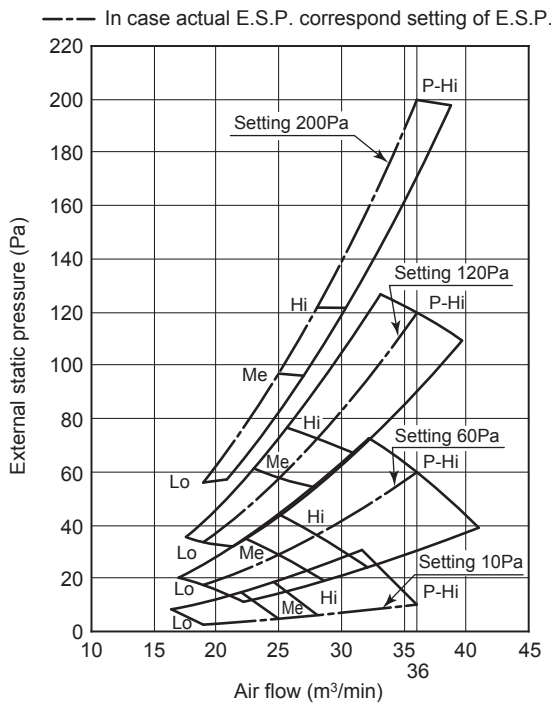


Characteristic FAN (2)

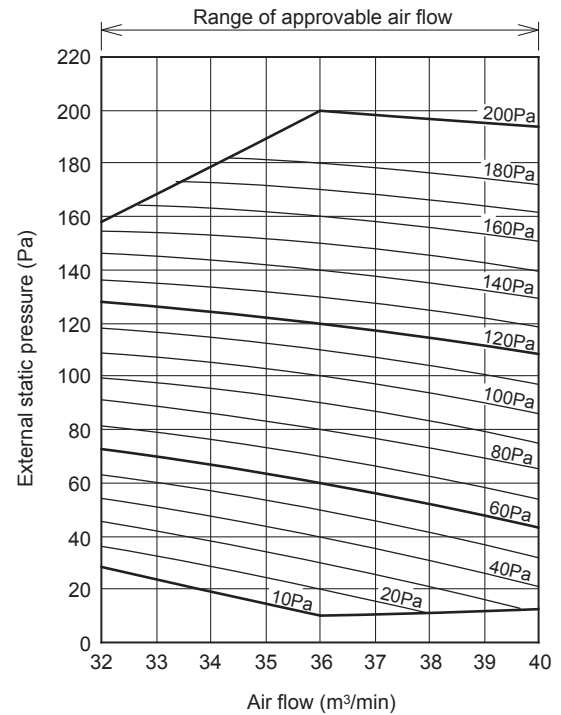


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



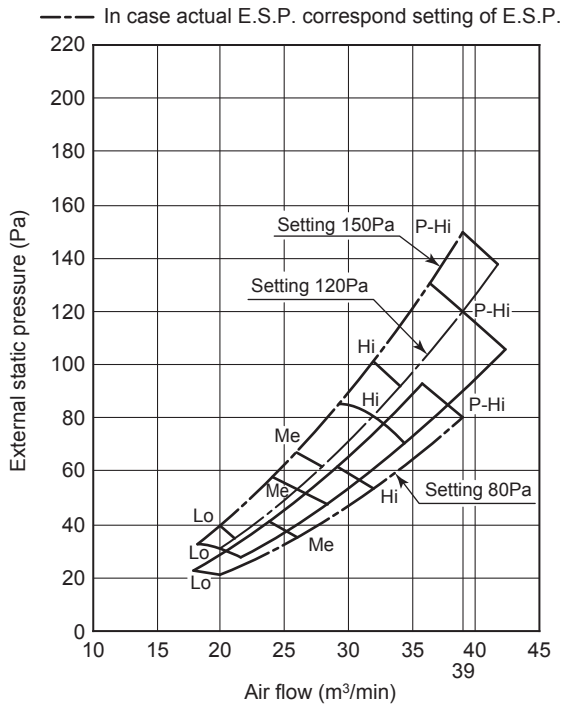
Characteristic FAN (2)



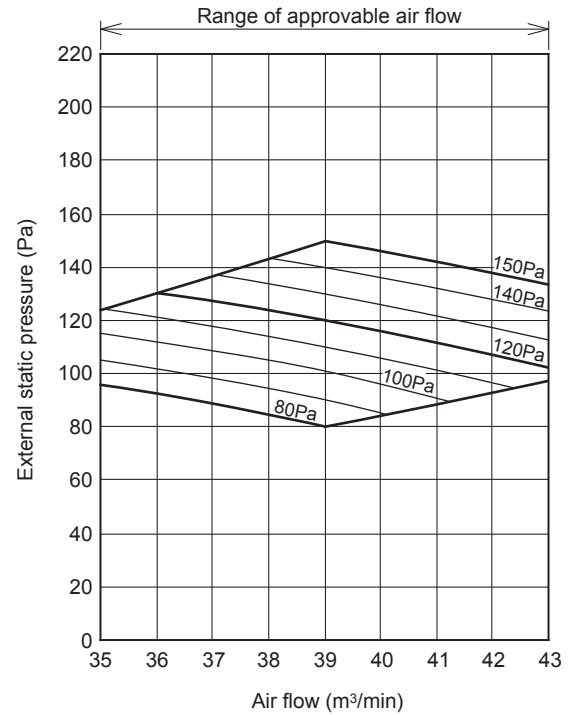
Model FDU125VH

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

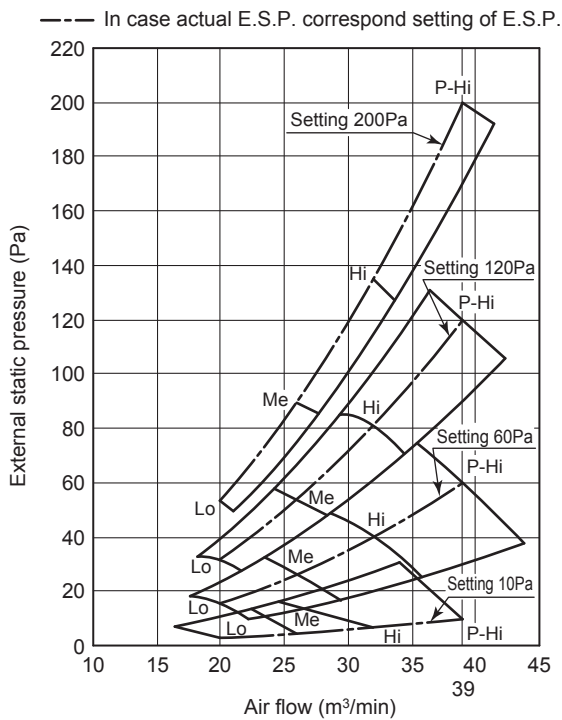


Characteristic FAN (2)

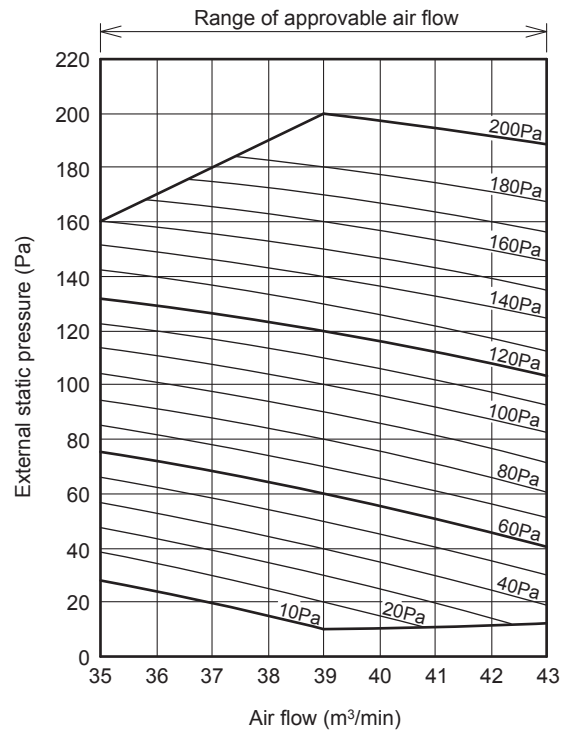


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



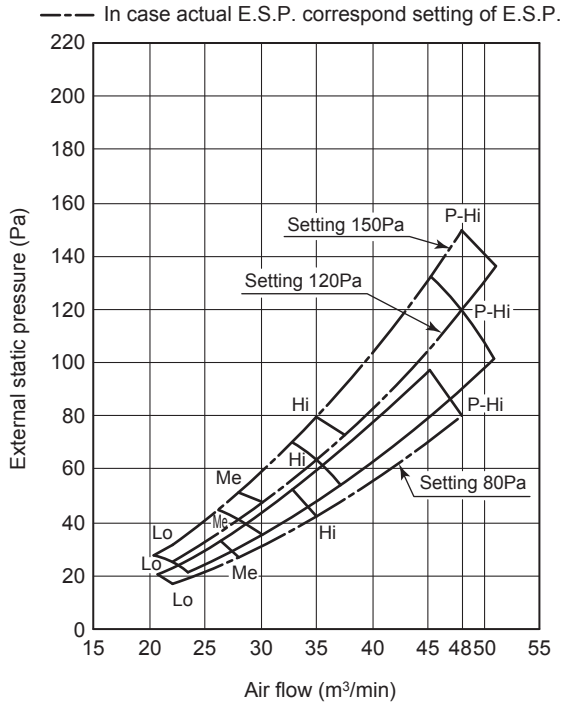
Characteristic FAN (2)



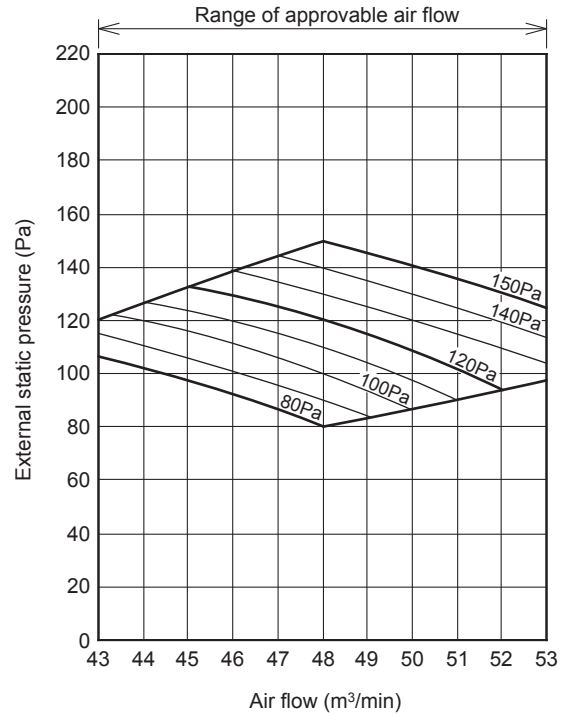
Model FDU140VH

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

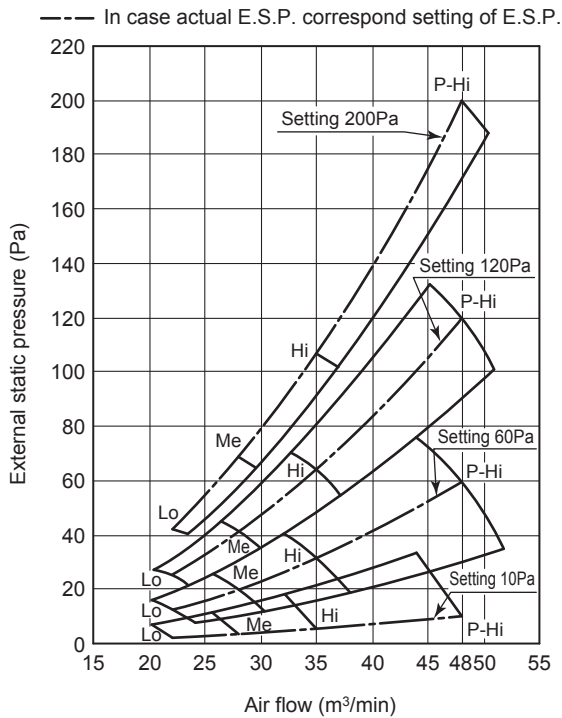


Characteristic FAN (2)

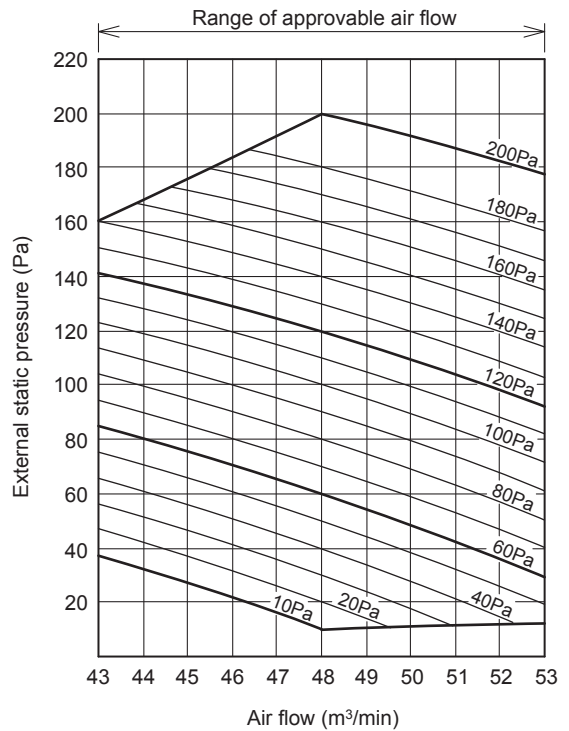


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



Characteristic FAN (2)



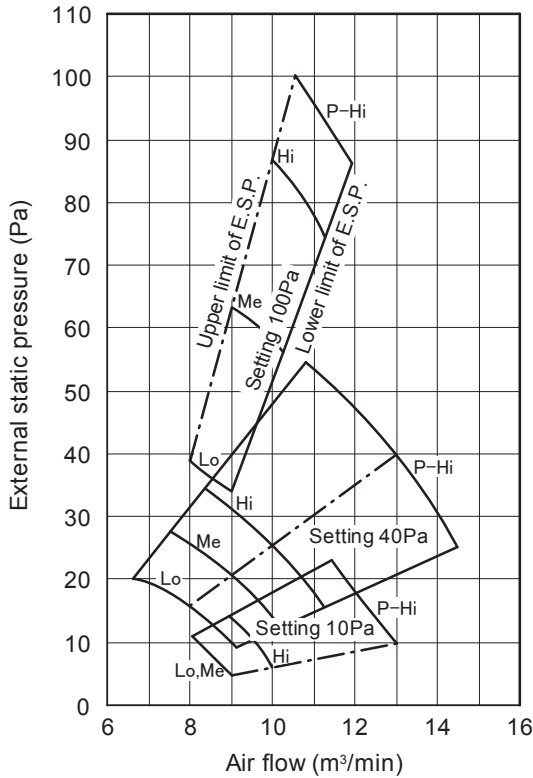
(2) Duct connected-Low / Middle static pressure type (FDUM)

- Characteristic FAN (1) shows air flow vs. External Static Pressure (E.S.P.) range where settings of E.S.P. are maximum E.S.P. (100Pa), rated E.S.P., and minimum E.S.P. (10Pa)
- Characteristic FAN (2) shows air flow vs E.S.P. curve when set fan tap is set P-Hi with each setting of E.S.P. by remote control.
- External Static Pressure (E.S.P.) can be set by wired remote control.
- You can set required E.S.P. by wired remote control which calculate it with the set air flow rate and pressure loss of the duct connected.

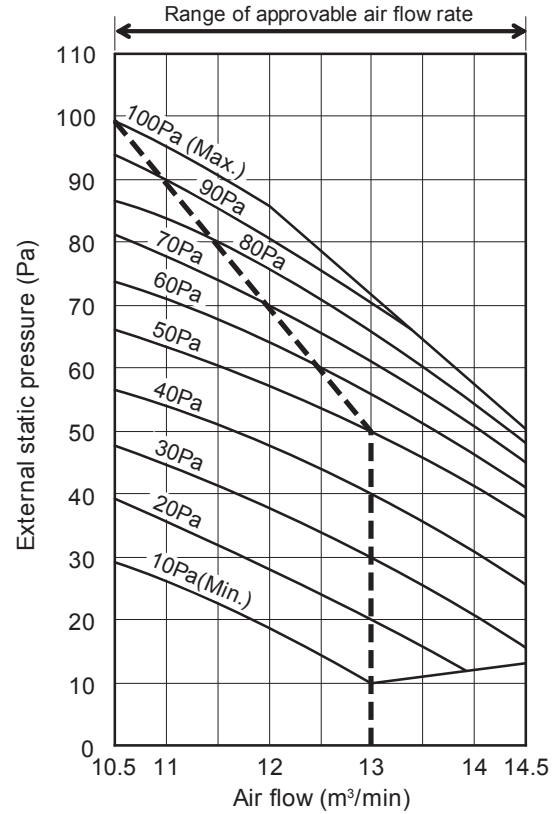
Models FDUM40VH, 50VH

Characteristic FAN(1)

--- In case actual E.S.P. correspond to setting of E.S.P.



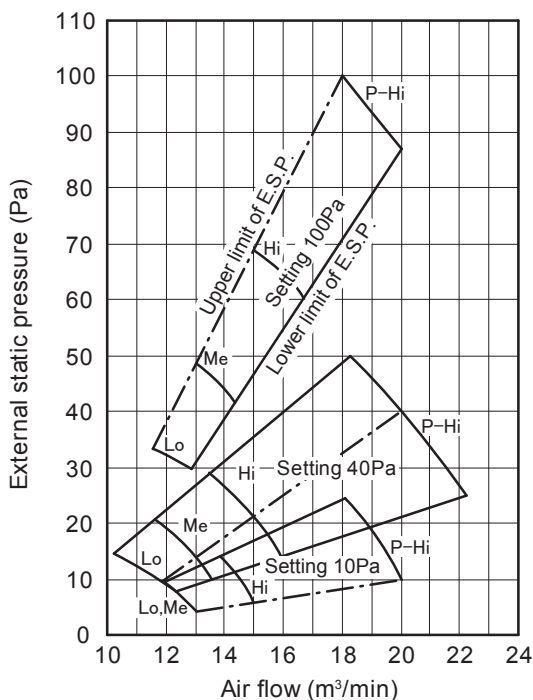
Characteristic FAN(2)



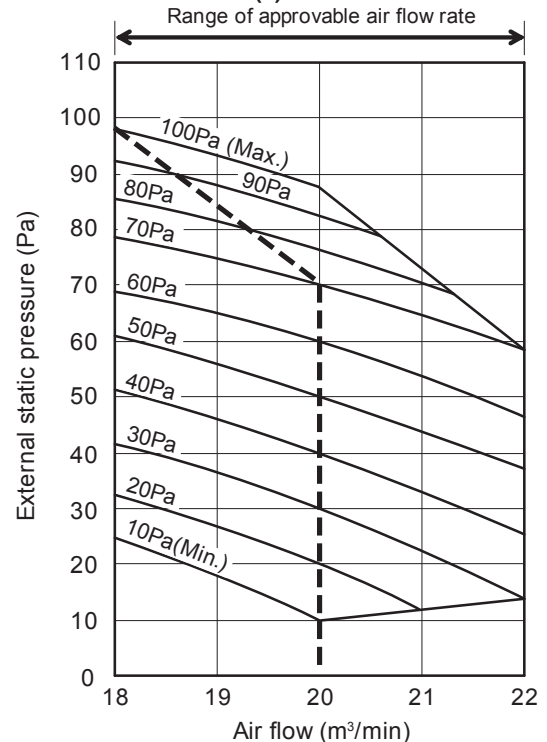
Model FDUM60VH

Characteristic FAN(1)

--- In case actual E.S.P. correspond to setting of E.S.P.



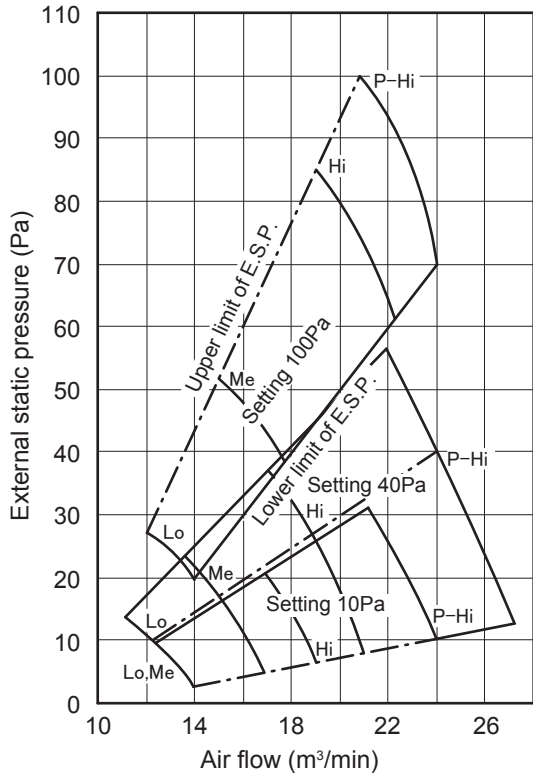
Characteristic FAN(2)



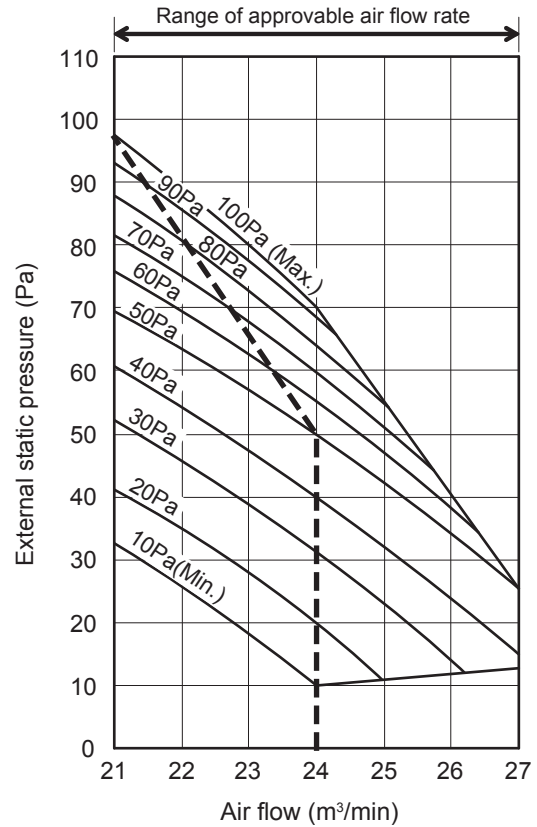
Model FDUM71VH

Characteristic FAN(1)

--- In case actual E.S.P. correspond to setting of E.S.P.



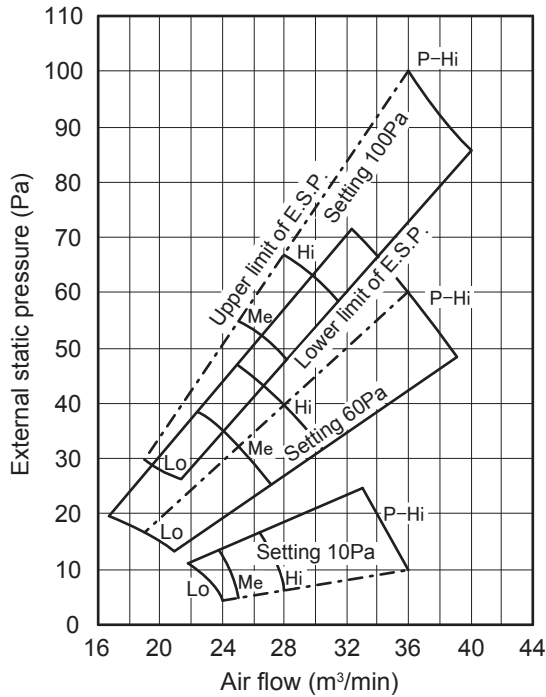
Characteristic FAN(2)



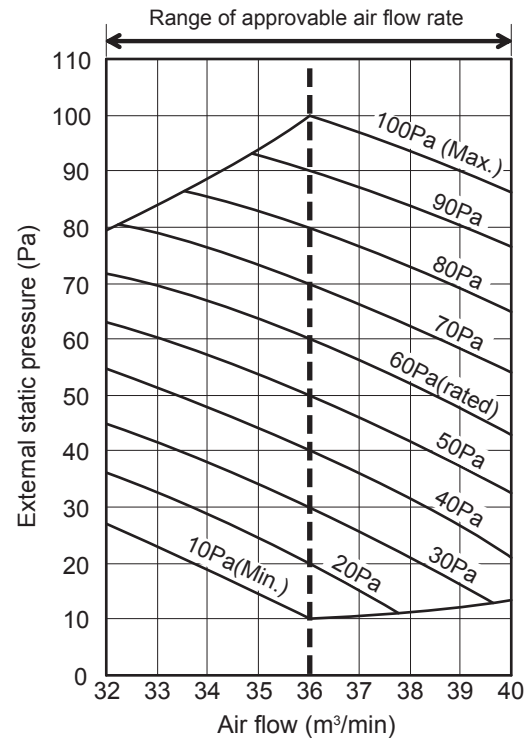
Model FDUM100VH

Characteristic FAN(1)

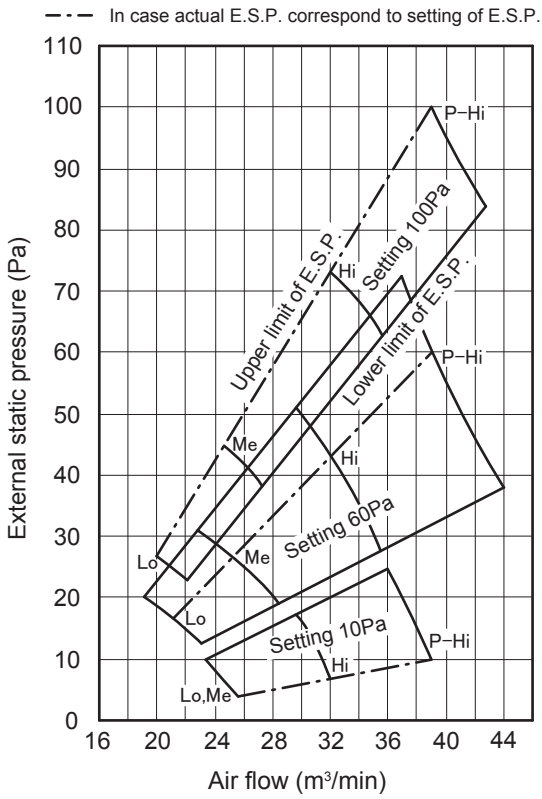
--- In case actual E.S.P. correspond to setting of E.S.P.



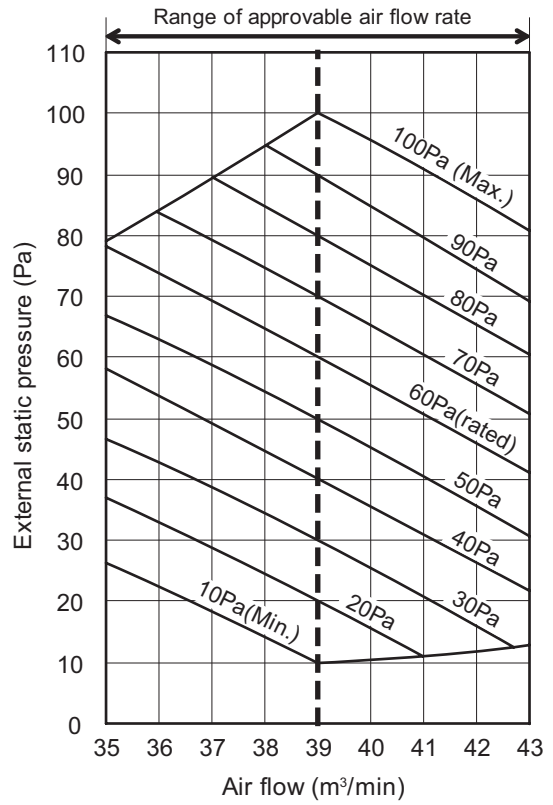
Characteristic FAN(2)



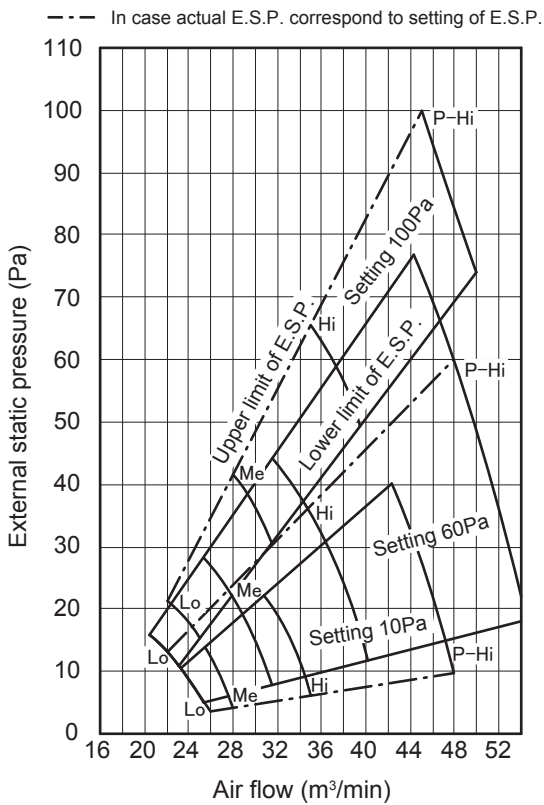
Model FDUM125VH
Characteristic FAN(1)



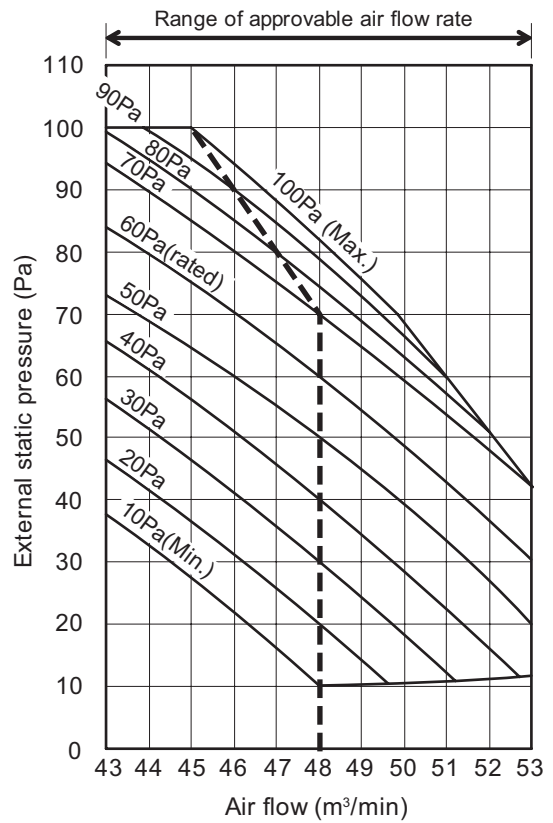
Characteristic FAN(2)



Model FDUM140VH
Characteristic FAN(1)



Characteristic FAN(2)



1.6 TEMPERATURE AND VELOCITY DISTRIBUTION

Indoor temperature

Cooling 27°CDB / 19°CWB

Heating 20°CDB

Note: These figures represent the typical main range of temperature and velocity distribution at the center of air outlet within the published conditions.

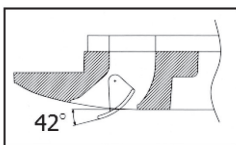
In the actual installation, they may differ from the typical figures under the influence of air temperature conditions, ceiling height, operation conditions and obstacles.

(1) Ceiling cassette-4 way compact type (FDTC)

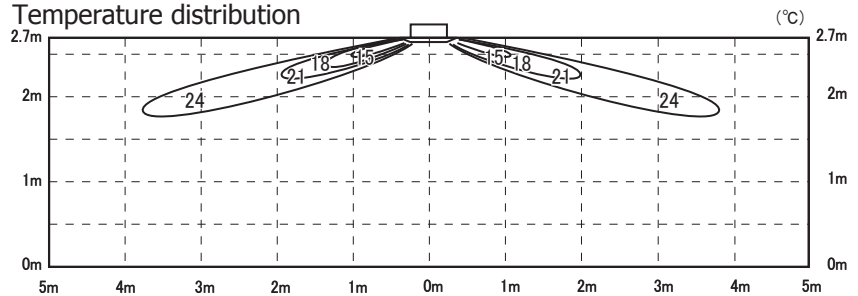
Models FDTC40VH, 50VH

Cooling Air flow: P-Hi

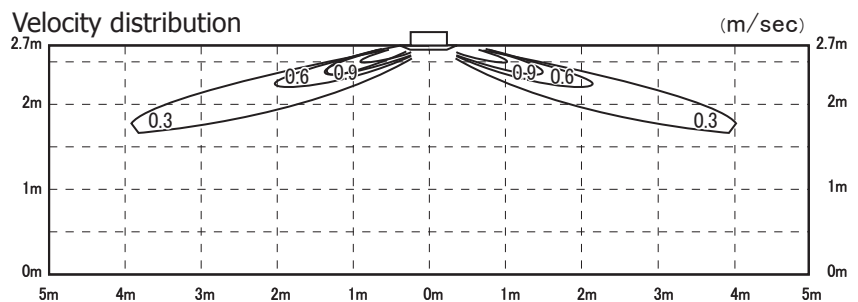
Louver position



Temperature distribution

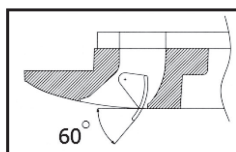


Velocity distribution

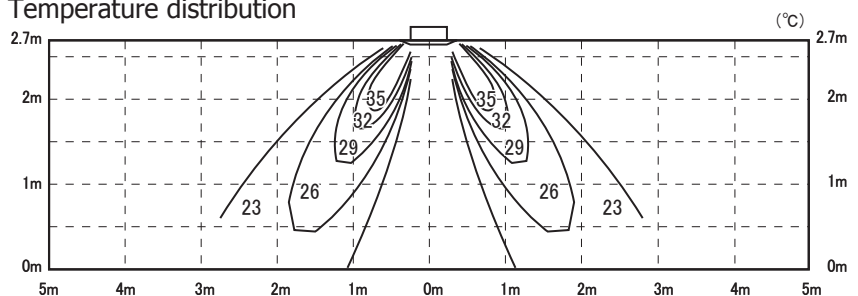


Heating Air flow: P-Hi

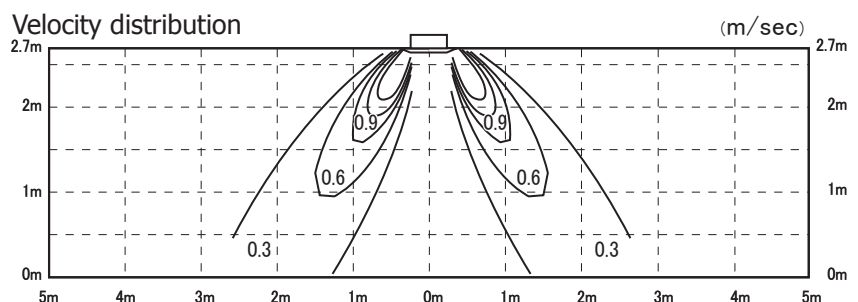
Louver position



Temperature distribution



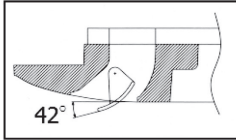
Velocity distribution



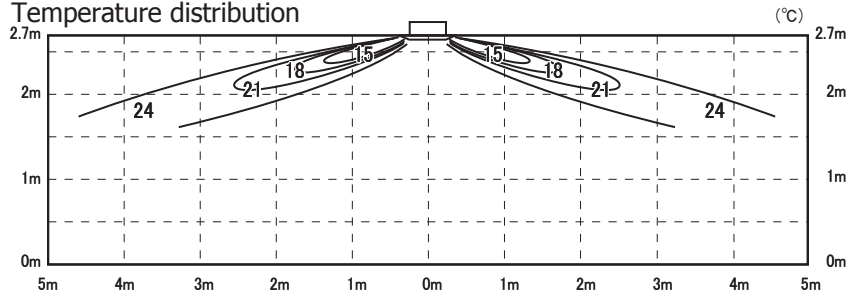
Model FDTC60VH

Cooling Air flow: P-Hi

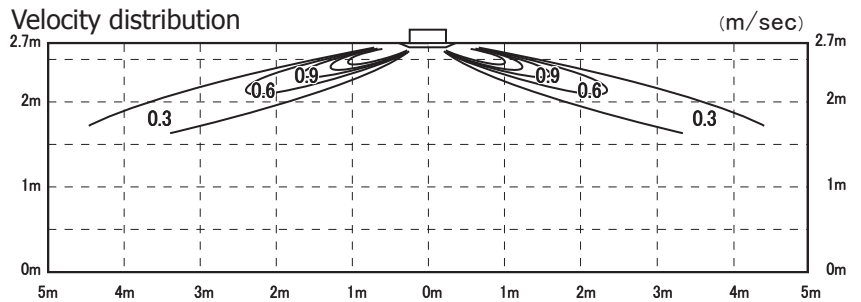
Louver position



Temperature distribution

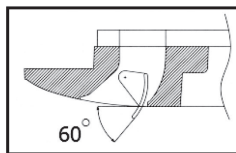


Velocity distribution

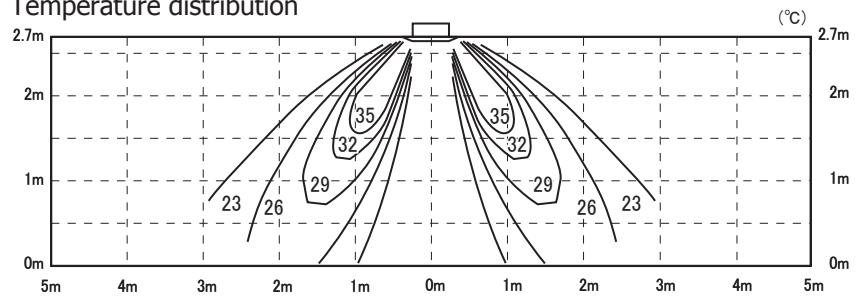


Heating Air flow: P-Hi

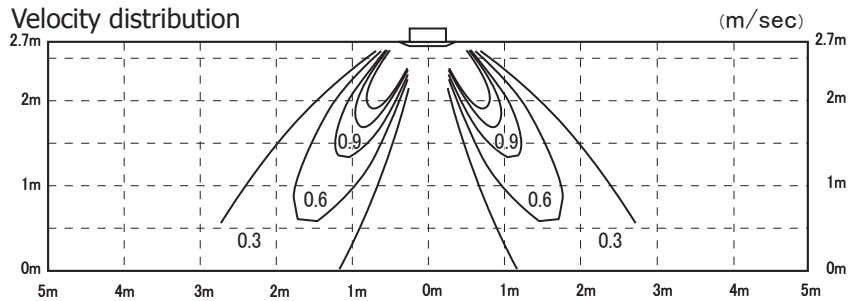
Louver position



Temperature distribution



Velocity distribution

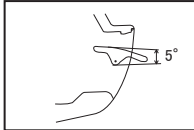


(2) Ceiling suspended type (FDE)

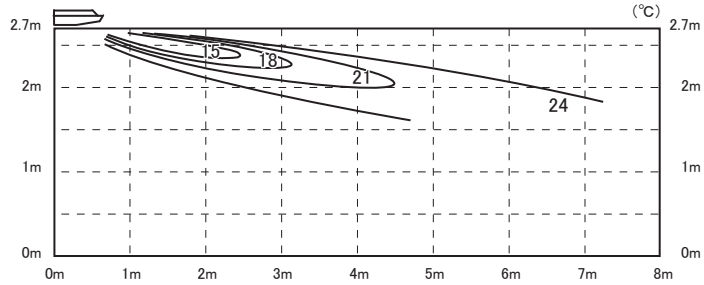
Models FDE40, 50VH

Cooling Air flow: P-Hi

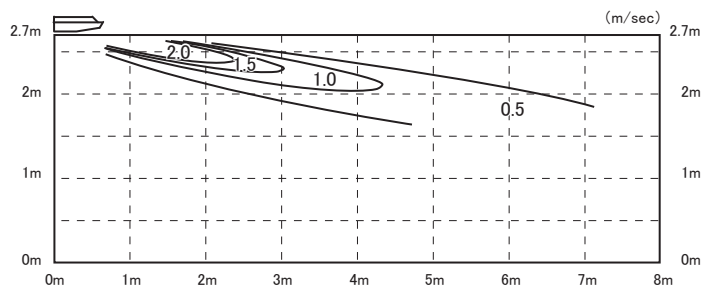
Louver position



Temperature distribution

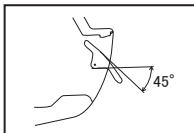


Velocity distribution

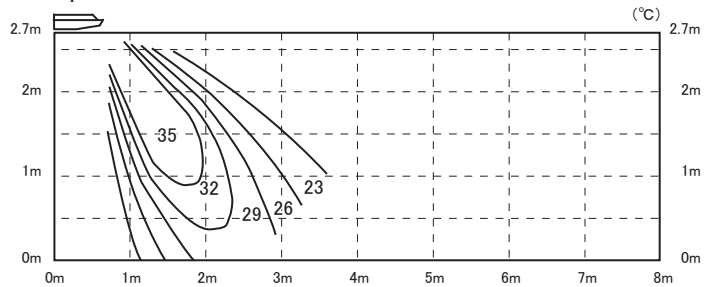


Heating Air flow: P-Hi

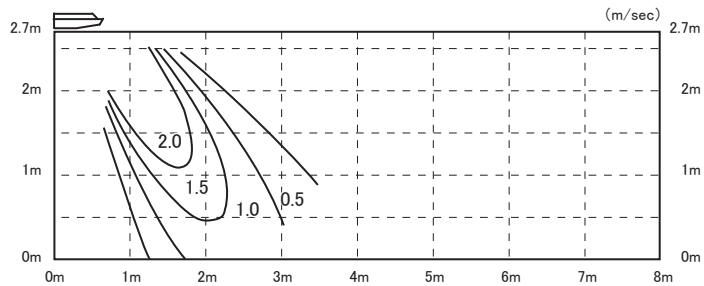
Louver position



Temperature distribution



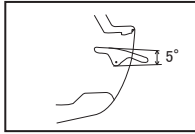
Velocity distribution



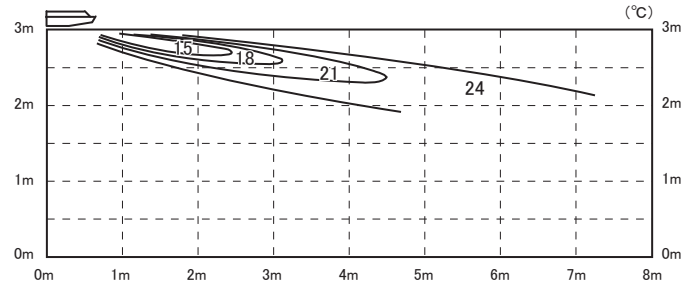
Models FDE60, 71VH

Cooling Air flow: P-Hi

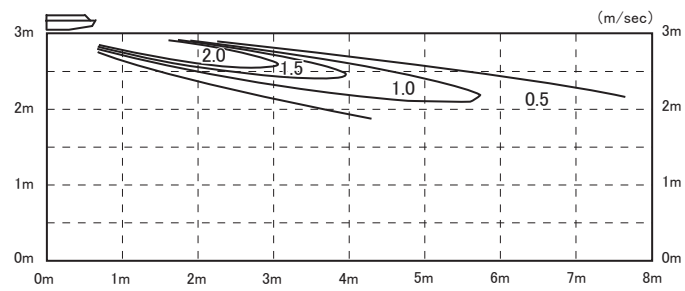
Louver position



Temperature distribution

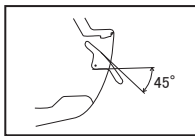


Velocity distribution

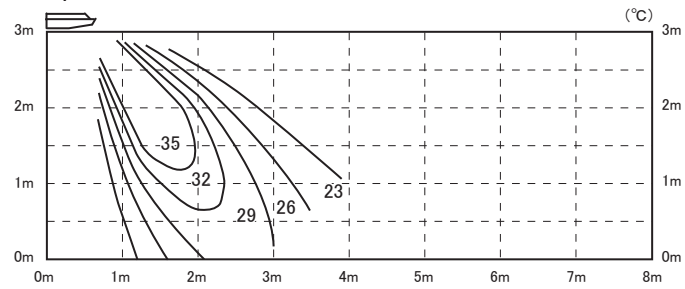


Heating Air flow: P-Hi

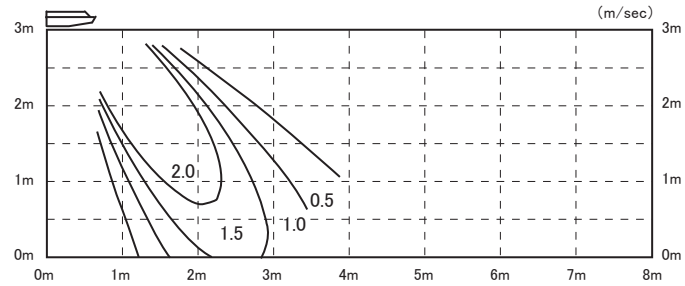
Louver position



Temperature distribution



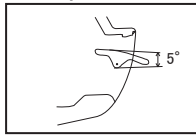
Velocity distribution



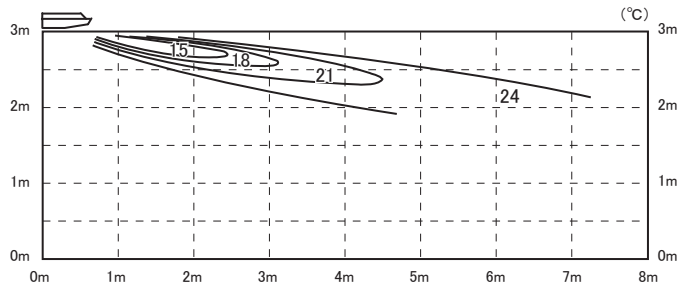
Models FDE100, 125VH

Cooling Air flow: P-Hi

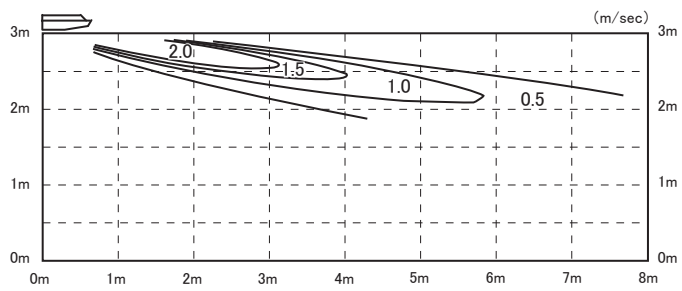
Louver position



Temperature distribution

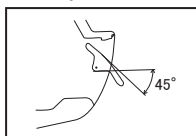


Velocity distribution

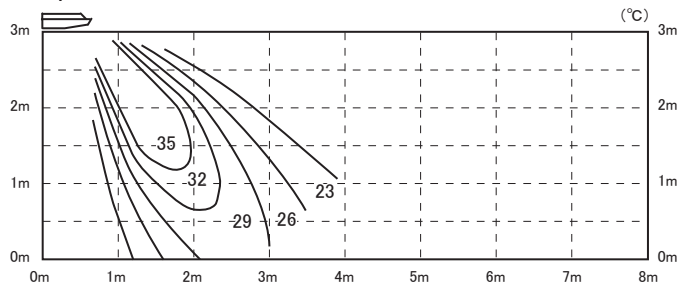


Heating Air flow: P-Hi

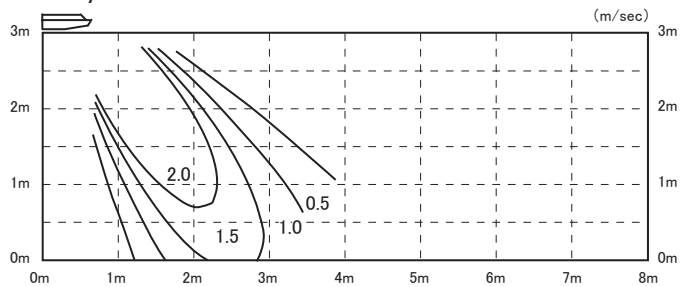
Louver position



Temperature distribution



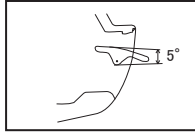
Velocity distribution



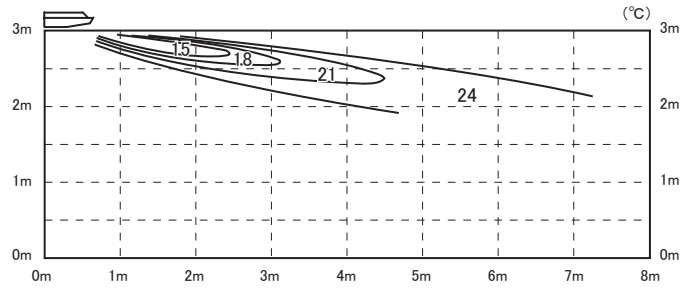
Model FDE140VH

Cooling Air flow: P-Hi

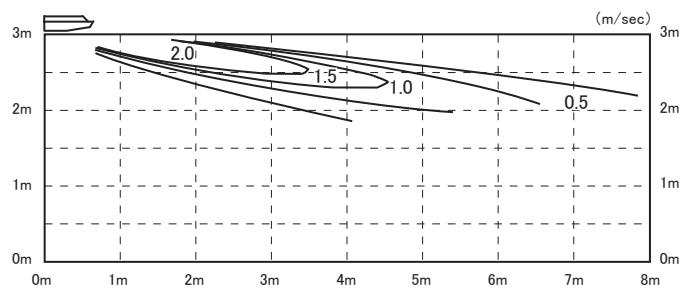
Louver position



Temperature distribution

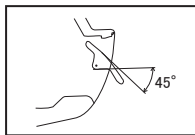


Velocity distribution

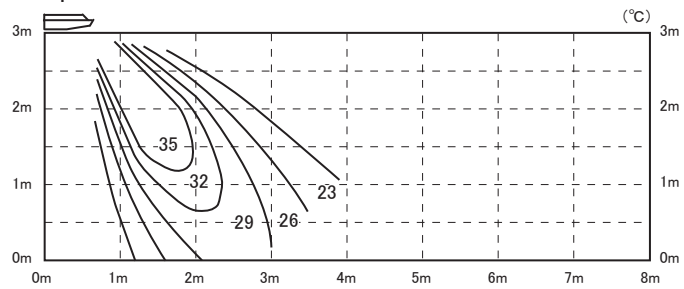


Heating Air flow: P-Hi

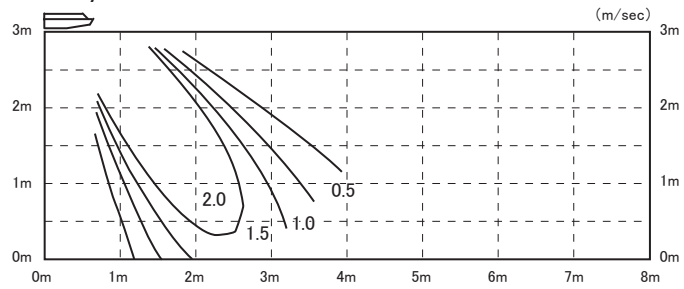
Louver position



Temperature distribution

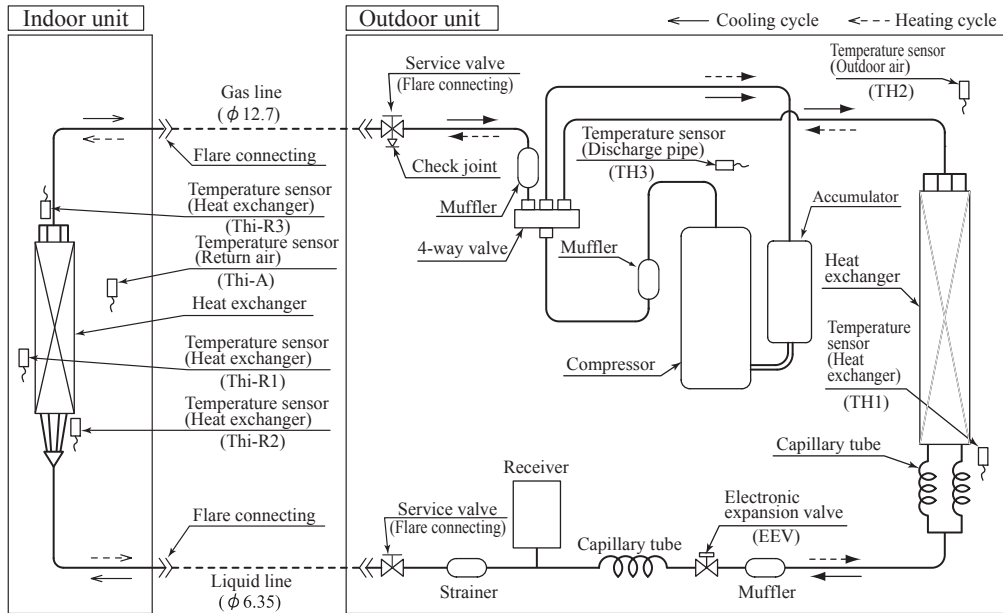


Velocity distribution

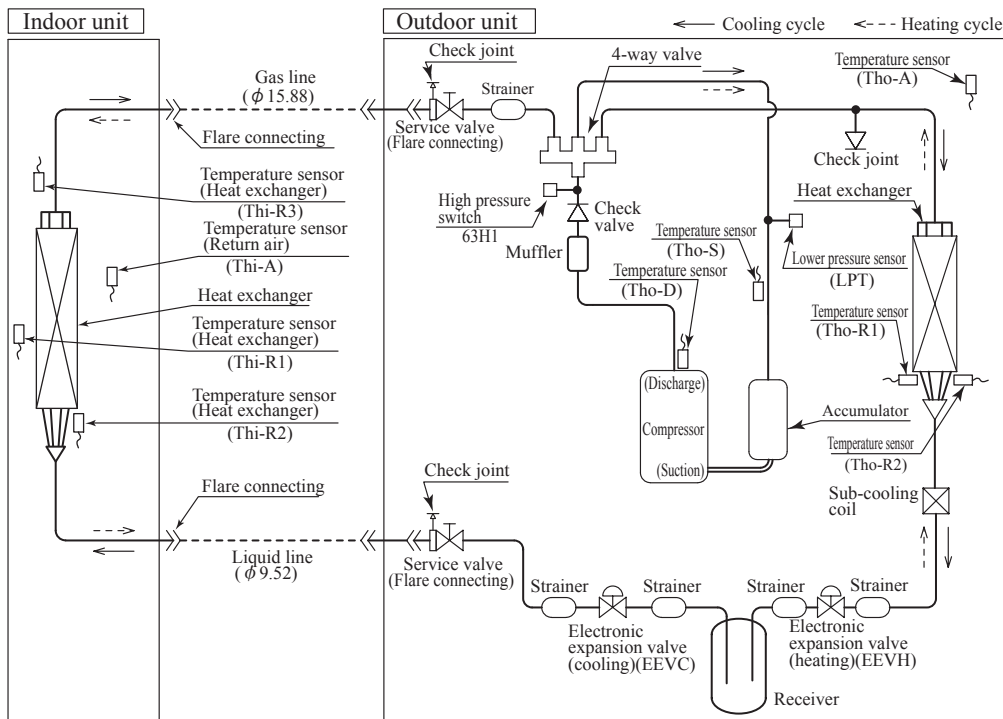


1.7 PIPING SYSTEM

(1) Single type
Models 40, 50, 60

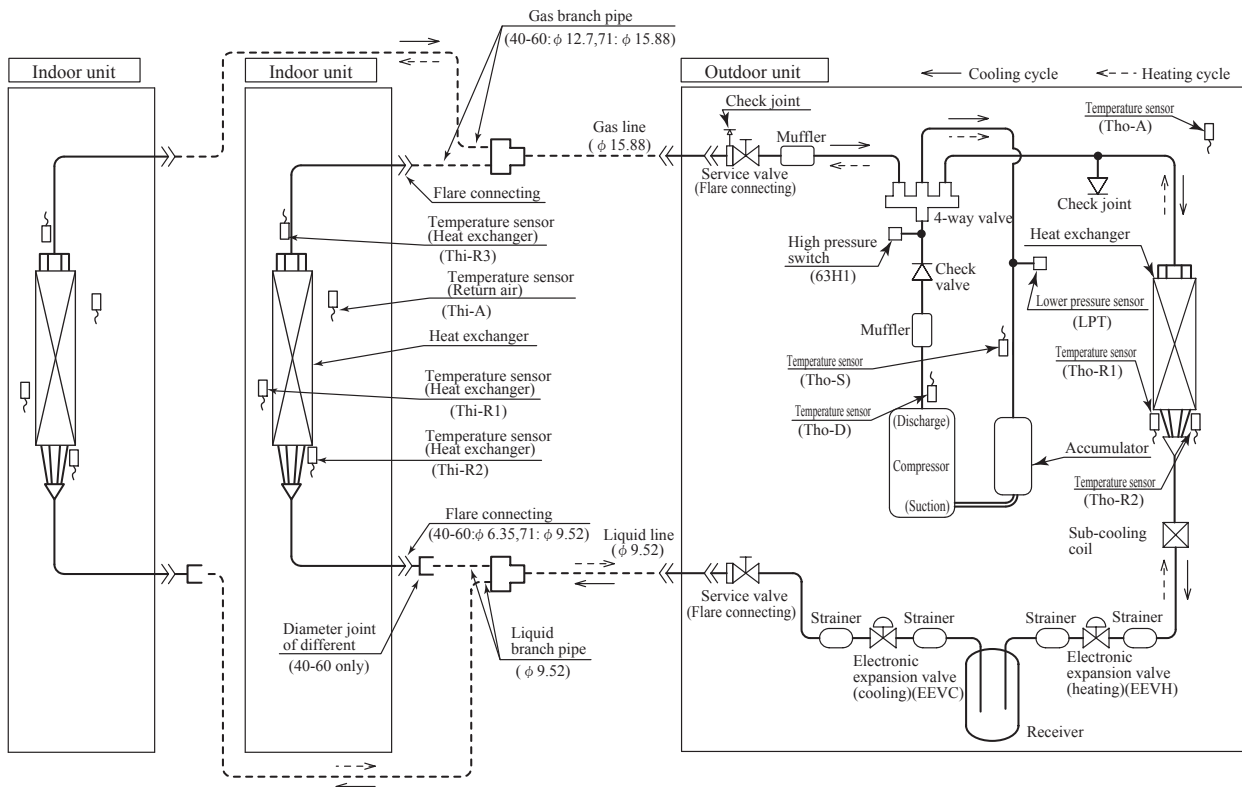


Models 71, 100, 125, 140



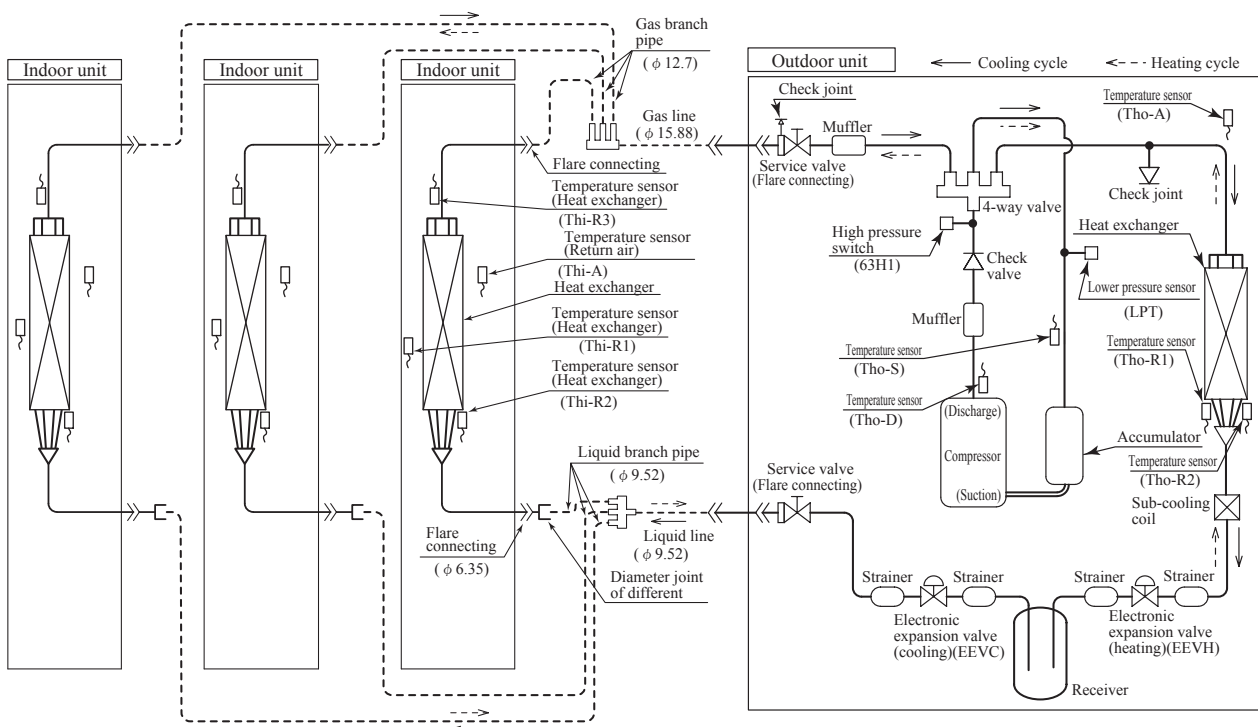
(2) Twin type

Models 71, 100, 125, 140



(3) Triple type

Model 140



Preset point of the protective devices

| Parts name | Mark | Equipped unit | 40, 50, 60 model | 71, 100, 125, 140 model |
|---|-------------|---------------|----------------------|-----------------------------|
| Temperature sensor (for protection overloading in heating) | Thi-R | Indoor unit | | OFF 63°C ON 56°C |
| Temperature sensor (for frost prevention) | Thi-R | | | OFF 1.0°C ON 10°C |
| Temperature sensor (for protection high pressure in cooling.) | Tho-R (TH1) | Outdoor unit | OFF 63°C ON 53°C | OFF 65°C ON 51°C |
| Temperature sensor (for detecting discharge pipe temp.) | Tho-D (TH3) | Outdoor unit | OFF 115°C ON 95°C | OFF 115°C ON 85°C |
| High pressure switch (for protection) | 63H1 | Outdoor unit | — | OFF 4.15MPa ON 3.15MPa |
| Low pressure sensor (for protection) | LPT | Outdoor unit | — | OFF 0.079MPa ON 0.227MPa |

Note(1) Values in () shown in the case of SRC40, 50, 60 model.

1.8 RANGE OF USAGE & LIMITATIONS


| | | |
|---|--------------------------|--|
| Operating temperature range | | See the next page. |
| | | When snow accumulate, install a snow hood. <SRC40-60> When used below -5°C, install a snow hood. <FDC71-140> |
| Recommendable area to install | | Considering to get sufficient heating capacity, the area where the averaged lowest ambient air temperature in day time during winter is above 0°C, and it has no accumulation of snow. |
| Installation site | | The limitations of installation space are shown in the page for outline drawing. Install the indoor unit at least 2.5m higher than the floor surface. |
| Temperature and humidity conditions surrounding the indoor unit in the ceiling (Note 2) | | Dew point temperature : 23°C or less, relative humidity : 80% or less<SRC40-60> Dew point temperature : 28°C (FDE : 23°C) or less, relative humidity : 80% or less<FDC71-140> |
| Limitations on unit and piping installation | | See page 106 and 107. |
| Compressor ON-OFF cycling | Cycle time | Max.4 times/h (Inching prevention 10 minutes)<SRC40-60> 7 minutes or more (from OFF to OFF) or (from ON to ON)<FDC71-140> |
| | Stop time | 3 minutes or more |
| Power source | Voltage range | Rating $\pm 10\%$ |
| | Voltage drop at start-up | Min.85% of rating |
| | Phase-to-phase unbalance | 3% or less |

Note 1. Do not install the unit in places which :

- 1) Flammable gas may leak.
- 2) Carbon fiber, metal particles, powder, etc. are floating.
- 3) Cosmetic or special sprays are used frequently.
- 4) Exposed to oil splashes or steam (e.g. kitchen and machine plant).
- 5) Exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent).
- 6) Exposed to ammonia substance (e.g. organic fertilizer).
- 7) Matters affecting devices, such as sulfuric gas, chlorine gas, acid, alkali, etc. may generate or accumulate.
- 8) Chimney smoke is hanging.
- 9) Sucking the exhaust gas from heat exchanger.
- 10) Adjacent to equipment generating electromagnetic waves or high frequency waves.
- 11) There is light beams that affect the receiving device of indoor unit in case of the wireless specification.
- 12) Snow falls heavily.
- 13) At an elevation of 1000 meters or higher.
- 14) On mobile machine (e.g. vehicle, ship, etc.)
- 15) Splashed with water to indoor unit (e.g. laundry room).
- 16) Indoor units of twin and triple specifications separately in a room with partition.

Note 2. If ambient temperature and humidity exceed the above values, add polyurethane foam insulation on the outer plate (10mm or thicker) of indoor unit.

Note 3. Both gas and liquid pipes need to be cover with 20mm or thicker heat insulation materials at the place where humidity exceeds 70%.

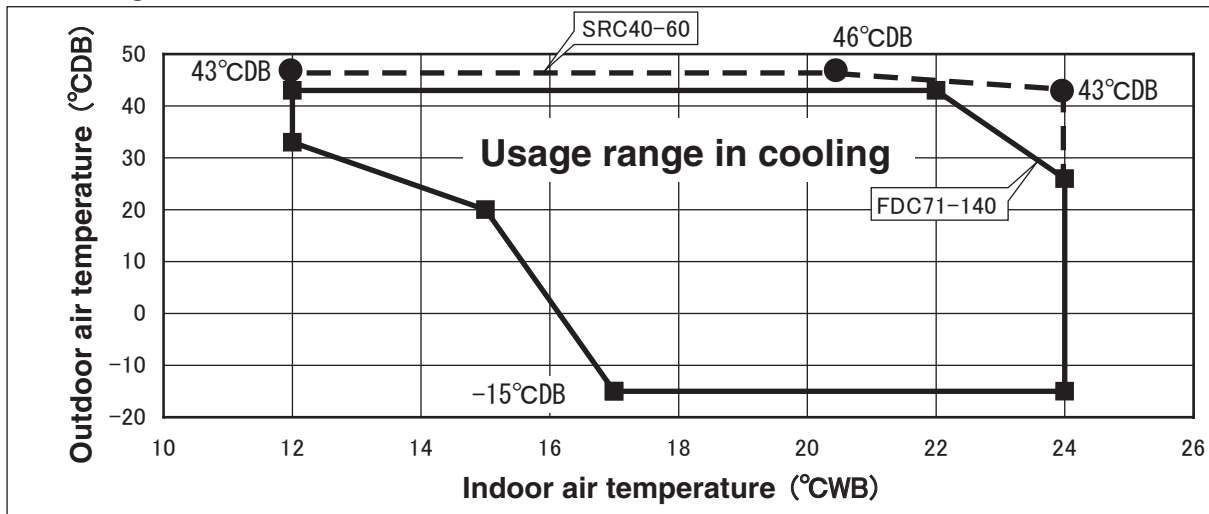
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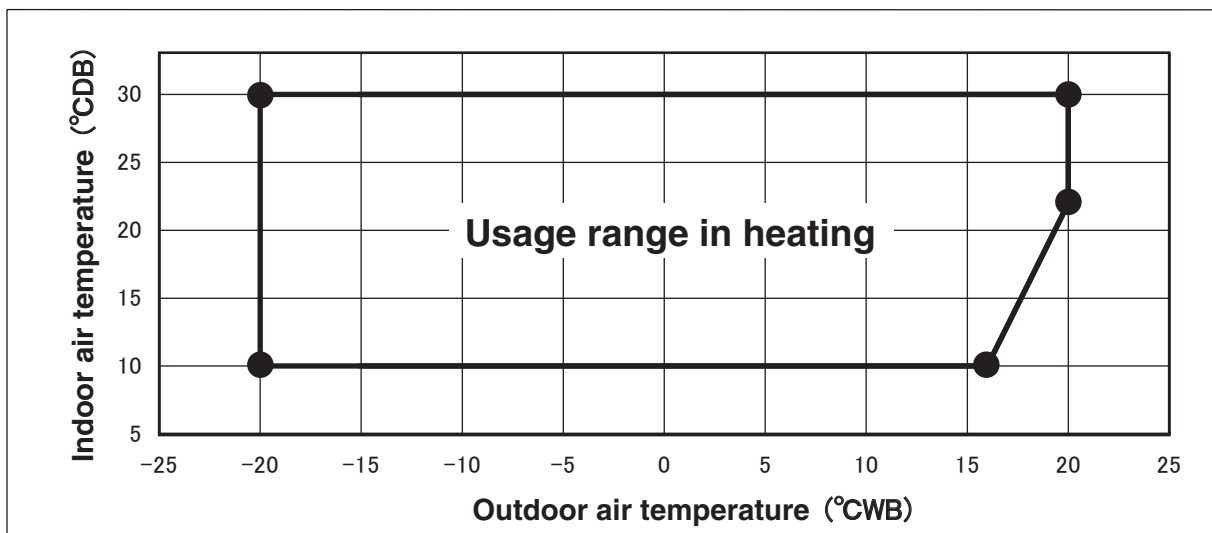
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Operating temperature range

■ Cooling



■ Heating



Decline in cooling and heating capacity or operation stop may occur when the outdoor unit is installed in places where natural wind can increase or decrease its design air flow rate.

“CAUTION” Cooling operation under low outdoor air temperature conditions

PAC models can be operated in cooling mode at low outdoor air temperature condition within above temperature range. However in case of severely low temperature conditions if the following precaution is not observed, it may not be operated in spite of operable temperature range mentioned above and cooling capacity may not be established under certain conditions.

[Precaution]

In case of severely low temperature condition

- 1) Install the outdoor unit at the place where strong wind cannot blow directly into the outdoor unit.
- 2) If there is no installation place where can prevent strong wind from directly blowing into the outdoor unit, mount the flex flow adapter (prepared as option part) or like such devices onto the outdoor unit in order to divert the strong wind.

[Reason]

Under the low outdoor air temperature conditions of -5°C or lower, the outdoor fan is controlled at lower or lowest speed by outdoor fan control, but if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop more. This makes high and low pressures to drop as well. This low pressure drop makes the indoor heat exchanger temperature to drop and will activate anti-frost control at indoor heat exchanger at frequent intervals, that cooling operation may not be established for any given time.

| Limitation on unit and piping installation - single, twin. | | | | |
|--|--|-------------------------|--------------------------------|--------------------|
| Descriptions | Models for outdoor unit | Dimensional limitations | Marks appearing in the drawing | |
| | | | Single type | Twin type |
| One-way pipe length | SRC40 · 50 · 60 | ≤ 30m | L | L + L1 + L2 |
| | FDC71 | ≤ 50m | | |
| | FDC100 · 125 | ≤ 100m | | |
| Main pipe length | FDC71 | ≤ 50m | L | L |
| | FDC100 · 125 | ≤ 100m | | |
| | FDC71 | ≤ 20m | | |
| One-way pipe length after first branching point | FDC71 | ≤ 20m | L1, L2 | L1, L2 |
| | FDC100 · 125 | ≤ 30m | | |
| Difference of pipe length after first branching point | | ≤ 10m | | L1 - L2 L2 - L1 |
| Total pipe length after the second branching point | | ≤ 15m | | |
| Elevation difference between indoor and outdoor unit | When outdoor unit is positioned higher | SRC40 · 50 · 60 | H | H |
| | | FDC71 | | |
| | When outdoor unit is positioned lower | SRC40 · 50 · 60 | H | H |
| | | FDC71 | | |
| Elevation difference among indoor units | | ≤ 15m | | h |
| | | ≤ 0.5m | | |

Single type

Twin type

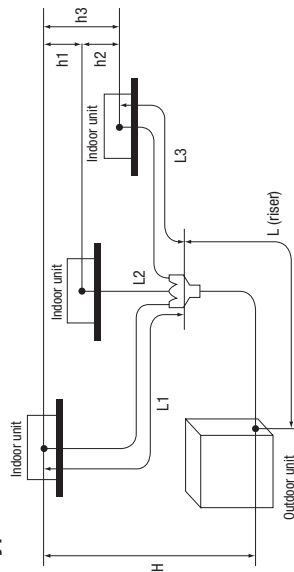
| | |
|----------------------------|-------------------|
| Model for outdoor units | FDC71 · 100 · 125 |
| Branch piping set (Option) | DIS-WA1G |

(1) A riser pipe must be part of the main.
 A branching pipe set should be installed horizontally at point as close to an indoor unit as possible.
 (2) Reduce refrigerant amount by according to table below from the factory charge when refrigerant piping is shorter than 3m.

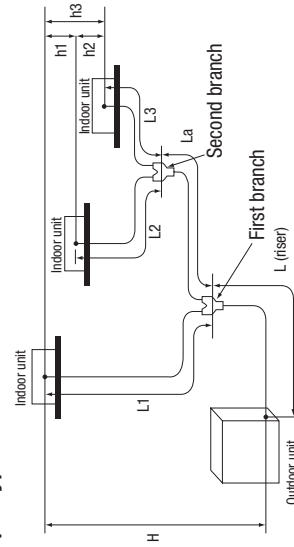
| | |
|-------------------------|---------------------------|
| Model for outdoor units | Refrigerant to be reduced |
| FDC71 · 100 · 125 | 1.0 kg |

| Limitation on unit and piping installation - triple. | | | | |
|---|--|-------------------------|--------------------------------|-----------------------------------|
| Descriptions | Models for outdoor unit | Dimensional limitations | Marks appearing in the drawing | |
| | | | Triple type A | Triple type B |
| One-way pipe length | FDC140 | ≤ 100m | L + L1 + L2 + L3 | L + La + L1 + L2 + L3 ※1 |
| Main pipe length | FDC140 | ≤ 100m | L | L |
| One-way pipe length first branching point to indoor units between | FDC140 | ≤ 30m | L1, L2, L3 | L1 ※1 |
| One-way pipe length between first branching point from and second branching point | FDC140 | ≤ 5m | | La |
| One-way pipe length first branching point and indoor units | FDC140 | ≤ 27m | | La + L2, La + L3 ※1 |
| Piping length difference among piping to indoor units from first branch | | < 3m | L1 - L2, L1 - L3, L2 - L3 | (not possible) |
| Piping length difference among piping to indoor units from second branching point to indoor units | | 3m ≤, ≤ 10m | (not possible) | L1 - (La + L2), L1 - (La + L3) ※1 |
| One-way pipe length difference from second branching point to indoor units | | ≤ 10m | | L2 - L3 |
| Elevation difference between indoor and outdoor | When the outdoor unit is positioned higher | ≤ 30m | H | H |
| | When the outdoor unit is positioned lower | ≤ 15m | | |
| Elevation difference among indoor units | | ≤ 0.5m | h1, h2, h3 | h1, h2, h3 |

Triple type A



Triple type B



Branch piping set (Option)

| Model for outdoor units | Triple type A | Triple type B |
|-------------------------|---------------|---------------|
| Branch piping | First branch | Second branch |
| FDC140 | DIS-TA1G | DIS-WA1G |
| | DIS-TA1G | DIS-WA1G |

(1) A riser pipe must be part of the main.

A branching pipe set should be installed horizontally at point as close to an indoor unit as possible.

(2) Reduce refrigerant amount by 1.0kg from the factory charge when refrigerant piping is shorter than 3m.

※1
Install the indoor units so that L + L1 becomes the longest one-way pipe. Keep the pipe length difference between L1 and (La + L2) or (La + L3) within 10m.

1.9 SELECTION CHART

Correct the cooling and heating capacity in accordance with the operating conditions. The net cooling and heating capacity can be obtained in the following way.

Net capacity = Capacity shown in the capacity tables (1.9.1) × Correction factors shown in the table (1.9.2) (1.9.3) (1.9.4).

Caution: In case that the cooling operation during low outdoor air temperature below -5°C is expected, install the outdoor unit where it is not influenced by natural wind. Otherwise protection control by low pressure will be activated much more frequently and it will cause insufficient capacity or breakdown of the compressor in worst case.

1.9.1 Capacity tables

(1) Ceiling cassette-4 way compact type (FDTC)

(a) Single type

Model **FDTC40ZSXVH** Indoor unit **FDTC40VH** Outdoor unit **SRC40ZSX-S**

Cooling mode

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 3.38 | 3.06 | 3.56 | 3.33 | 3.65 | 3.30 | 3.75 | 3.28 | 3.95 | 3.48 | 4.15 | 3.42 |
| 13 | | | | | 3.46 | 3.10 | 3.65 | 3.36 | 3.75 | 3.34 | 3.85 | 3.31 | 4.05 | 3.51 | 4.26 | 3.45 |
| 15 | | | | | 3.54 | 3.13 | 3.74 | 3.39 | 3.84 | 3.37 | 3.95 | 3.35 | 4.15 | 3.54 | 4.36 | 3.48 |
| 17 | | | | | 3.62 | 3.16 | 3.83 | 3.43 | 3.94 | 3.41 | 4.04 | 3.38 | 4.26 | 3.58 | 4.47 | 3.51 |
| 19 | | | | | 3.69 | 3.19 | 3.91 | 3.46 | 4.02 | 3.44 | 4.15 | 3.42 | 4.41 | 3.63 | 4.67 | 3.57 |
| 21 | | | | | 3.81 | 3.24 | 3.99 | 3.49 | 4.10 | 3.47 | 4.26 | 3.46 | 4.56 | 3.68 | 4.87 | 3.64 |
| 23 | | | | | 3.85 | 3.26 | 4.04 | 3.51 | 4.15 | 3.49 | 4.30 | 3.47 | 4.59 | 3.69 | 4.88 | 3.64 |
| 25 | | | 3.73 | 3.39 | 3.89 | 3.28 | 4.08 | 3.53 | 4.20 | 3.50 | 4.34 | 3.49 | 4.61 | 3.69 | 4.89 | 3.64 |
| 27 | | | 3.76 | 3.40 | 3.93 | 3.30 | 4.13 | 3.55 | 4.25 | 3.52 | 4.36 | 3.49 | 4.60 | 3.69 | | |
| 29 | | | 3.70 | 3.38 | 3.86 | 3.27 | 4.06 | 3.52 | 4.18 | 3.50 | 4.30 | 3.47 | 4.54 | 3.67 | | |
| 31 | | | 3.64 | 3.35 | 3.80 | 3.24 | 4.00 | 3.50 | 4.12 | 3.47 | 4.24 | 3.45 | 4.48 | 3.65 | | |
| 33 | 3.23 | 3.02 | 3.44 | 3.26 | 3.74 | 3.21 | 3.94 | 3.47 | 4.06 | 3.45 | 4.18 | 3.43 | 4.42 | 3.63 | | |
| 35 | 3.28 | 3.04 | 3.44 | 3.26 | 3.68 | 3.19 | 3.88 | 3.45 | 4.00 | 3.43 | 4.12 | 3.41 | 4.36 | 3.61 | | |
| 37 | 3.23 | 3.02 | 3.38 | 3.23 | 3.62 | 3.16 | 3.82 | 3.43 | 3.94 | 3.41 | 4.06 | 3.39 | 4.30 | 3.59 | | |
| 39 | 3.17 | 2.99 | 3.32 | 3.21 | 3.56 | 3.14 | 3.76 | 3.40 | 3.88 | 3.38 | 4.00 | 3.36 | 4.23 | 3.57 | | |
| 41 | 3.12 | 2.97 | 3.27 | 3.18 | 3.50 | 3.11 | 3.70 | 3.38 | 3.82 | 3.36 | 3.93 | 3.34 | 4.17 | 3.55 | | |
| 43 | 3.06 | 2.94 | 3.21 | 3.15 | 3.44 | 3.09 | 3.64 | 3.36 | 3.76 | 3.34 | 3.87 | 3.32 | 4.10 | 3.52 | | |

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|------|
| | | 16 | 18 | 20 | 22 | 24 | |
| | | -19.8 | -20 | 2.19 | 2.15 | 2.11 | 2.06 |
| -17.7 | -18 | 2.34 | 2.30 | 2.26 | 2.22 | 2.17 | |
| -15.7 | -16 | 2.50 | 2.46 | 2.42 | 2.38 | 2.33 | |
| -13.5 | -14 | 2.67 | 2.63 | 2.59 | 2.55 | 2.50 | |
| -11.5 | -12 | 2.83 | 2.79 | 2.75 | 2.71 | 2.67 | |
| -9.5 | -10 | 3.00 | 2.96 | 2.92 | 2.88 | 2.84 | |
| -7.5 | -8 | 3.17 | 3.13 | 3.09 | 3.05 | 3.01 | |
| -5.5 | -6 | 3.23 | 3.20 | 3.16 | 3.12 | 3.09 | |
| -3.0 | -4 | 3.29 | 3.26 | 3.23 | 3.20 | 3.17 | |
| -1.0 | -2 | 3.36 | 3.33 | 3.30 | 3.28 | 3.25 | |
| 1.0 | 0 | 3.42 | 3.40 | 3.38 | 3.35 | 3.33 | |
| 2.0 | 1 | 3.45 | 3.43 | 3.41 | 3.39 | 3.37 | |
| 3.0 | 2 | 3.67 | 3.65 | 3.63 | 3.61 | 3.59 | |
| 5.0 | 4 | 4.11 | 4.09 | 4.07 | 4.04 | 4.01 | |
| 7.0 | 6 | 4.55 | 4.53 | 4.50 | 4.47 | 4.44 | |
| 9.0 | 8 | 4.78 | 4.75 | 4.72 | 4.69 | 4.66 | |
| 11.5 | 10 | 5.01 | 4.98 | 4.95 | 4.91 | 4.88 | |
| 13.5 | 12 | 5.30 | 5.26 | 5.21 | 5.14 | 5.10 | |
| 15.5 | 14 | 5.58 | 5.53 | 5.48 | 5.37 | 5.32 | |
| 16.5 | 16 | 5.73 | 5.67 | 5.61 | 5.48 | 5.44 | |

PJF000Z511

Model **FDTC50ZSXVH** Indoor unit **FDTC50VH** Outdoor unit **SRC50ZSX-S**

Cooling mode

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.22 | 3.43 | 4.45 | 3.68 | 4.56 | 3.65 | 4.69 | 3.63 | 4.94 | 3.82 | 5.19 | 3.75 |
| 13 | | | | | 4.32 | 3.47 | 4.56 | 3.73 | 4.68 | 3.70 | 4.81 | 3.67 | 5.07 | 3.86 | 5.32 | 3.79 |
| 15 | | | | | 4.42 | 3.52 | 4.68 | 3.78 | 4.80 | 3.75 | 4.93 | 3.72 | 5.19 | 3.90 | 5.45 | 3.83 |
| 17 | | | | | 4.53 | 3.57 | 4.79 | 3.82 | 4.92 | 3.79 | 5.06 | 3.77 | 5.32 | 3.95 | 5.58 | 3.87 |
| 19 | | | | | 4.62 | 3.61 | 4.89 | 3.86 | 5.02 | 3.83 | 5.19 | 3.82 | 5.51 | 4.02 | 5.84 | 3.96 |
| 21 | | | | | 4.76 | 3.67 | 4.99 | 3.91 | 5.13 | 3.88 | 5.32 | 3.87 | 5.70 | 4.08 | 6.09 | 4.04 |
| 23 | | | | | 4.81 | 3.69 | 5.04 | 3.93 | 5.19 | 3.90 | 5.37 | 3.89 | 5.73 | 4.10 | 6.10 | 4.04 |
| 25 | | | 4.66 | 3.84 | 4.86 | 3.71 | 5.10 | 3.95 | 5.25 | 3.93 | 5.42 | 3.91 | 5.76 | 4.11 | 6.11 | 4.05 |
| 27 | | | 4.70 | 3.86 | 4.91 | 3.74 | 5.16 | 3.98 | 5.31 | 3.95 | 5.46 | 3.92 | 5.75 | 4.10 | | |
| 29 | | | 4.62 | 3.82 | 4.83 | 3.70 | 5.08 | 3.94 | 5.23 | 3.92 | 5.38 | 3.89 | 5.68 | 4.08 | | |
| 31 | | | 4.54 | 3.78 | 4.75 | 3.66 | 5.00 | 3.91 | 5.15 | 3.89 | 5.30 | 3.86 | 5.60 | 4.05 | | |
| 33 | 4.04 | 3.43 | 4.31 | 3.67 | 4.67 | 3.63 | 4.93 | 3.88 | 5.08 | 3.86 | 5.23 | 3.83 | 5.53 | 4.02 | | |
| 35 | 4.11 | 3.46 | 4.30 | 3.67 | 4.59 | 3.59 | 4.85 | 3.85 | 5.00 | 3.83 | 5.15 | 3.80 | 5.45 | 4.00 | | |
| 37 | 4.04 | 3.43 | 4.23 | 3.63 | 4.52 | 3.56 | 4.77 | 3.81 | 4.92 | 3.79 | 5.07 | 3.77 | 5.37 | 3.97 | | |
| 39 | 3.97 | 3.39 | 4.16 | 3.60 | 4.45 | 3.53 | 4.70 | 3.79 | 4.85 | 3.77 | 4.99 | 3.74 | 5.29 | 3.94 | | |
| 41 | 3.90 | 3.36 | 4.09 | 3.57 | 4.38 | 3.50 | 4.62 | 3.75 | 4.77 | 3.74 | 4.92 | 3.71 | 5.21 | 3.91 | | |
| 43 | 3.83 | 3.32 | 4.01 | 3.53 | 4.30 | 3.46 | 4.55 | 3.72 | 4.69 | 3.70 | 4.84 | 3.68 | 5.13 | 3.88 | | |

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|------|
| | | 16 | 18 | 20 | 22 | 24 | |
| | | -19.8 | -20 | 2.63 | 2.58 | 2.53 | 2.47 |
| -17.7 | -18 | 2.81 | 2.77 | 2.72 | 2.66 | 2.61 | |
| -15.7 | -16 | 3.00 | 2.95 | 2.91 | 2.85 | 2.80 | |
| -13.5 | -14 | 3.20 | 3.15 | 3.11 | 3.05 | 3.00 | |
| -11.5 | -12 | 3.40 | 3.35 | 3.31 | 3.26 | 3.20 | |
| -9.5 | -10 | 3.60 | 3.55 | 3.51 | 3.46 | 3.41 | |
| -7.5 | -8 | 3.80 | 3.75 | 3.71 | 3.66 | 3.61 | |
| -5.5 | -6 | 3.88 | 3.83 | 3.79 | 3.75 | 3.71 | |
| -3.0 | -4 | 3.95 | 3.92 | 3.88 | 3.84 | 3.80 | |
| -1.0 | -2 | 4.03 | 4.00 | 3.97 | 3.93 | 3.90 | |
| 1.0 | 0 | 4.10 | 4.08 | 4.05 | 4.03 | 4.00 | |
| 2.0 | 1 | 4.14 | 4.12 | 4.10 | 4.07 | 4.05 | |
| 3.0 | 2 | 4.41 | 4.38 | 4.36 | 4.33 | 4.30 | |
| 5.0 | 4 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 | |
| 7.0 | 6 | 5.46 | 5.43 | 5.40 | 5.37 | 5.33 | |
| 9.0 | 8 | 5.74 | 5.70 | 5.67 | 5.63 | 5.59 | |
| 11.5 | 10 | 6.02 | 5.98 | 5.94 | 5.89 | 5.85 | |
| 13.5 | 12 | 6.36 | 6.31 | 6.25 | 6.17 | 6.12 | |
| 15.5 | 14 | 6.70 | 6.64 | 6.57 | 6.44 | 6.39 | |
| 16.5 | 16 | 6.87 | 6.80 | 6.73 | 6.58 | 6.52 | |

PJF000Z511

- Notes(1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDTC100VNXPVH Indoor unit FDTC50VH (2 units) Outdoor unit FDC100VNX
 Cooling mode (kW)

Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.81 | 8.84 | 7.34 | 9.10 | 7.30 | 9.38 | 7.26 | 9.94 | 7.66 | 10.50 | 7.54 |
| 13 | | | | | 8.63 | 6.94 | 9.17 | 7.48 | 9.43 | 7.43 | 9.73 | 7.39 | 10.32 | 7.79 | 10.92 | 7.67 |
| 15 | | | | | 8.93 | 7.07 | 9.49 | 7.61 | 9.77 | 7.56 | 10.09 | 7.52 | 10.71 | 7.92 | 11.34 | 7.81 |
| 17 | | | | | 9.23 | 7.21 | 9.82 | 7.75 | 10.11 | 7.70 | 10.44 | 7.66 | 11.10 | 8.06 | 11.75 | 7.94 |
| 19 | | | | | 9.44 | 7.30 | 10.04 | 7.84 | 10.34 | 7.79 | 10.68 | 7.75 | 11.35 | 8.15 | 12.01 | 8.02 |
| 21 | | | | | 9.64 | 7.39 | 10.26 | 7.93 | 10.57 | 7.88 | 10.91 | 7.84 | 11.59 | 8.24 | 12.28 | 8.11 |
| 23 | | | | | 9.64 | 7.39 | 10.28 | 7.94 | 10.59 | 7.89 | 10.94 | 7.85 | 11.63 | 8.25 | 12.32 | 8.13 |
| 25 | | | 8.95 | 7.50 | 9.64 | 7.39 | 10.30 | 7.95 | 10.62 | 7.90 | 10.97 | 7.86 | 11.66 | 8.26 | 12.36 | 8.14 |
| 27 | | | 8.91 | 7.48 | 9.64 | 7.39 | 10.33 | 7.96 | 10.64 | 7.91 | 10.96 | 7.86 | 11.59 | 8.24 | | |
| 29 | | | 8.84 | 7.45 | 9.51 | 7.33 | 10.16 | 7.89 | 10.48 | 7.85 | 10.80 | 7.80 | 11.45 | 8.19 | | |
| 31 | | | 8.76 | 7.41 | 9.37 | 7.27 | 10.00 | 7.82 | 10.32 | 7.78 | 10.65 | 7.74 | 11.30 | 8.13 | | |
| 33 | 8.21 | 6.92 | 8.58 | 7.32 | 9.23 | 7.21 | 9.83 | 7.75 | 10.16 | 7.72 | 10.49 | 7.68 | 11.15 | 8.08 | | |
| 35 | 7.77 | 6.70 | 8.31 | 7.19 | 9.09 | 7.15 | 9.66 | 7.68 | 10.00 | 7.65 | 10.34 | 7.62 | 11.01 | 8.03 | | |
| 37 | 7.68 | 6.65 | 8.18 | 7.13 | 8.92 | 7.07 | 9.49 | 7.61 | 9.81 | 7.58 | 10.13 | 7.54 | 10.77 | 7.95 | | |
| 39 | 7.58 | 6.60 | 8.04 | 7.07 | 8.76 | 7.00 | 9.31 | 7.54 | 9.62 | 7.50 | 9.93 | 7.46 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.56 | 7.91 | 7.01 | 8.59 | 6.92 | 9.14 | 7.47 | 9.43 | 7.43 | 9.73 | 7.39 | 10.31 | 7.78 | | |
| 43 | 7.40 | 6.51 | 7.78 | 6.95 | 8.42 | 6.85 | 8.96 | 7.39 | 9.24 | 7.35 | 9.52 | 7.31 | 10.08 | 7.71 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature | | | |
|-------------------|------|-------|------------------------|---------|---------|---------|
| | | | 16 °CDB | 18 °CDB | 20 °CDB | 22 °CDB |
| -19.8 | -20 | 7.30 | 7.24 | 7.18 | 7.12 | 7.06 |
| -17.7 | -18 | 7.74 | 7.68 | 7.62 | 7.55 | 7.49 |
| -15.7 | -16 | 8.18 | 8.12 | 8.05 | 7.99 | 7.92 |
| -13.5 | -14 | 8.54 | 8.47 | 8.40 | 8.33 | 8.27 |
| -11.5 | -12 | 8.89 | 8.82 | 8.75 | 8.68 | 8.61 |
| -9.5 | -10 | 9.25 | 9.17 | 9.10 | 9.03 | 8.95 |
| -7.5 | -8 | 9.60 | 9.53 | 9.45 | 9.38 | 9.30 |
| -5.5 | -6 | 10.00 | 9.92 | 9.84 | 9.76 | 9.68 |
| -3.0 | -4 | 10.39 | 10.31 | 10.23 | 10.14 | 10.06 |
| -1.0 | -2 | 10.79 | 10.70 | 10.62 | 10.53 | 10.44 |
| 1.0 | 0 | 11.18 | 11.09 | 11.01 | 10.91 | 10.82 |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJF000Z511

Model FDTC100VSXPVH Indoor unit FDTC50VH (2 units) Outdoor unit FDC100VSX
 Cooling mode (kW)

Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.81 | 8.84 | 7.34 | 9.10 | 7.30 | 9.38 | 7.26 | 9.94 | 7.66 | 10.50 | 7.54 |
| 13 | | | | | 8.63 | 6.94 | 9.17 | 7.48 | 9.43 | 7.43 | 9.73 | 7.39 | 10.32 | 7.79 | 10.92 | 7.67 |
| 15 | | | | | 8.93 | 7.07 | 9.49 | 7.61 | 9.77 | 7.56 | 10.09 | 7.52 | 10.71 | 7.92 | 11.34 | 7.81 |
| 17 | | | | | 9.23 | 7.21 | 9.82 | 7.75 | 10.11 | 7.70 | 10.44 | 7.66 | 11.10 | 8.06 | 11.75 | 7.94 |
| 19 | | | | | 9.44 | 7.30 | 10.04 | 7.84 | 10.34 | 7.79 | 10.68 | 7.75 | 11.35 | 8.15 | 12.01 | 8.02 |
| 21 | | | | | 9.64 | 7.39 | 10.26 | 7.93 | 10.57 | 7.88 | 10.91 | 7.84 | 11.59 | 8.24 | 12.28 | 8.11 |
| 23 | | | | | 9.64 | 7.39 | 10.28 | 7.94 | 10.59 | 7.89 | 10.94 | 7.85 | 11.63 | 8.25 | 12.32 | 8.13 |
| 25 | | | 8.95 | 7.50 | 9.64 | 7.39 | 10.30 | 7.95 | 10.62 | 7.90 | 10.97 | 7.86 | 11.66 | 8.26 | 12.36 | 8.14 |
| 27 | | | 8.91 | 7.48 | 9.64 | 7.39 | 10.33 | 7.96 | 10.64 | 7.91 | 10.96 | 7.86 | 11.59 | 8.24 | | |
| 29 | | | 8.84 | 7.45 | 9.51 | 7.33 | 10.16 | 7.89 | 10.48 | 7.85 | 10.80 | 7.80 | 11.45 | 8.19 | | |
| 31 | | | 8.76 | 7.41 | 9.37 | 7.27 | 10.00 | 7.82 | 10.32 | 7.78 | 10.65 | 7.74 | 11.30 | 8.13 | | |
| 33 | 8.21 | 6.92 | 8.58 | 7.32 | 9.23 | 7.21 | 9.83 | 7.75 | 10.16 | 7.72 | 10.49 | 7.68 | 11.15 | 8.08 | | |
| 35 | 7.77 | 6.70 | 8.31 | 7.19 | 9.09 | 7.15 | 9.66 | 7.68 | 10.00 | 7.65 | 10.34 | 7.62 | 11.01 | 8.03 | | |
| 37 | 7.68 | 6.65 | 8.18 | 7.13 | 8.92 | 7.07 | 9.49 | 7.61 | 9.81 | 7.58 | 10.13 | 7.54 | 10.77 | 7.95 | | |
| 39 | 7.58 | 6.60 | 8.04 | 7.07 | 8.76 | 7.00 | 9.31 | 7.54 | 9.62 | 7.50 | 9.93 | 7.46 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.56 | 7.91 | 7.01 | 8.59 | 6.92 | 9.14 | 7.47 | 9.43 | 7.43 | 9.73 | 7.39 | 10.31 | 7.78 | | |
| 43 | 7.40 | 6.51 | 7.78 | 6.95 | 8.42 | 6.85 | 8.96 | 7.39 | 9.24 | 7.35 | 9.52 | 7.31 | 10.08 | 7.71 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature | | | |
|-------------------|------|-------|------------------------|---------|---------|---------|
| | | | 16 °CDB | 18 °CDB | 20 °CDB | 22 °CDB |
| -19.8 | -20 | 11.29 | 11.20 | 11.11 | 11.02 | 10.93 |
| -17.7 | -18 | 11.34 | 11.25 | 11.16 | 11.06 | 10.97 |
| -15.7 | -16 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -13.5 | -14 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -11.5 | -12 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -9.5 | -10 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -7.5 | -8 | 11.37 | 11.29 | 11.20 | 11.11 | 11.02 |
| -5.5 | -6 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -3.0 | -4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| -1.0 | -2 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 1.0 | 0 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJF000Z511

- Notes(1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
 (3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model **FDTC125VNXPVH** Indoor unit **FDTC60VH (2 units)** Outdoor unit **FDC125VNX**

Cooling mode (kW)

Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 10.41 | 7.50 | 11.05 | 8.01 | 11.37 | 7.92 | 11.72 | 7.84 | 12.42 | 8.19 | 13.12 | 7.98 |
| 13 | | | | | 10.79 | 7.66 | 11.46 | 8.17 | 11.79 | 8.08 | 12.16 | 8.00 | 12.91 | 8.35 | 13.65 | 8.13 |
| 15 | | | | | 11.16 | 7.82 | 11.87 | 8.33 | 12.22 | 8.24 | 12.61 | 8.16 | 13.39 | 8.51 | 14.17 | 8.28 |
| 17 | | | | | 11.54 | 7.99 | 12.27 | 8.49 | 12.64 | 8.40 | 13.05 | 8.32 | 13.87 | 8.67 | 14.69 | 8.44 |
| 19 | | | | | 11.80 | 8.10 | 12.55 | 8.60 | 12.93 | 8.51 | 13.34 | 8.43 | 14.18 | 8.77 | 15.02 | 8.54 |
| 21 | | | | | 12.05 | 8.21 | 12.83 | 8.72 | 13.21 | 8.62 | 13.64 | 8.54 | 14.49 | 8.88 | 15.34 | 8.63 |
| 23 | | | | | 12.05 | 8.21 | 12.85 | 8.73 | 13.24 | 8.63 | 13.67 | 8.55 | 14.54 | 8.89 | 15.40 | 8.65 |
| 25 | | | 11.19 | 8.38 | 12.05 | 8.21 | 12.88 | 8.74 | 13.27 | 8.65 | 13.71 | 8.56 | 14.58 | 8.91 | 15.45 | 8.67 |
| 27 | | | 11.14 | 8.36 | 12.05 | 8.21 | 12.91 | 8.75 | 13.30 | 8.66 | 13.70 | 8.56 | 14.49 | 8.88 | | |
| 29 | | | 11.05 | 8.32 | 11.88 | 8.13 | 12.70 | 8.67 | 13.10 | 8.58 | 13.51 | 8.49 | 14.31 | 8.81 | | |
| 31 | | | 10.95 | 8.27 | 11.71 | 8.06 | 12.49 | 8.58 | 12.90 | 8.50 | 13.31 | 8.41 | 14.13 | 8.75 | | |
| 33 | 10.26 | 7.80 | 10.73 | 8.17 | 11.53 | 7.98 | 12.29 | 8.50 | 12.70 | 8.42 | 13.11 | 8.34 | 13.94 | 8.69 | | |
| 35 | 9.71 | 7.52 | 10.39 | 8.01 | 11.36 | 7.91 | 12.08 | 8.41 | 12.50 | 8.35 | 12.92 | 8.27 | 13.76 | 8.63 | | |
| 37 | 9.60 | 7.47 | 10.22 | 7.93 | 11.15 | 7.82 | 11.86 | 8.33 | 12.26 | 8.26 | 12.67 | 8.18 | 13.47 | 8.53 | | |
| 39 | 9.48 | 7.41 | 10.05 | 7.85 | 10.94 | 7.73 | 11.64 | 8.24 | 12.03 | 8.17 | 12.41 | 8.09 | 13.18 | 8.44 | | |
| 41 | 9.36 | 7.35 | 9.89 | 7.78 | 10.74 | 7.64 | 11.42 | 8.15 | 11.79 | 8.08 | 12.16 | 8.00 | 12.89 | 8.34 | | |
| 43 | 9.25 | 7.30 | 9.72 | 7.70 | 10.53 | 7.55 | 11.21 | 8.07 | 11.55 | 7.99 | 11.90 | 7.90 | 12.60 | 8.25 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 9.12 | 9.05 | 8.97 | 8.90 | 8.83 |
| -17.7 | -18 | 9.67 | 9.60 | 9.52 | 9.44 | 9.37 |
| -15.7 | -16 | 10.23 | 10.15 | 10.07 | 9.98 | 9.90 |
| -13.5 | -14 | 10.67 | 10.59 | 10.50 | 10.42 | 10.33 |
| -11.5 | -12 | 11.11 | 11.03 | 10.94 | 10.85 | 10.76 |
| -9.5 | -10 | 11.56 | 11.47 | 11.38 | 11.29 | 11.19 |
| -7.5 | -8 | 12.00 | 11.91 | 11.82 | 11.72 | 11.62 |
| -5.5 | -6 | 12.49 | 12.40 | 12.30 | 12.20 | 12.10 |
| -3.0 | -4 | 12.99 | 12.89 | 12.79 | 12.68 | 12.57 |
| -1.0 | -2 | 13.48 | 13.38 | 13.27 | 13.16 | 13.05 |
| 1.0 | 0 | 13.98 | 13.87 | 13.76 | 13.64 | 13.52 |
| 2.0 | 1 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 3.0 | 2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 5.0 | 4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 7.0 | 6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 9.0 | 8 | 14.81 | 14.70 | 14.59 | 14.47 | 14.35 |
| 11.5 | 10 | 15.41 | 15.29 | 15.18 | 15.06 | 14.94 |
| 13.5 | 12 | 16.22 | 16.09 | 15.97 | 15.85 | 15.90 |
| 15.5 | 14 | 17.03 | 16.90 | 16.76 | 16.65 | 16.86 |
| 16.5 | 16 | 17.44 | 17.30 | 17.16 | 17.04 | 17.34 |

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Model **FDTC125VSPVH** Indoor unit **FDTC60VH (2 units)** Outdoor unit **FDC125VSVX**

Cooling mode (kW)

Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 10.41 | 7.50 | 11.05 | 8.01 | 11.37 | 7.92 | 11.72 | 7.84 | 12.42 | 8.19 | 13.12 | 7.98 |
| 13 | | | | | 10.79 | 7.66 | 11.46 | 8.17 | 11.79 | 8.08 | 12.16 | 8.00 | 12.91 | 8.35 | 13.65 | 8.13 |
| 15 | | | | | 11.16 | 7.82 | 11.87 | 8.33 | 12.22 | 8.24 | 12.61 | 8.16 | 13.39 | 8.51 | 14.17 | 8.28 |
| 17 | | | | | 11.54 | 7.99 | 12.27 | 8.49 | 12.64 | 8.40 | 13.05 | 8.32 | 13.87 | 8.67 | 14.69 | 8.44 |
| 19 | | | | | 11.80 | 8.10 | 12.55 | 8.60 | 12.93 | 8.51 | 13.34 | 8.43 | 14.18 | 8.77 | 15.02 | 8.54 |
| 21 | | | | | 12.05 | 8.21 | 12.83 | 8.72 | 13.21 | 8.62 | 13.64 | 8.54 | 14.49 | 8.88 | 15.34 | 8.63 |
| 23 | | | | | 12.05 | 8.21 | 12.85 | 8.73 | 13.24 | 8.63 | 13.67 | 8.55 | 14.54 | 8.89 | 15.40 | 8.65 |
| 25 | | | 11.19 | 8.38 | 12.05 | 8.21 | 12.88 | 8.74 | 13.27 | 8.65 | 13.71 | 8.56 | 14.58 | 8.91 | 15.45 | 8.67 |
| 27 | | | 11.14 | 8.36 | 12.05 | 8.21 | 12.91 | 8.75 | 13.30 | 8.66 | 13.70 | 8.56 | 14.49 | 8.88 | | |
| 29 | | | 11.05 | 8.32 | 11.88 | 8.13 | 12.70 | 8.67 | 13.10 | 8.58 | 13.51 | 8.49 | 14.31 | 8.81 | | |
| 31 | | | 10.95 | 8.27 | 11.71 | 8.06 | 12.49 | 8.58 | 12.90 | 8.50 | 13.31 | 8.41 | 14.13 | 8.75 | | |
| 33 | 10.26 | 7.80 | 10.73 | 8.17 | 11.53 | 7.98 | 12.29 | 8.50 | 12.70 | 8.42 | 13.11 | 8.34 | 13.94 | 8.69 | | |
| 35 | 9.71 | 7.52 | 10.39 | 8.01 | 11.36 | 7.91 | 12.08 | 8.41 | 12.50 | 8.35 | 12.92 | 8.27 | 13.76 | 8.63 | | |
| 37 | 9.60 | 7.47 | 10.22 | 7.93 | 11.15 | 7.82 | 11.86 | 8.33 | 12.26 | 8.26 | 12.67 | 8.18 | 13.47 | 8.53 | | |
| 39 | 9.48 | 7.41 | 10.05 | 7.85 | 10.94 | 7.73 | 11.64 | 8.24 | 12.03 | 8.17 | 12.41 | 8.09 | 13.18 | 8.44 | | |
| 41 | 9.36 | 7.35 | 9.89 | 7.78 | 10.74 | 7.64 | 11.42 | 8.15 | 11.79 | 8.08 | 12.16 | 8.00 | 12.89 | 8.34 | | |
| 43 | 9.25 | 7.30 | 9.72 | 7.70 | 10.53 | 7.55 | 11.21 | 8.07 | 11.55 | 7.99 | 11.90 | 7.90 | 12.60 | 8.25 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 11.07 | 10.99 | 10.90 | 10.81 | 10.72 |
| -17.7 | -18 | 12.32 | 12.22 | 12.12 | 12.02 | 11.92 |
| -15.7 | -16 | 13.06 | 12.95 | 12.85 | 12.74 | 12.63 |
| -13.5 | -14 | 13.64 | 13.52 | 13.42 | 13.31 | 13.20 |
| -11.5 | -12 | 13.98 | 13.87 | 13.77 | 13.66 | 13.54 |
| -9.5 | -10 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| -7.5 | -8 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| -5.5 | -6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| -3.0 | -4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| -1.0 | -2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 1.0 | 0 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 2.0 | 1 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 3.0 | 2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 5.0 | 4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 7.0 | 6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 9.0 | 8 | 14.81 | 14.70 | 14.59 | 14.47 | 14.35 |
| 11.5 | 10 | 15.41 | 15.29 | 15.18 | 15.06 | 14.94 |
| 13.5 | 12 | 16.22 | 16.09 | 15.97 | 15.85 | 15.90 |
| 15.5 | 14 | 17.03 | 16.90 | 16.76 | 16.65 | 16.86 |
| 16.5 | 16 | 17.44 | 17.30 | 17.16 | 17.04 | 17.34 |

PJF000Z511

Notes(1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.(Cooling only)
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
 (3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

(2) Duct connected-High static pressure type (FDU)

Model FDU71VNXVH Indoor unit FDU71VH Outdoor unit FDC71VNX
Cooling mode

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.87 | 4.77 | 6.02 | 5.60 | 6.59 | 5.67 | 6.79 | 5.62 | 7.19 | 5.96 | 7.59 | 5.82 |
| 13 | | | | | 5.33 | 5.01 | 6.32 | 5.70 | 6.82 | 5.74 | 7.03 | 5.69 | 7.45 | 6.03 | 7.88 | 5.89 |
| 15 | | | | | 5.79 | 5.17 | 6.63 | 5.80 | 7.05 | 5.82 | 7.27 | 5.76 | 7.71 | 6.10 | 8.16 | 5.96 |
| 17 | | | | | 6.26 | 5.35 | 6.94 | 5.91 | 7.27 | 5.89 | 7.51 | 5.84 | 7.97 | 6.17 | 8.44 | 6.03 |
| 19 | | | | | 6.59 | 5.47 | 7.16 | 5.98 | 7.44 | 5.95 | 7.68 | 5.89 | 8.15 | 6.22 | 8.63 | 6.08 |
| 21 | | | | | 6.93 | 5.60 | 7.38 | 6.06 | 7.60 | 6.00 | 7.84 | 5.94 | 8.33 | 6.27 | 8.82 | 6.13 |
| 23 | | | | | 6.91 | 5.59 | 7.35 | 6.05 | 7.57 | 5.99 | 7.81 | 5.93 | 8.30 | 6.26 | 8.78 | 6.11 |
| 25 | | | 6.46 | 5.76 | 6.89 | 5.58 | 7.32 | 6.04 | 7.54 | 5.98 | 7.78 | 5.92 | 8.26 | 6.25 | 8.74 | 6.10 |
| 27 | | | 6.45 | 5.75 | 6.87 | 5.57 | 7.30 | 6.03 | 7.52 | 5.97 | 7.74 | 5.91 | 8.18 | 6.23 | | |
| 29 | | | 6.34 | 5.71 | 6.75 | 5.53 | 7.19 | 5.99 | 7.41 | 5.94 | 7.64 | 5.88 | 8.09 | 6.21 | | |
| 31 | | | 6.23 | 5.66 | 6.64 | 5.49 | 7.08 | 5.96 | 7.31 | 5.90 | 7.54 | 5.85 | 7.99 | 6.18 | | |
| 33 | 5.77 | 5.22 | 6.05 | 5.59 | 6.53 | 5.45 | 6.97 | 5.92 | 7.20 | 5.87 | 7.44 | 5.81 | 7.90 | 6.15 | | |
| 35 | 5.67 | 5.18 | 5.95 | 5.55 | 6.42 | 5.40 | 6.86 | 5.88 | 7.10 | 5.83 | 7.34 | 5.78 | 7.81 | 6.13 | | |
| 37 | 5.58 | 5.14 | 5.85 | 5.51 | 6.31 | 5.36 | 6.72 | 5.83 | 6.95 | 5.79 | 7.18 | 5.73 | 7.64 | 6.08 | | |
| 39 | 5.49 | 5.10 | 5.76 | 5.47 | 6.20 | 5.32 | 6.59 | 5.79 | 6.81 | 5.74 | 7.03 | 5.69 | 7.46 | 6.03 | | |
| 41 | 5.39 | 5.05 | 5.67 | 5.44 | 6.09 | 5.28 | 6.45 | 5.74 | 6.66 | 5.69 | 6.87 | 5.64 | 7.29 | 5.99 | | |
| 43 | 5.30 | 5.02 | 5.57 | 5.40 | 5.97 | 5.24 | 6.31 | 5.70 | 6.51 | 5.65 | 6.71 | 5.59 | 7.12 | 5.94 | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|------|------|------|------|
| °CDB | °CWB | °CDB | | | | |
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 3.95 | 3.93 | 3.91 | 3.88 | 3.86 |
| -17.7 | -18 | 4.18 | 4.16 | 4.14 | 4.11 | 4.09 |
| -15.7 | -16 | 4.42 | 4.39 | 4.37 | 4.34 | 4.32 |
| -13.5 | -14 | 4.68 | 4.65 | 4.63 | 4.60 | 4.57 |
| -11.5 | -12 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 |
| -9.5 | -10 | 5.20 | 5.17 | 5.14 | 5.11 | 5.08 |
| -7.5 | -8 | 5.46 | 5.43 | 5.40 | 5.36 | 5.33 |
| -5.5 | -6 | 5.59 | 5.55 | 5.52 | 5.48 | 5.44 |
| -3.0 | -4 | 5.71 | 5.68 | 5.64 | 5.60 | 5.56 |
| -1.0 | -2 | 5.84 | 5.80 | 5.76 | 5.72 | 5.67 |
| 1.0 | 0 | 5.97 | 5.92 | 5.88 | 5.83 | 5.79 |
| 2.0 | 1 | 6.03 | 5.98 | 5.94 | 5.89 | 5.85 |
| 3.0 | 2 | 6.45 | 6.40 | 6.35 | 6.30 | 6.25 |
| 5.0 | 4 | 7.29 | 7.23 | 7.18 | 7.12 | 7.06 |
| 7.0 | 6 | 8.13 | 8.06 | 8.00 | 7.93 | 7.87 |
| 9.0 | 8 | 8.42 | 8.36 | 8.29 | 8.23 | 8.16 |
| 11.5 | 10 | 8.72 | 8.65 | 8.59 | 8.52 | 8.46 |
| 13.5 | 12 | 9.20 | 9.13 | 9.06 | 9.00 | 8.92 |
| 15.5 | 14 | 9.69 | 9.61 | 9.53 | 9.47 | 9.39 |
| 16.5 | 16 | 9.93 | 9.85 | 9.77 | 9.71 | 9.62 |

PJG000Z045 

Model FDU100VNXVH Indoor unit FDU100VH Outdoor unit FDC100VNX
Cooling mode

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.94 | 8.84 | 7.57 | 9.10 | 7.45 | 9.38 | 7.33 | 9.94 | 7.76 | 10.50 | 7.48 |
| 13 | | | | | 8.63 | 7.03 | 9.17 | 7.65 | 9.43 | 7.52 | 9.73 | 7.40 | 10.32 | 7.83 | 10.92 | 7.54 |
| 15 | | | | | 8.93 | 7.11 | 9.49 | 7.73 | 9.77 | 7.60 | 10.09 | 7.48 | 10.71 | 7.90 | 11.34 | 7.60 |
| 17 | | | | | 9.23 | 7.20 | 9.82 | 7.82 | 10.11 | 7.69 | 10.44 | 7.56 | 11.10 | 7.97 | 11.75 | 7.67 |
| 19 | | | | | 9.44 | 7.27 | 10.04 | 7.87 | 10.34 | 7.74 | 10.68 | 7.61 | 11.35 | 8.02 | 12.01 | 7.71 |
| 21 | | | | | 9.64 | 7.33 | 10.26 | 7.93 | 10.57 | 7.80 | 10.91 | 7.66 | 11.59 | 8.07 | 12.28 | 7.75 |
| 23 | | | | | 9.64 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.94 | 7.67 | 11.63 | 8.08 | 12.32 | 7.76 |
| 25 | | | 8.95 | 7.65 | 9.64 | 7.33 | 10.30 | 7.94 | 10.62 | 7.81 | 10.97 | 7.68 | 11.66 | 8.08 | 12.36 | 7.76 |
| 27 | | | 8.91 | 7.63 | 9.64 | 7.33 | 10.33 | 7.95 | 10.64 | 7.82 | 10.96 | 7.68 | 11.59 | 8.07 | | |
| 29 | | | 8.84 | 7.61 | 9.51 | 7.29 | 10.16 | 7.91 | 10.48 | 7.78 | 10.80 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.76 | 7.58 | 9.37 | 7.25 | 10.00 | 7.86 | 10.32 | 7.74 | 10.65 | 7.60 | 11.30 | 8.01 | | |
| 33 | 8.21 | 7.04 | 8.58 | 7.52 | 9.23 | 7.20 | 9.83 | 7.82 | 10.16 | 7.70 | 10.49 | 7.57 | 11.15 | 7.98 | | |
| 35 | 7.77 | 6.87 | 8.31 | 7.43 | 9.09 | 7.16 | 9.66 | 7.77 | 10.00 | 7.66 | 10.34 | 7.53 | 11.01 | 7.96 | | |
| 37 | 7.68 | 6.84 | 8.18 | 7.39 | 8.92 | 7.11 | 9.49 | 7.73 | 9.81 | 7.61 | 10.13 | 7.49 | 10.77 | 7.91 | | |
| 39 | 7.58 | 6.80 | 8.04 | 7.34 | 8.76 | 7.06 | 9.31 | 7.68 | 9.62 | 7.57 | 9.93 | 7.44 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.77 | 7.91 | 7.30 | 8.59 | 7.02 | 9.14 | 7.64 | 9.43 | 7.52 | 9.73 | 7.40 | 10.31 | 7.83 | | |
| 43 | 7.40 | 6.74 | 7.78 | 7.26 | 8.42 | 6.97 | 8.96 | 7.60 | 9.24 | 7.48 | 9.52 | 7.36 | 10.08 | 7.79 | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | °CDB | | | | |
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.30 | 7.24 | 7.18 | 7.12 | 7.06 |
| -17.7 | -18 | 7.74 | 7.68 | 7.62 | 7.55 | 7.49 |
| -15.7 | -16 | 8.18 | 8.12 | 8.05 | 7.99 | 7.92 |
| -13.5 | -14 | 8.54 | 8.47 | 8.40 | 8.33 | 8.27 |
| -11.5 | -12 | 8.89 | 8.82 | 8.75 | 8.68 | 8.61 |
| -9.5 | -10 | 9.25 | 9.17 | 9.10 | 9.03 | 8.95 |
| -7.5 | -8 | 9.60 | 9.53 | 9.45 | 9.38 | 9.30 |
| -5.5 | -6 | 10.00 | 9.92 | 9.84 | 9.76 | 9.68 |
| -3.0 | -4 | 10.39 | 10.31 | 10.23 | 10.14 | 10.06 |
| -1.0 | -2 | 10.79 | 10.70 | 10.62 | 10.53 | 10.44 |
| 1.0 | 0 | 11.18 | 11.09 | 11.01 | 10.91 | 10.82 |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJG000Z045 

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDU100VSVXH** Indoor unit **FDU100VH** Outdoor unit **FDC100VSX**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.94 | 8.84 | 7.57 | 9.10 | 7.45 | 9.38 | 7.33 | 9.94 | 7.76 | 10.50 | 7.48 |
| 13 | | | | | 8.63 | 7.03 | 9.17 | 7.65 | 9.43 | 7.52 | 9.73 | 7.40 | 10.32 | 7.83 | 10.92 | 7.54 |
| 15 | | | | | 8.93 | 7.11 | 9.49 | 7.73 | 9.77 | 7.60 | 10.09 | 7.48 | 10.71 | 7.90 | 11.34 | 7.60 |
| 17 | | | | | 9.23 | 7.20 | 9.82 | 7.82 | 10.11 | 7.69 | 10.44 | 7.56 | 11.10 | 7.97 | 11.75 | 7.67 |
| 19 | | | | | 9.44 | 7.27 | 10.04 | 7.87 | 10.34 | 7.74 | 10.68 | 7.61 | 11.35 | 8.02 | 12.01 | 7.71 |
| 21 | | | | | 9.64 | 7.33 | 10.26 | 7.93 | 10.57 | 7.80 | 10.91 | 7.66 | 11.59 | 8.07 | 12.28 | 7.75 |
| 23 | | | | | 9.64 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.94 | 7.67 | 11.63 | 8.08 | 12.32 | 7.76 |
| 25 | | | 8.95 | 7.65 | 9.64 | 7.33 | 10.30 | 7.94 | 10.62 | 7.81 | 10.97 | 7.68 | 11.66 | 8.08 | 12.36 | 7.76 |
| 27 | | | 8.91 | 7.63 | 9.64 | 7.33 | 10.33 | 7.95 | 10.64 | 7.82 | 10.96 | 7.68 | 11.59 | 8.07 | | |
| 29 | | | 8.84 | 7.61 | 9.51 | 7.29 | 10.16 | 7.91 | 10.48 | 7.78 | 10.80 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.76 | 7.58 | 9.37 | 7.25 | 10.00 | 7.86 | 10.32 | 7.74 | 10.65 | 7.60 | 11.30 | 8.01 | | |
| 33 | 8.21 | 7.04 | 8.58 | 7.52 | 9.23 | 7.20 | 9.83 | 7.82 | 10.16 | 7.70 | 10.49 | 7.57 | 11.15 | 7.98 | | |
| 35 | 7.77 | 6.87 | 8.31 | 7.43 | 9.09 | 7.16 | 9.66 | 7.77 | 10.00 | 7.66 | 10.34 | 7.53 | 11.01 | 7.96 | | |
| 37 | 7.68 | 6.84 | 8.18 | 7.39 | 8.92 | 7.11 | 9.49 | 7.73 | 9.81 | 7.61 | 10.13 | 7.49 | 10.77 | 7.91 | | |
| 39 | 7.58 | 6.80 | 8.04 | 7.34 | 8.76 | 7.06 | 9.31 | 7.68 | 9.62 | 7.57 | 9.93 | 7.44 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.77 | 7.91 | 7.30 | 8.59 | 7.02 | 9.14 | 7.64 | 9.43 | 7.52 | 9.73 | 7.40 | 10.31 | 7.83 | | |
| 43 | 7.40 | 6.74 | 7.78 | 7.26 | 8.42 | 6.97 | 8.96 | 7.60 | 9.24 | 7.48 | 9.52 | 7.36 | 10.08 | 7.79 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature | | | | |
|-------------------|------|------|------------------------|-------|-------|-------|-------|
| | | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | 11.29 | 11.20 | 11.11 | 11.02 | 10.93 |
| -17.7 | -18 | | 11.34 | 11.25 | 11.16 | 11.06 | 10.97 |
| -15.7 | -16 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -13.5 | -14 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -11.5 | -12 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -9.5 | -10 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -7.5 | -8 | | 11.37 | 11.29 | 11.20 | 11.11 | 11.02 |
| -5.5 | -6 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -3.0 | -4 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| -1.0 | -2 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 1.0 | 0 | | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 2.0 | 1 | | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJG000Z045

Model **FDU125VNVXH** Indoor unit **FDU125VH** Outdoor unit **FDC125VNX**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.41 | 9.34 | 11.05 | 10.16 | 11.37 | 10.10 | 11.72 | 10.04 | 12.42 | 10.66 | 13.12 | 10.51 |
| 13 | | | | | 10.79 | 9.50 | 11.46 | 10.32 | 11.79 | 10.25 | 12.16 | 10.20 | 12.91 | 10.83 | 13.65 | 10.67 |
| 15 | | | | | 11.16 | 9.66 | 11.87 | 10.48 | 12.22 | 10.42 | 12.61 | 10.36 | 13.39 | 10.99 | 14.17 | 10.83 |
| 17 | | | | | 11.54 | 9.82 | 12.27 | 10.64 | 12.64 | 10.58 | 13.05 | 10.52 | 13.87 | 11.15 | 14.69 | 10.99 |
| 19 | | | | | 11.80 | 9.93 | 12.55 | 10.75 | 12.93 | 10.69 | 13.34 | 10.63 | 14.18 | 11.25 | 15.02 | 11.10 |
| 21 | | | | | 12.05 | 10.04 | 12.83 | 10.86 | 13.21 | 10.79 | 13.64 | 10.74 | 14.49 | 11.36 | 15.34 | 11.20 |
| 23 | | | | | 12.05 | 10.04 | 12.85 | 10.87 | 13.24 | 10.81 | 13.67 | 10.75 | 14.54 | 11.38 | 15.40 | 11.22 |
| 25 | | | 11.19 | 10.21 | 12.05 | 10.04 | 12.88 | 10.88 | 13.27 | 10.82 | 13.71 | 10.77 | 14.58 | 11.39 | 15.45 | 11.23 |
| 27 | | | 11.14 | 10.19 | 12.05 | 10.04 | 12.91 | 10.89 | 13.30 | 10.83 | 13.70 | 10.76 | 14.49 | 11.36 | | |
| 29 | | | 11.05 | 10.15 | 11.88 | 9.97 | 12.70 | 10.81 | 13.10 | 10.75 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.95 | 10.10 | 11.71 | 9.89 | 12.49 | 10.72 | 12.90 | 10.67 | 13.31 | 10.62 | 14.13 | 11.24 | | |
| 33 | 10.26 | 9.37 | 10.73 | 10.00 | 11.53 | 9.82 | 12.29 | 10.64 | 12.70 | 10.60 | 13.11 | 10.54 | 13.94 | 11.17 | | |
| 35 | 9.71 | 9.10 | 10.39 | 9.84 | 11.36 | 9.74 | 12.08 | 10.56 | 12.50 | 10.52 | 12.92 | 10.47 | 13.76 | 11.11 | | |
| 37 | 9.60 | 9.05 | 10.22 | 9.77 | 11.15 | 9.65 | 11.86 | 10.47 | 12.26 | 10.43 | 12.67 | 10.38 | 13.47 | 11.01 | | |
| 39 | 9.48 | 8.99 | 10.05 | 9.69 | 10.94 | 9.57 | 11.64 | 10.39 | 12.03 | 10.34 | 12.41 | 10.29 | 13.18 | 10.92 | | |
| 41 | 9.36 | 8.93 | 9.89 | 9.62 | 10.74 | 9.48 | 11.42 | 10.30 | 11.79 | 10.25 | 12.16 | 10.20 | 12.89 | 10.82 | | |
| 43 | 9.25 | 8.88 | 9.72 | 9.53 | 10.53 | 9.39 | 11.21 | 10.22 | 11.55 | 10.16 | 11.90 | 10.10 | 12.60 | 10.72 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature | | | | |
|-------------------|------|------|------------------------|-------|-------|-------|-------|
| | | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | 9.12 | 9.05 | 8.97 | 8.90 | 8.83 |
| -17.7 | -18 | | 9.67 | 9.60 | 9.52 | 9.44 | 9.37 |
| -15.7 | -16 | | 10.23 | 10.15 | 10.07 | 9.98 | 9.90 |
| -13.5 | -14 | | 10.67 | 10.59 | 10.50 | 10.42 | 10.33 |
| -11.5 | -12 | | 11.11 | 11.03 | 10.94 | 10.85 | 10.76 |
| -9.5 | -10 | | 11.56 | 11.47 | 11.38 | 11.29 | 11.19 |
| -7.5 | -8 | | 12.00 | 11.91 | 11.82 | 11.72 | 11.62 |
| -5.5 | -6 | | 12.49 | 12.40 | 12.30 | 12.20 | 12.10 |
| -3.0 | -4 | | 12.99 | 12.89 | 12.79 | 12.68 | 12.57 |
| -1.0 | -2 | | 13.48 | 13.38 | 13.27 | 13.16 | 13.05 |
| 1.0 | 0 | | 13.98 | 13.87 | 13.76 | 13.64 | 13.52 |
| 2.0 | 1 | | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 3.0 | 2 | | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 5.0 | 4 | | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 |
| 7.0 | 6 | | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 |
| 9.0 | 8 | | 14.81 | 14.70 | 14.59 | 14.47 | 14.35 |
| 11.5 | 10 | | 15.41 | 15.29 | 15.18 | 15.06 | 14.94 |
| 13.5 | 12 | | 16.22 | 16.09 | 15.97 | 15.85 | 15.90 |
| 15.5 | 14 | | 17.03 | 16.90 | 16.76 | 16.65 | 16.86 |
| 16.5 | 16 | | 17.44 | 17.30 | 17.16 | 17.04 | 17.34 |

PJG000Z045

Notes(1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
 (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model FDU125VSXVH Indoor unit **FDU125VH** Outdoor unit **FDC125VSX**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.41 | 9.34 | 11.05 | 10.16 | 11.37 | 10.10 | 11.72 | 10.04 | 12.42 | 10.66 | 13.12 | 10.51 |
| 13 | | | | | 10.79 | 9.50 | 11.46 | 10.32 | 11.79 | 10.25 | 12.16 | 10.20 | 12.91 | 10.83 | 13.65 | 10.67 |
| 15 | | | | | 11.16 | 9.66 | 11.87 | 10.48 | 12.22 | 10.42 | 12.61 | 10.36 | 13.39 | 10.99 | 14.17 | 10.83 |
| 17 | | | | | 11.54 | 9.82 | 12.27 | 10.64 | 12.64 | 10.58 | 13.05 | 10.52 | 13.87 | 11.15 | 14.69 | 10.99 |
| 19 | | | | | 11.80 | 9.93 | 12.55 | 10.75 | 12.93 | 10.69 | 13.34 | 10.63 | 14.18 | 11.25 | 15.02 | 11.10 |
| 21 | | | | | 12.05 | 10.04 | 12.83 | 10.86 | 13.21 | 10.79 | 13.64 | 10.74 | 14.49 | 11.36 | 15.34 | 11.20 |
| 23 | | | | | 12.05 | 10.04 | 12.85 | 10.87 | 13.24 | 10.81 | 13.67 | 10.75 | 14.54 | 11.38 | 15.40 | 11.22 |
| 25 | | | 11.19 | 10.21 | 12.05 | 10.04 | 12.88 | 10.88 | 13.27 | 10.82 | 13.71 | 10.77 | 14.58 | 11.39 | 15.45 | 11.23 |
| 27 | | | 11.14 | 10.19 | 12.05 | 10.04 | 12.91 | 10.89 | 13.30 | 10.83 | 13.70 | 10.76 | 14.49 | 11.36 | | |
| 29 | | | 11.05 | 10.15 | 11.88 | 9.97 | 12.70 | 10.81 | 13.10 | 10.75 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.95 | 10.10 | 11.71 | 9.89 | 12.49 | 10.72 | 12.90 | 10.67 | 13.31 | 10.62 | 14.13 | 11.24 | | |
| 33 | 10.26 | 9.37 | 10.73 | 10.00 | 11.53 | 9.82 | 12.29 | 10.64 | 12.70 | 10.60 | 13.11 | 10.54 | 13.94 | 11.17 | | |
| 35 | 9.71 | 9.10 | 10.39 | 9.84 | 11.36 | 9.74 | 12.08 | 10.56 | 12.50 | 10.52 | 12.92 | 10.47 | 13.76 | 11.11 | | |
| 37 | 9.60 | 9.05 | 10.22 | 9.77 | 11.15 | 9.65 | 11.86 | 10.47 | 12.26 | 10.43 | 12.67 | 10.38 | 13.47 | 11.01 | | |
| 39 | 9.48 | 8.99 | 10.05 | 9.69 | 10.94 | 9.57 | 11.64 | 10.39 | 12.03 | 10.34 | 12.41 | 10.29 | 13.18 | 10.92 | | |
| 41 | 9.36 | 8.93 | 9.89 | 9.62 | 10.74 | 9.48 | 11.42 | 10.30 | 11.79 | 10.25 | 12.16 | 10.20 | 12.89 | 10.82 | | |
| 43 | 9.25 | 8.88 | 9.72 | 9.53 | 10.53 | 9.39 | 11.21 | 10.22 | 11.55 | 10.16 | 11.90 | 10.10 | 12.60 | 10.72 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | |
|------------------------|------|-----------------------------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 14.11 | 14.00 | 13.89 | 13.78 |
| -17.7 | -18 | 14.17 | 14.06 | 13.94 | 13.83 |
| -15.7 | -16 | 14.23 | 14.11 | 14.00 | 13.89 |
| -13.5 | -14 | 14.23 | 14.11 | 14.00 | 13.89 |
| -11.5 | -12 | 14.22 | 14.11 | 14.00 | 13.89 |
| -9.5 | -10 | 14.22 | 14.11 | 14.00 | 13.89 |
| -7.5 | -8 | 14.22 | 14.11 | 14.00 | 13.89 |
| -5.5 | -6 | 14.22 | 14.11 | 14.00 | 13.88 |
| -3.0 | -4 | 14.22 | 14.11 | 14.00 | 13.88 |
| -1.0 | -2 | 14.22 | 14.11 | 14.00 | 13.88 |
| 1.0 | 0 | 14.22 | 14.11 | 14.00 | 13.88 |
| 2.0 | 1 | 14.22 | 14.11 | 14.00 | 13.88 |
| 3.0 | 2 | 14.22 | 14.11 | 14.00 | 13.88 |
| 5.0 | 4 | 14.22 | 14.11 | 14.00 | 13.88 |
| 7.0 | 6 | 14.22 | 14.11 | 14.00 | 13.88 |
| 9.0 | 8 | 14.81 | 14.70 | 14.59 | 14.47 |
| 11.5 | 10 | 15.41 | 15.29 | 15.18 | 15.06 |
| 13.5 | 12 | 16.22 | 16.09 | 15.97 | 15.85 |
| 15.5 | 14 | 17.03 | 16.90 | 16.76 | 16.65 |
| 16.5 | 16 | 17.44 | 17.30 | 17.16 | 17.04 |

PJG00Z045

Model FDU140VNXVH Indoor unit **FDU140VH** Outdoor unit **FDC140VNX**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.66 | 10.07 | 12.38 | 10.97 | 12.73 | 10.84 | 13.13 | 10.71 | 13.91 | 11.36 | 14.70 | 11.06 |
| 13 | | | | | 12.08 | 10.21 | 12.83 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.45 | 11.49 | 15.28 | 11.18 |
| 15 | | | | | 12.50 | 10.35 | 13.29 | 11.25 | 13.68 | 11.11 | 14.12 | 10.98 | 14.99 | 11.63 | 15.87 | 11.31 |
| 17 | | | | | 12.92 | 10.50 | 13.75 | 11.39 | 14.16 | 11.26 | 14.62 | 11.12 | 15.54 | 11.76 | 16.45 | 11.43 |
| 19 | | | | | 13.21 | 10.60 | 14.06 | 11.49 | 14.48 | 11.35 | 14.95 | 11.22 | 15.88 | 11.85 | 16.82 | 11.52 |
| 21 | | | | | 13.50 | 10.71 | 14.36 | 11.59 | 14.80 | 11.45 | 15.28 | 11.31 | 16.23 | 11.94 | 17.19 | 11.60 |
| 23 | | | | | 13.50 | 10.71 | 14.40 | 11.60 | 14.83 | 11.46 | 15.31 | 11.32 | 16.28 | 11.95 | 17.25 | 11.61 |
| 25 | | | 12.53 | 11.05 | 13.50 | 10.71 | 14.43 | 11.61 | 14.87 | 11.47 | 15.35 | 11.33 | 16.33 | 11.96 | 17.30 | 11.62 |
| 27 | | | 12.48 | 11.03 | 13.50 | 10.71 | 14.46 | 11.62 | 14.90 | 11.48 | 15.34 | 11.33 | 16.23 | 11.94 | | |
| 29 | | | 12.37 | 10.98 | 13.31 | 10.64 | 14.23 | 11.54 | 14.68 | 11.41 | 15.13 | 11.27 | 16.03 | 11.89 | | |
| 31 | | | 12.26 | 10.94 | 13.11 | 10.57 | 13.99 | 11.47 | 14.45 | 11.34 | 14.91 | 11.21 | 15.82 | 11.83 | | |
| 33 | 11.49 | 10.15 | 12.02 | 10.85 | 12.92 | 10.50 | 13.76 | 11.39 | 14.23 | 11.28 | 14.69 | 11.14 | 15.61 | 11.78 | | |
| 35 | 10.88 | 9.90 | 11.63 | 10.70 | 12.72 | 10.43 | 13.53 | 11.32 | 14.00 | 11.21 | 14.47 | 11.08 | 15.41 | 11.73 | | |
| 37 | 10.75 | 9.84 | 11.45 | 10.63 | 12.49 | 10.35 | 13.29 | 11.25 | 13.74 | 11.13 | 14.18 | 11.00 | 15.08 | 11.65 | | |
| 39 | 10.62 | 9.79 | 11.26 | 10.56 | 12.26 | 10.27 | 13.04 | 11.17 | 13.47 | 11.05 | 13.90 | 10.92 | 14.76 | 11.57 | | |
| 41 | 10.49 | 9.73 | 11.07 | 10.49 | 12.02 | 10.19 | 12.80 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.44 | 11.49 | | |
| 43 | 10.35 | 9.68 | 10.89 | 10.42 | 11.79 | 10.11 | 12.55 | 11.02 | 12.94 | 10.90 | 13.33 | 10.77 | 14.11 | 11.41 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | |
|------------------------|------|-----------------------------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 10.42 | 10.34 | 10.26 | 10.17 |
| -17.7 | -18 | 11.06 | 10.97 | 10.88 | 10.79 |
| -15.7 | -16 | 11.69 | 11.60 | 11.50 | 11.41 |
| -13.5 | -14 | 12.20 | 12.10 | 12.00 | 11.91 |
| -11.5 | -12 | 12.70 | 12.60 | 12.50 | 12.40 |
| -9.5 | -10 | 13.21 | 13.11 | 13.00 | 12.90 |
| -7.5 | -8 | 13.71 | 13.61 | 13.50 | 13.39 |
| -5.5 | -6 | 14.28 | 14.17 | 14.06 | 13.94 |
| -3.0 | -4 | 14.84 | 14.73 | 14.61 | 14.49 |
| -1.0 | -2 | 15.41 | 15.29 | 15.17 | 15.04 |
| 1.0 | 0 | 15.97 | 15.85 | 15.72 | 15.59 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 |

PJG00Z045

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

Model **FDU140VSXVH** Indoor unit **FDU140VH** Outdoor unit **FDC140VSX**

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.66 | 10.07 | 12.38 | 10.97 | 12.73 | 10.84 | 13.13 | 10.71 | 13.91 | 11.36 | 14.70 | 11.06 |
| 13 | | | | | 12.08 | 10.21 | 12.83 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.45 | 11.49 | 15.28 | 11.18 |
| 15 | | | | | 12.50 | 10.35 | 13.29 | 11.25 | 13.68 | 11.11 | 14.12 | 10.98 | 14.99 | 11.63 | 15.87 | 11.31 |
| 17 | | | | | 12.92 | 10.50 | 13.75 | 11.39 | 14.16 | 11.26 | 14.62 | 11.12 | 15.54 | 11.76 | 16.45 | 11.43 |
| 19 | | | | | 13.21 | 10.60 | 14.06 | 11.49 | 14.48 | 11.35 | 14.95 | 11.22 | 15.88 | 11.85 | 16.82 | 11.52 |
| 21 | | | | | 13.50 | 10.71 | 14.36 | 11.59 | 14.80 | 11.45 | 15.28 | 11.31 | 16.23 | 11.94 | 17.19 | 11.60 |
| 23 | | | | | 13.50 | 10.71 | 14.40 | 11.60 | 14.83 | 11.46 | 15.31 | 11.32 | 16.28 | 11.95 | 17.25 | 11.61 |
| 25 | | | 12.53 | 11.05 | 13.50 | 10.71 | 14.43 | 11.61 | 14.87 | 11.47 | 15.35 | 11.33 | 16.33 | 11.96 | 17.30 | 11.62 |
| 27 | | | 12.48 | 11.03 | 13.50 | 10.71 | 14.46 | 11.62 | 14.90 | 11.48 | 15.34 | 11.33 | 16.23 | 11.94 | | |
| 29 | | | 12.37 | 10.98 | 13.31 | 10.64 | 14.23 | 11.54 | 14.68 | 11.41 | 15.13 | 11.27 | 16.03 | 11.89 | | |
| 31 | | | 12.26 | 10.94 | 13.11 | 10.57 | 13.99 | 11.47 | 14.45 | 11.34 | 14.91 | 11.21 | 15.82 | 11.83 | | |
| 33 | 11.49 | 10.15 | 12.02 | 10.85 | 12.92 | 10.50 | 13.76 | 11.39 | 14.23 | 11.28 | 14.69 | 11.14 | 15.61 | 11.78 | | |
| 35 | 10.88 | 9.90 | 11.63 | 10.70 | 12.72 | 10.43 | 13.53 | 11.32 | 14.00 | 11.21 | 14.47 | 11.08 | 15.41 | 11.73 | | |
| 37 | 10.75 | 9.84 | 11.45 | 10.63 | 12.49 | 10.35 | 13.29 | 11.25 | 13.74 | 11.13 | 14.18 | 11.00 | 15.08 | 11.65 | | |
| 39 | 10.62 | 9.79 | 11.26 | 10.56 | 12.26 | 10.27 | 13.04 | 11.17 | 13.47 | 11.05 | 13.90 | 10.92 | 14.76 | 11.57 | | |
| 41 | 10.49 | 9.73 | 11.07 | 10.49 | 12.02 | 10.19 | 12.80 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.44 | 11.49 | | |
| 43 | 10.35 | 9.68 | 10.89 | 10.42 | 11.79 | 10.11 | 12.55 | 11.02 | 12.94 | 10.90 | 13.33 | 10.77 | 14.11 | 11.41 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 16.13 | 16.00 | 15.87 | 15.74 |
| -17.7 | -18 | 16.19 | 16.07 | 15.94 | 15.81 |
| -15.7 | -16 | 16.26 | 16.13 | 16.00 | 15.87 |
| -13.5 | -14 | 16.26 | 16.13 | 16.00 | 15.87 |
| -11.5 | -12 | 16.25 | 16.13 | 16.00 | 15.87 |
| -9.5 | -10 | 16.25 | 16.13 | 16.00 | 15.87 |
| -7.5 | -8 | 16.25 | 16.12 | 16.00 | 15.87 |
| -5.5 | -6 | 16.25 | 16.13 | 16.00 | 15.87 |
| -3.0 | -4 | 16.25 | 16.13 | 16.00 | 15.87 |
| -1.0 | -2 | 16.25 | 16.13 | 16.00 | 15.86 |
| 1.0 | 0 | 16.25 | 16.13 | 16.00 | 15.86 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 |

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.

- TC : Total cooling capacity (kW)
- SHC : Sensible heat capacity (kW)
- HC : Heating capacity (kW)



(3) Duct connected-Low / Middle static pressure type (FDUM)

(a) Single type

Model **FDUM40ZSXVH** Indoor unit **FDUM40VH** Outdoor unit **SRC40ZSX-S**

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 3.38 | 3.08 | 3.56 | 3.34 | 3.65 | 3.31 | 3.75 | 3.29 | 3.95 | 3.49 | 4.15 | 3.44 |
| 13 | | | | | 3.46 | 3.11 | 3.65 | 3.37 | 3.75 | 3.35 | 3.85 | 3.33 | 4.05 | 3.52 | 4.26 | 3.47 |
| 15 | | | | | 3.54 | 3.14 | 3.74 | 3.41 | 3.84 | 3.38 | 3.95 | 3.36 | 4.15 | 3.56 | 4.36 | 3.50 |
| 17 | | | | | 3.62 | 3.18 | 3.83 | 3.44 | 3.94 | 3.42 | 4.04 | 3.39 | 4.26 | 3.59 | 4.47 | 3.53 |
| 19 | | | | | 3.69 | 3.21 | 3.91 | 3.47 | 4.02 | 3.45 | 4.15 | 3.43 | 4.41 | 3.64 | 4.67 | 3.59 |
| 21 | | | | | 3.81 | 3.26 | 3.99 | 3.51 | 4.10 | 3.48 | 4.26 | 3.47 | 4.56 | 3.69 | 4.87 | 3.66 |
| 23 | | | | | 3.85 | 3.27 | 4.04 | 3.53 | 4.15 | 3.50 | 4.30 | 3.49 | 4.59 | 3.71 | 4.88 | 3.66 |
| 25 | | | 3.73 | 3.40 | 3.89 | 3.29 | 4.08 | 3.54 | 4.20 | 3.52 | 4.34 | 3.50 | 4.61 | 3.71 | 4.89 | 3.66 |
| 27 | | | 3.76 | 3.42 | 3.93 | 3.31 | 4.13 | 3.56 | 4.25 | 3.54 | 4.36 | 3.51 | 4.60 | 3.71 | | |
| 29 | | | 3.70 | 3.39 | 3.86 | 3.28 | 4.06 | 3.53 | 4.18 | 3.51 | 4.30 | 3.49 | 4.54 | 3.69 | | |
| 31 | | | 3.64 | 3.36 | 3.80 | 3.25 | 4.00 | 3.51 | 4.12 | 3.49 | 4.24 | 3.47 | 4.48 | 3.67 | | |
| 33 | 3.23 | 3.03 | 3.44 | 3.27 | 3.74 | 3.23 | 3.94 | 3.49 | 4.06 | 3.47 | 4.18 | 3.45 | 4.42 | 3.65 | | |
| 35 | 3.28 | 3.05 | 3.44 | 3.27 | 3.68 | 3.20 | 3.88 | 3.46 | 4.00 | 3.44 | 4.12 | 3.42 | 4.36 | 3.63 | | |
| 37 | 3.23 | 3.03 | 3.38 | 3.24 | 3.62 | 3.18 | 3.82 | 3.44 | 3.94 | 3.42 | 4.06 | 3.40 | 4.30 | 3.61 | | |
| 39 | 3.17 | 3.00 | 3.32 | 3.22 | 3.56 | 3.15 | 3.76 | 3.42 | 3.88 | 3.40 | 4.00 | 3.38 | 4.23 | 3.58 | | |
| 41 | 3.12 | 2.98 | 3.27 | 3.19 | 3.50 | 3.13 | 3.70 | 3.39 | 3.82 | 3.38 | 3.93 | 3.36 | 4.17 | 3.56 | | |
| 43 | 3.06 | 2.95 | 3.21 | 3.15 | 3.44 | 3.10 | 3.64 | 3.37 | 3.76 | 3.35 | 3.87 | 3.33 | 4.10 | 3.54 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| | | -19.8 | -20 | | | | |
| -17.7 | -18 | | | | | | |
| -15.7 | -16 | | | | | | |
| -13.5 | -14 | 2.67 | 2.63 | 2.59 | 2.55 | 2.50 | |
| -11.5 | -12 | 2.83 | 2.79 | 2.75 | 2.71 | 2.67 | |
| -9.5 | -10 | 3.00 | 2.96 | 2.92 | 2.88 | 2.84 | |
| -7.5 | -8 | 3.17 | 3.13 | 3.09 | 3.05 | 3.01 | |
| -5.5 | -6 | 3.23 | 3.20 | 3.16 | 3.12 | 3.09 | |
| -3.0 | -4 | 3.29 | 3.26 | 3.23 | 3.20 | 3.17 | |
| -1.0 | -2 | 3.36 | 3.33 | 3.30 | 3.28 | 3.25 | |
| 1.0 | 0 | 3.42 | 3.40 | 3.38 | 3.35 | 3.33 | |
| 2.0 | 1 | 3.45 | 3.43 | 3.41 | 3.39 | 3.37 | |
| 3.0 | 2 | 3.67 | 3.65 | 3.63 | 3.61 | 3.59 | |
| 5.0 | 4 | 4.11 | 4.09 | 4.07 | 4.04 | 4.01 | |
| 7.0 | 6 | 4.55 | 4.53 | 4.50 | 4.47 | 4.44 | |
| 9.0 | 8 | 4.78 | 4.75 | 4.72 | 4.69 | 4.66 | |
| 11.5 | 10 | 5.01 | 4.98 | 4.95 | 4.91 | 4.88 | |
| 13.5 | 12 | 5.30 | 5.26 | 5.21 | 5.14 | 5.10 | |
| 15.5 | 14 | 5.58 | 5.53 | 5.48 | 5.37 | 5.32 | |
| 16.5 | 16 | 5.73 | 5.67 | 5.61 | 5.48 | 5.44 | |

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| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.22 | 3.43 | 4.45 | 3.69 | 4.56 | 3.66 | 4.69 | 3.63 | 4.94 | 3.82 | 5.19 | 3.76 |
| 13 | | | | | 4.32 | 3.48 | 4.56 | 3.73 | 4.68 | 3.71 | 4.81 | 3.68 | 5.07 | 3.87 | 5.32 | 3.80 |
| 15 | | | | | 4.42 | 3.52 | 4.68 | 3.78 | 4.80 | 3.75 | 4.93 | 3.72 | 5.19 | 3.91 | 5.45 | 3.84 |
| 17 | | | | | 4.53 | 3.57 | 4.79 | 3.83 | 4.92 | 3.80 | 5.06 | 3.77 | 5.32 | 3.96 | 5.58 | 3.88 |
| 19 | | | | | 4.62 | 3.61 | 4.89 | 3.87 | 5.02 | 3.84 | 5.19 | 3.82 | 5.51 | 4.02 | 5.84 | 3.97 |
| 21 | | | | | 4.76 | 3.67 | 4.99 | 3.91 | 5.13 | 3.88 | 5.32 | 3.87 | 5.70 | 4.09 | 6.09 | 4.05 |
| 23 | | | | | 4.81 | 3.70 | 5.04 | 3.93 | 5.19 | 3.91 | 5.37 | 3.89 | 5.73 | 4.10 | 6.10 | 4.05 |
| 25 | | | 4.66 | 3.84 | 4.86 | 3.72 | 5.10 | 3.96 | 5.25 | 3.93 | 5.42 | 3.91 | 5.76 | 4.11 | 6.11 | 4.05 |
| 27 | | | 4.70 | 3.86 | 4.91 | 3.74 | 5.16 | 3.98 | 5.31 | 3.96 | 5.46 | 3.93 | 5.75 | 4.11 | | |
| 29 | | | 4.62 | 3.82 | 4.83 | 3.71 | 5.08 | 3.95 | 5.23 | 3.92 | 5.38 | 3.90 | 5.68 | 4.09 | | |
| 31 | | | 4.54 | 3.79 | 4.75 | 3.67 | 5.00 | 3.92 | 5.15 | 3.89 | 5.30 | 3.87 | 5.60 | 4.06 | | |
| 33 | 4.04 | 3.43 | 4.31 | 3.68 | 4.67 | 3.63 | 4.93 | 3.89 | 5.08 | 3.86 | 5.23 | 3.84 | 5.53 | 4.03 | | |
| 35 | 4.11 | 3.47 | 4.30 | 3.67 | 4.59 | 3.60 | 4.85 | 3.85 | 5.00 | 3.83 | 5.15 | 3.81 | 5.45 | 4.00 | | |
| 37 | 4.04 | 3.43 | 4.23 | 3.64 | 4.52 | 3.57 | 4.77 | 3.82 | 4.92 | 3.80 | 5.07 | 3.78 | 5.37 | 3.97 | | |
| 39 | 3.97 | 3.40 | 4.16 | 3.60 | 4.45 | 3.54 | 4.70 | 3.79 | 4.85 | 3.77 | 4.99 | 3.75 | 5.29 | 3.95 | | |
| 41 | 3.90 | 3.36 | 4.09 | 3.57 | 4.38 | 3.50 | 4.62 | 3.76 | 4.77 | 3.74 | 4.92 | 3.72 | 5.21 | 3.92 | | |
| 43 | 3.83 | 3.33 | 4.01 | 3.53 | 4.30 | 3.47 | 4.55 | 3.73 | 4.69 | 3.71 | 4.84 | 3.69 | 5.13 | 3.89 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| | | -19.8 | -20 | | | | |
| -17.7 | -18 | | | | | | |
| -15.7 | -16 | | | | | | |
| -13.5 | -14 | 3.20 | 3.15 | 3.11 | 3.05 | 3.00 | |
| -11.5 | -12 | 3.40 | 3.35 | 3.31 | 3.26 | 3.20 | |
| -9.5 | -10 | 3.60 | 3.55 | 3.51 | 3.46 | 3.41 | |
| -7.5 | -8 | 3.80 | 3.75 | 3.71 | 3.66 | 3.61 | |
| -5.5 | -6 | 3.88 | 3.83 | 3.79 | 3.75 | 3.71 | |
| -3.0 | -4 | 3.95 | 3.92 | 3.88 | 3.84 | 3.80 | |
| -1.0 | -2 | 4.03 | 4.00 | 3.97 | 3.93 | 3.90 | |
| 1.0 | 0 | 4.10 | 4.08 | 4.05 | 4.03 | 4.00 | |
| 2.0 | 1 | 4.14 | 4.12 | 4.10 | 4.07 | 4.05 | |
| 3.0 | 2 | 4.41 | 4.38 | 4.36 | 4.33 | 4.30 | |
| 5.0 | 4 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 | |
| 7.0 | 6 | 5.46 | 5.43 | 5.40 | 5.37 | 5.33 | |
| 9.0 | 8 | 5.74 | 5.70 | 5.67 | 5.63 | 5.59 | |
| 11.5 | 10 | 6.02 | 5.98 | 5.94 | 5.89 | 5.85 | |
| 13.5 | 12 | 6.36 | 6.31 | 6.25 | 6.17 | 6.12 | |
| 15.5 | 14 | 6.70 | 6.64 | 6.57 | 6.44 | 6.39 | |
| 16.5 | 16 | 6.87 | 6.80 | 6.73 | 6.58 | 6.52 | |

PJG000Z012 

Notes(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length : 7.5m

Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

Model **FDUM60ZSXVH** Indoor unit **FDUM60VH** Outdoor unit **SRC60ZSX-S**

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|
| | 18°CDB 12°CWB | | 21°CDB 14°CWB | | 23°CDB 16°CWB | | 26°CDB 18°CWB | | 27°CDB 19°CWB | | 28°CDB 20°CWB | | 31°CDB 22°CWB | | 33°CDB 24°CWB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.73 | 4.33 | 4.98 | 4.71 | 5.11 | 4.67 | 5.25 | 4.62 | 5.53 | 4.91 | 5.81 | 4.80 |
| 13 | | | | | 4.84 | 4.37 | 5.11 | 4.76 | 5.24 | 4.71 | 5.39 | 4.66 | 5.67 | 4.95 | 5.96 | 4.84 |
| 15 | | | | | 4.95 | 4.41 | 5.24 | 4.80 | 5.38 | 4.75 | 5.52 | 4.70 | 5.82 | 4.99 | 6.11 | 4.88 |
| 17 | | | | | 5.07 | 4.45 | 5.37 | 4.84 | 5.51 | 4.80 | 5.66 | 4.75 | 5.96 | 5.03 | 6.25 | 4.91 |
| 19 | | | | | 5.17 | 4.49 | 5.48 | 4.88 | 5.63 | 4.83 | 5.81 | 4.79 | 6.17 | 5.09 | 6.54 | 4.99 |
| 21 | | | | | 5.33 | 4.55 | 5.59 | 4.92 | 5.74 | 4.87 | 5.96 | 4.84 | 6.39 | 5.15 | 6.82 | 5.06 |
| 23 | | | | | 5.39 | 4.58 | 5.65 | 4.94 | 5.81 | 4.89 | 6.01 | 4.86 | 6.42 | 5.16 | 6.83 | 5.06 |
| 25 | | | 5.22 | 4.78 | 5.44 | 4.59 | 5.71 | 4.96 | 5.88 | 4.92 | 6.07 | 4.88 | 6.45 | 5.17 | 6.84 | 5.06 |
| 27 | | | 5.27 | 4.80 | 5.50 | 4.62 | 5.78 | 4.99 | 5.94 | 4.94 | 6.11 | 4.89 | 6.44 | 5.17 | | |
| 29 | | | 5.18 | 4.77 | 5.41 | 4.58 | 5.69 | 4.95 | 5.86 | 4.91 | 6.02 | 4.86 | 6.36 | 5.14 | | |
| 31 | | | 5.09 | 4.73 | 5.32 | 4.55 | 5.60 | 4.92 | 5.77 | 4.88 | 5.94 | 4.83 | 6.27 | 5.12 | | |
| 33 | 4.53 | 4.27 | 4.82 | 4.62 | 5.23 | 4.51 | 5.52 | 4.90 | 5.69 | 4.85 | 5.85 | 4.81 | 6.19 | 5.09 | | |
| 35 | 4.60 | 4.30 | 4.81 | 4.61 | 5.15 | 4.48 | 5.43 | 4.86 | 5.60 | 4.82 | 5.77 | 4.78 | 6.10 | 5.07 | | |
| 37 | 4.52 | 4.27 | 4.73 | 4.58 | 5.06 | 4.45 | 5.35 | 4.84 | 5.51 | 4.80 | 5.68 | 4.75 | 6.01 | 5.04 | | |
| 39 | 4.44 | 4.23 | 4.65 | 4.55 | 4.98 | 4.42 | 5.26 | 4.81 | 5.43 | 4.77 | 5.59 | 4.73 | 5.92 | 5.02 | | |
| 41 | 4.37 | 4.20 | 4.58 | 4.49 | 4.90 | 4.39 | 5.18 | 4.78 | 5.34 | 4.74 | 5.51 | 4.70 | 5.83 | 4.99 | | |
| 43 | 4.29 | 4.17 | 4.50 | 4.41 | 4.82 | 4.36 | 5.10 | 4.75 | 5.26 | 4.71 | 5.42 | 4.67 | 5.74 | 4.97 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 3.97 | 3.91 | 3.85 | 3.79 | 3.73 |
| -11.5 | -12 | 4.22 | 4.16 | 4.10 | 4.04 | 3.98 |
| -9.5 | -10 | 4.47 | 4.41 | 4.35 | 4.29 | 4.23 |
| -7.5 | -8 | 4.72 | 4.66 | 4.60 | 4.54 | 4.48 |
| -5.5 | -6 | 4.81 | 4.76 | 4.70 | 4.65 | 4.60 |
| -3.0 | -4 | 4.90 | 4.86 | 4.81 | 4.77 | 4.72 |
| -1.0 | -2 | 5.00 | 4.96 | 4.92 | 4.88 | 4.84 |
| 1.0 | 0 | 5.09 | 5.06 | 5.03 | 4.99 | 4.96 |
| 2.0 | 1 | 5.14 | 5.11 | 5.08 | 5.05 | 5.02 |
| 3.0 | 2 | 5.47 | 5.44 | 5.41 | 5.37 | 5.34 |
| 5.0 | 4 | 6.12 | 6.09 | 6.05 | 6.01 | 5.98 |
| 7.0 | 6 | 6.78 | 6.74 | 6.70 | 6.66 | 6.61 |
| 9.0 | 8 | 7.12 | 7.08 | 7.03 | 6.98 | 6.94 |
| 11.5 | 10 | 7.47 | 7.41 | 7.36 | 7.31 | 7.26 |
| 13.5 | 12 | 7.89 | 7.82 | 7.76 | 7.65 | 7.59 |
| 15.5 | 14 | 8.31 | 8.23 | 8.15 | 7.99 | 7.93 |
| 16.5 | 16 | 8.53 | 8.44 | 8.35 | 8.16 | 8.09 |



Model **FDUM71VNXVH** Indoor unit **FDUM71VH** Outdoor unit **FDC71VNX**

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|------------------|------|
| | 18°CDB 12°CWB | | 21°CDB 14°CWB | | 23°CDB 16°CWB | | 26°CDB 18°CWB | | 27°CDB 19°CWB | | 28°CDB 20°CWB | | 31°CDB 22°CWB | | 33°CDB 24°CWB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.87 | 4.77 | 6.02 | 5.60 | 6.59 | 5.67 | 6.79 | 5.62 | 7.19 | 5.96 | 7.59 | 5.82 |
| 13 | | | | | 5.33 | 5.01 | 6.32 | 5.70 | 6.82 | 5.74 | 7.03 | 5.69 | 7.45 | 6.03 | 7.88 | 5.89 |
| 15 | | | | | 5.79 | 5.17 | 6.63 | 5.80 | 7.05 | 5.82 | 7.27 | 5.76 | 7.71 | 6.10 | 8.16 | 5.96 |
| 17 | | | | | 6.26 | 5.35 | 6.94 | 5.91 | 7.27 | 5.89 | 7.51 | 5.84 | 7.97 | 6.17 | 8.44 | 6.03 |
| 19 | | | | | 6.59 | 5.47 | 7.16 | 5.98 | 7.44 | 5.95 | 7.68 | 5.89 | 8.15 | 6.22 | 8.63 | 6.08 |
| 21 | | | | | 6.93 | 5.60 | 7.38 | 6.06 | 7.60 | 6.00 | 7.84 | 5.94 | 8.33 | 6.27 | 8.82 | 6.13 |
| 23 | | | | | 6.91 | 5.59 | 7.35 | 6.05 | 7.57 | 5.99 | 7.81 | 5.93 | 8.30 | 6.26 | 8.78 | 6.11 |
| 25 | | | 6.46 | 5.76 | 6.89 | 5.58 | 7.32 | 6.04 | 7.54 | 5.98 | 7.78 | 5.92 | 8.26 | 6.25 | 8.74 | 6.10 |
| 27 | | | 6.45 | 5.75 | 6.87 | 5.57 | 7.30 | 6.03 | 7.52 | 5.97 | 7.74 | 5.91 | 8.18 | 6.23 | | |
| 29 | | | 6.34 | 5.71 | 6.75 | 5.53 | 7.19 | 5.99 | 7.41 | 5.94 | 7.64 | 5.88 | 8.09 | 6.21 | | |
| 31 | | | 6.23 | 5.66 | 6.64 | 5.49 | 7.08 | 5.96 | 7.31 | 5.90 | 7.54 | 5.85 | 7.99 | 6.18 | | |
| 33 | 5.77 | 5.22 | 6.05 | 5.59 | 6.53 | 5.45 | 6.97 | 5.92 | 7.20 | 5.87 | 7.44 | 5.81 | 7.90 | 6.15 | | |
| 35 | 5.67 | 5.18 | 5.95 | 5.55 | 6.42 | 5.40 | 6.86 | 5.88 | 7.10 | 5.83 | 7.34 | 5.78 | 7.81 | 6.13 | | |
| 37 | 5.58 | 5.14 | 5.85 | 5.51 | 6.31 | 5.36 | 6.72 | 5.83 | 6.95 | 5.79 | 7.18 | 5.73 | 7.64 | 6.08 | | |
| 39 | 5.49 | 5.10 | 5.76 | 5.47 | 6.20 | 5.32 | 6.59 | 5.79 | 6.81 | 5.74 | 7.03 | 5.69 | 7.46 | 6.03 | | |
| 41 | 5.39 | 5.05 | 5.67 | 5.44 | 6.09 | 5.28 | 6.45 | 5.74 | 6.66 | 5.69 | 6.87 | 5.64 | 7.29 | 5.99 | | |
| 43 | 5.30 | 5.02 | 5.57 | 5.40 | 5.97 | 5.24 | 6.31 | 5.70 | 6.51 | 5.65 | 6.71 | 5.59 | 7.12 | 5.94 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|------|------|------|------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 3.95 | 3.93 | 3.91 | 3.88 | 3.86 |
| -17.7 | -18 | 4.18 | 4.16 | 4.14 | 4.11 | 4.09 |
| -15.7 | -16 | 4.42 | 4.39 | 4.37 | 4.34 | 4.32 |
| -13.5 | -14 | 4.68 | 4.65 | 4.63 | 4.60 | 4.57 |
| -11.5 | -12 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 |
| -9.5 | -10 | 5.20 | 5.17 | 5.14 | 5.11 | 5.08 |
| -7.5 | -8 | 5.46 | 5.43 | 5.40 | 5.36 | 5.33 |
| -5.5 | -6 | 5.59 | 5.55 | 5.52 | 5.48 | 5.44 |
| -3.0 | -4 | 5.71 | 5.68 | 5.64 | 5.60 | 5.56 |
| -1.0 | -2 | 5.84 | 5.80 | 5.76 | 5.72 | 5.67 |
| 1.0 | 0 | 5.97 | 5.92 | 5.88 | 5.83 | 5.79 |
| 2.0 | 1 | 6.03 | 5.98 | 5.94 | 5.89 | 5.85 |
| 3.0 | 2 | 6.45 | 6.40 | 6.35 | 6.30 | 6.25 |
| 5.0 | 4 | 7.29 | 7.23 | 7.18 | 7.12 | 7.06 |
| 7.0 | 6 | 8.13 | 8.06 | 8.00 | 7.93 | 7.87 |
| 9.0 | 8 | 8.42 | 8.36 | 8.29 | 8.23 | 8.16 |
| 11.5 | 10 | 8.72 | 8.65 | 8.59 | 8.52 | 8.46 |
| 13.5 | 12 | 9.20 | 9.13 | 9.06 | 9.00 | 8.92 |
| 15.5 | 14 | 9.69 | 9.61 | 9.53 | 9.47 | 9.39 |
| 16.5 | 16 | 9.93 | 9.85 | 9.77 | 9.71 | 9.62 |



Notes(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDUM100VNXVH** Indoor unit FDUM100VH Outdoor unit FDC100VNX

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.94 | 8.84 | 7.57 | 9.10 | 7.45 | 9.38 | 7.33 | 9.94 | 7.76 | 10.50 | 7.48 |
| 13 | | | | | 8.63 | 7.03 | 9.17 | 7.65 | 9.43 | 7.52 | 9.73 | 7.40 | 10.32 | 7.83 | 10.92 | 7.54 |
| 15 | | | | | 8.93 | 7.11 | 9.49 | 7.73 | 9.77 | 7.60 | 10.09 | 7.48 | 10.71 | 7.90 | 11.34 | 7.60 |
| 17 | | | | | 9.23 | 7.20 | 9.82 | 7.82 | 10.11 | 7.69 | 10.44 | 7.56 | 11.10 | 7.97 | 11.75 | 7.67 |
| 19 | | | | | 9.44 | 7.27 | 10.04 | 7.87 | 10.34 | 7.74 | 10.68 | 7.61 | 11.35 | 8.02 | 12.01 | 7.71 |
| 21 | | | | | 9.64 | 7.33 | 10.26 | 7.93 | 10.57 | 7.80 | 10.91 | 7.66 | 11.59 | 8.07 | 12.28 | 7.75 |
| 23 | | | | | 9.64 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.94 | 7.67 | 11.63 | 8.08 | 12.32 | 7.76 |
| 25 | | | 8.95 | 7.65 | 9.64 | 7.33 | 10.30 | 7.94 | 10.62 | 7.81 | 10.97 | 7.68 | 11.66 | 8.08 | 12.36 | 7.76 |
| 27 | | | 8.91 | 7.63 | 9.64 | 7.33 | 10.33 | 7.95 | 10.64 | 7.82 | 10.96 | 7.68 | 11.59 | 8.07 | | |
| 29 | | | 8.84 | 7.61 | 9.51 | 7.29 | 10.16 | 7.91 | 10.48 | 7.78 | 10.80 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.76 | 7.58 | 9.37 | 7.25 | 10.00 | 7.86 | 10.32 | 7.74 | 10.65 | 7.60 | 11.30 | 8.01 | | |
| 33 | 8.21 | 7.04 | 8.58 | 7.52 | 9.23 | 7.20 | 9.83 | 7.82 | 10.16 | 7.70 | 10.49 | 7.57 | 11.15 | 7.98 | | |
| 35 | 7.77 | 6.87 | 8.31 | 7.43 | 9.09 | 7.16 | 9.66 | 7.77 | 10.00 | 7.66 | 10.34 | 7.53 | 11.01 | 7.96 | | |
| 37 | 7.68 | 6.84 | 8.18 | 7.39 | 8.92 | 7.11 | 9.49 | 7.73 | 9.81 | 7.61 | 10.13 | 7.49 | 10.77 | 7.91 | | |
| 39 | 7.58 | 6.80 | 8.04 | 7.34 | 8.76 | 7.06 | 9.31 | 7.68 | 9.62 | 7.57 | 9.93 | 7.44 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.77 | 7.91 | 7.30 | 8.59 | 7.02 | 9.14 | 7.64 | 9.43 | 7.52 | 9.73 | 7.40 | 10.31 | 7.83 | | |
| 43 | 7.40 | 6.74 | 7.78 | 7.26 | 8.42 | 6.97 | 8.96 | 7.60 | 9.24 | 7.48 | 9.52 | 7.36 | 10.08 | 7.79 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|----------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 7.30 | 7.24 | 7.18 | 7.12 | 7.06 |
| -17.7 | -18 | 7.74 | 7.68 | 7.62 | 7.55 | 7.49 |
| -15.7 | -16 | 8.18 | 8.12 | 8.05 | 7.99 | 7.92 |
| -13.5 | -14 | 8.54 | 8.47 | 8.40 | 8.33 | 8.27 |
| -11.5 | -12 | 8.89 | 8.82 | 8.75 | 8.68 | 8.61 |
| -9.5 | -10 | 9.25 | 9.17 | 9.10 | 9.03 | 8.95 |
| -7.5 | -8 | 9.60 | 9.53 | 9.45 | 9.38 | 9.30 |
| -5.5 | -6 | 10.00 | 9.92 | 9.84 | 9.76 | 9.68 |
| -3.0 | -4 | 10.39 | 10.31 | 10.23 | 10.14 | 10.06 |
| -1.0 | -2 | 10.79 | 10.70 | 10.62 | 10.53 | 10.44 |
| 1.0 | 0 | 11.18 | 11.09 | 11.01 | 10.91 | 10.82 |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJG00Z012

Model **FDUM100VSXVH** Indoor unit FDUM100VH Outdoor unit FDC100VSX

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.94 | 8.84 | 7.57 | 9.10 | 7.45 | 9.38 | 7.33 | 9.94 | 7.76 | 10.50 | 7.48 |
| 13 | | | | | 8.63 | 7.03 | 9.17 | 7.65 | 9.43 | 7.52 | 9.73 | 7.40 | 10.32 | 7.83 | 10.92 | 7.54 |
| 15 | | | | | 8.93 | 7.11 | 9.49 | 7.73 | 9.77 | 7.60 | 10.09 | 7.48 | 10.71 | 7.90 | 11.34 | 7.60 |
| 17 | | | | | 9.23 | 7.20 | 9.82 | 7.82 | 10.11 | 7.69 | 10.44 | 7.56 | 11.10 | 7.97 | 11.75 | 7.67 |
| 19 | | | | | 9.44 | 7.27 | 10.04 | 7.87 | 10.34 | 7.74 | 10.68 | 7.61 | 11.35 | 8.02 | 12.01 | 7.71 |
| 21 | | | | | 9.64 | 7.33 | 10.26 | 7.93 | 10.57 | 7.80 | 10.91 | 7.66 | 11.59 | 8.07 | 12.28 | 7.75 |
| 23 | | | | | 9.64 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.94 | 7.67 | 11.63 | 8.08 | 12.32 | 7.76 |
| 25 | | | 8.95 | 7.65 | 9.64 | 7.33 | 10.30 | 7.94 | 10.62 | 7.81 | 10.97 | 7.68 | 11.66 | 8.08 | 12.36 | 7.76 |
| 27 | | | 8.91 | 7.63 | 9.64 | 7.33 | 10.33 | 7.95 | 10.64 | 7.82 | 10.96 | 7.68 | 11.59 | 8.07 | | |
| 29 | | | 8.84 | 7.61 | 9.51 | 7.29 | 10.16 | 7.91 | 10.48 | 7.78 | 10.80 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.76 | 7.58 | 9.37 | 7.25 | 10.00 | 7.86 | 10.32 | 7.74 | 10.65 | 7.60 | 11.30 | 8.01 | | |
| 33 | 8.21 | 7.04 | 8.58 | 7.52 | 9.23 | 7.20 | 9.83 | 7.82 | 10.16 | 7.70 | 10.49 | 7.57 | 11.15 | 7.98 | | |
| 35 | 7.77 | 6.87 | 8.31 | 7.43 | 9.09 | 7.16 | 9.66 | 7.77 | 10.00 | 7.66 | 10.34 | 7.53 | 11.01 | 7.96 | | |
| 37 | 7.68 | 6.84 | 8.18 | 7.39 | 8.92 | 7.11 | 9.49 | 7.73 | 9.81 | 7.61 | 10.13 | 7.49 | 10.77 | 7.91 | | |
| 39 | 7.58 | 6.80 | 8.04 | 7.34 | 8.76 | 7.06 | 9.31 | 7.68 | 9.62 | 7.57 | 9.93 | 7.44 | 10.54 | 7.87 | | |
| 41 | 7.49 | 6.77 | 7.91 | 7.30 | 8.59 | 7.02 | 9.14 | 7.64 | 9.43 | 7.52 | 9.73 | 7.40 | 10.31 | 7.83 | | |
| 43 | 7.40 | 6.74 | 7.78 | 7.26 | 8.42 | 6.97 | 8.96 | 7.60 | 9.24 | 7.48 | 9.52 | 7.36 | 10.08 | 7.79 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|----------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 11.29 | 11.20 | 11.11 | 11.02 | 10.93 |
| -17.7 | -18 | 11.34 | 11.25 | 11.16 | 11.06 | 10.97 |
| -15.7 | -16 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -13.5 | -14 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -11.5 | -12 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -9.5 | -10 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -7.5 | -8 | 11.37 | 11.29 | 11.20 | 11.11 | 11.02 |
| -5.5 | -6 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 |
| -3.0 | -4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| -1.0 | -2 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 1.0 | 0 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 |

PJG00Z012

- Notes(1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.
- (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
- (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model FDUM125VNXVH Indoor unit FDUM125VH Outdoor unit FDC125VNX

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.41 | 9.34 | 11.05 | 10.16 | 11.37 | 10.10 | 11.72 | 10.04 | 12.42 | 10.66 | 13.12 | 10.51 |
| 13 | | | | | 10.79 | 9.50 | 11.46 | 10.32 | 11.79 | 10.25 | 12.16 | 10.20 | 12.91 | 10.83 | 13.65 | 10.67 |
| 15 | | | | | 11.16 | 9.66 | 11.87 | 10.48 | 12.22 | 10.42 | 12.61 | 10.36 | 13.39 | 10.99 | 14.17 | 10.83 |
| 17 | | | | | 11.54 | 9.82 | 12.27 | 10.64 | 12.64 | 10.58 | 13.05 | 10.52 | 13.87 | 11.15 | 14.69 | 10.99 |
| 19 | | | | | 11.80 | 9.93 | 12.55 | 10.75 | 12.93 | 10.69 | 13.34 | 10.63 | 14.18 | 11.25 | 15.02 | 11.10 |
| 21 | | | | | 12.05 | 10.04 | 12.83 | 10.86 | 13.21 | 10.79 | 13.64 | 10.74 | 14.49 | 11.36 | 15.34 | 11.20 |
| 23 | | | | | 12.05 | 10.04 | 12.85 | 10.87 | 13.24 | 10.81 | 13.67 | 10.75 | 14.54 | 11.38 | 15.40 | 11.22 |
| 25 | | | 11.19 | 10.21 | 12.05 | 10.04 | 12.88 | 10.88 | 13.27 | 10.82 | 13.71 | 10.77 | 14.58 | 11.39 | 15.45 | 11.23 |
| 27 | | | 11.14 | 10.19 | 12.05 | 10.04 | 12.91 | 10.89 | 13.30 | 10.83 | 13.70 | 10.76 | 14.49 | 11.36 | | |
| 29 | | | 11.05 | 10.15 | 11.88 | 9.97 | 12.70 | 10.81 | 13.10 | 10.75 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.95 | 10.10 | 11.71 | 9.89 | 12.49 | 10.72 | 12.90 | 10.67 | 13.31 | 10.62 | 14.13 | 11.24 | | |
| 33 | 10.26 | 9.37 | 10.73 | 10.00 | 11.53 | 9.82 | 12.29 | 10.64 | 12.70 | 10.60 | 13.11 | 10.54 | 13.94 | 11.17 | | |
| 35 | 9.71 | 9.10 | 10.39 | 9.84 | 11.36 | 9.74 | 12.08 | 10.56 | 12.50 | 10.52 | 12.92 | 10.47 | 13.76 | 11.11 | | |
| 37 | 9.60 | 9.05 | 10.22 | 9.77 | 11.15 | 9.65 | 11.86 | 10.47 | 12.26 | 10.43 | 12.67 | 10.38 | 13.47 | 11.01 | | |
| 39 | 9.48 | 8.99 | 10.05 | 9.69 | 10.94 | 9.57 | 11.64 | 10.39 | 12.03 | 10.34 | 12.41 | 10.29 | 13.18 | 10.92 | | |
| 41 | 9.36 | 8.93 | 9.89 | 9.62 | 10.74 | 9.48 | 11.42 | 10.30 | 11.79 | 10.25 | 12.16 | 10.20 | 12.89 | 10.82 | | |
| 43 | 9.25 | 8.88 | 9.72 | 9.53 | 10.53 | 9.39 | 11.21 | 10.22 | 11.55 | 10.16 | 11.90 | 10.10 | 12.60 | 10.72 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 9.12 | 9.05 | 8.97 | 8.90 | 8.83 | |
| -17.7 | -18 | 9.67 | 9.60 | 9.52 | 9.44 | 9.37 | |
| -15.7 | -16 | 10.23 | 10.15 | 10.07 | 9.98 | 9.90 | |
| -13.5 | -14 | 10.67 | 10.59 | 10.50 | 10.42 | 10.33 | |
| -11.5 | -12 | 11.11 | 11.03 | 10.94 | 10.85 | 10.76 | |
| -9.5 | -10 | 11.56 | 11.47 | 11.38 | 11.29 | 11.19 | |
| -7.5 | -8 | 12.00 | 11.91 | 11.82 | 11.72 | 11.62 | |
| -5.5 | -6 | 12.49 | 12.40 | 12.30 | 12.20 | 12.10 | |
| -3.0 | -4 | 12.99 | 12.89 | 12.79 | 12.68 | 12.57 | |
| -1.0 | -2 | 13.48 | 13.38 | 13.27 | 13.16 | 13.05 | |
| 1.0 | 0 | 13.98 | 13.87 | 13.76 | 13.64 | 13.52 | |
| 2.0 | 1 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 3.0 | 2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 5.0 | 4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 7.0 | 6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 | |
| 9.0 | 8 | 14.81 | 14.70 | 14.59 | 14.47 | 14.35 | |
| 11.5 | 10 | 15.41 | 15.29 | 15.18 | 15.06 | 14.94 | |
| 13.5 | 12 | 16.22 | 16.09 | 15.97 | 15.85 | 15.90 | |
| 15.5 | 14 | 17.03 | 16.90 | 16.76 | 16.65 | 16.86 | |
| 16.5 | 16 | 17.44 | 17.30 | 17.16 | 17.04 | 17.34 | |

PJG00Z012

Model FDUM125VSXVH Indoor unit FDUM125VH Outdoor unit FDC125VSX

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.41 | 9.34 | 11.05 | 10.16 | 11.37 | 10.10 | 11.72 | 10.04 | 12.42 | 10.66 | 13.12 | 10.51 |
| 13 | | | | | 10.79 | 9.50 | 11.46 | 10.32 | 11.79 | 10.25 | 12.16 | 10.20 | 12.91 | 10.83 | 13.65 | 10.67 |
| 15 | | | | | 11.16 | 9.66 | 11.87 | 10.48 | 12.22 | 10.42 | 12.61 | 10.36 | 13.39 | 10.99 | 14.17 | 10.83 |
| 17 | | | | | 11.54 | 9.82 | 12.27 | 10.64 | 12.64 | 10.58 | 13.05 | 10.52 | 13.87 | 11.15 | 14.69 | 10.99 |
| 19 | | | | | 11.80 | 9.93 | 12.55 | 10.75 | 12.93 | 10.69 | 13.34 | 10.63 | 14.18 | 11.25 | 15.02 | 11.10 |
| 21 | | | | | 12.05 | 10.04 | 12.83 | 10.86 | 13.21 | 10.79 | 13.64 | 10.74 | 14.49 | 11.36 | 15.34 | 11.20 |
| 23 | | | | | 12.05 | 10.04 | 12.85 | 10.87 | 13.24 | 10.81 | 13.67 | 10.75 | 14.54 | 11.38 | 15.40 | 11.22 |
| 25 | | | 11.19 | 10.21 | 12.05 | 10.04 | 12.88 | 10.88 | 13.27 | 10.82 | 13.71 | 10.77 | 14.58 | 11.39 | 15.45 | 11.23 |
| 27 | | | 11.14 | 10.19 | 12.05 | 10.04 | 12.91 | 10.89 | 13.30 | 10.83 | 13.70 | 10.76 | 14.49 | 11.36 | | |
| 29 | | | 11.05 | 10.15 | 11.88 | 9.97 | 12.70 | 10.81 | 13.10 | 10.75 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.95 | 10.10 | 11.71 | 9.89 | 12.49 | 10.72 | 12.90 | 10.67 | 13.31 | 10.62 | 14.13 | 11.24 | | |
| 33 | 10.26 | 9.37 | 10.73 | 10.00 | 11.53 | 9.82 | 12.29 | 10.64 | 12.70 | 10.60 | 13.11 | 10.54 | 13.94 | 11.17 | | |
| 35 | 9.71 | 9.10 | 10.39 | 9.84 | 11.36 | 9.74 | 12.08 | 10.56 | 12.50 | 10.52 | 12.92 | 10.47 | 13.76 | 11.11 | | |
| 37 | 9.60 | 9.05 | 10.22 | 9.77 | 11.15 | 9.65 | 11.86 | 10.47 | 12.26 | 10.43 | 12.67 | 10.38 | 13.47 | 11.01 | | |
| 39 | 9.48 | 8.99 | 10.05 | 9.69 | 10.94 | 9.57 | 11.64 | 10.39 | 12.03 | 10.34 | 12.41 | 10.29 | 13.18 | 10.92 | | |
| 41 | 9.36 | 8.93 | 9.89 | 9.62 | 10.74 | 9.48 | 11.42 | 10.30 | 11.79 | 10.25 | 12.16 | 10.20 | 12.89 | 10.82 | | |
| 43 | 9.25 | 8.88 | 9.72 | 9.53 | 10.53 | 9.39 | 11.21 | 10.22 | 11.55 | 10.16 | 11.90 | 10.10 | 12.60 | 10.72 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 14.11 | 14.00 | 13.89 | 13.78 | 13.66 | |
| -17.7 | -18 | 14.17 | 14.06 | 13.93 | 13.83 | 13.72 | |
| -15.7 | -16 | 14.23 | 14.11 | 14.00 | 13.89 | 13.77 | |
| -13.5 | -14 | 14.23 | 14.11 | 14.00 | 13.89 | 13.77 | |
| -11.5 | -12 | 14.22 | 14.11 | 14.00 | 13.89 | 13.77 | |
| -9.5 | -10 | 14.22 | 14.11 | 14.00 | 13.89 | 13.77 | |
| -7.5 | -8 | 14.22 | 14.11 | 14.00 | 13.89 | 13.77 | |
| -5.5 | -6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 | |
| -3.0 | -4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 | |
| -1.0 | -2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 1.0 | 0 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 2.0 | 1 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 3.0 | 2 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 5.0 | 4 | 14.22 | 14.11 | 14.00 | 13.88 | 13.76 | |
| 7.0 | 6 | 14.22 | 14.11 | 14.00 | 13.88 | 13.77 | |
| 9.0 | 8 | 14.81 | 14.70 | 14.59 | 14.47 | 14.35 | |
| 11.5 | 10 | 15.41 | 15.29 | 15.18 | 15.06 | 14.94 | |
| 13.5 | 12 | 16.22 | 16.09 | 15.97 | 15.85 | 15.90 | |
| 15.5 | 14 | 17.03 | 16.90 | 16.76 | 16.65 | 16.86 | |
| 16.5 | 16 | 17.44 | 17.30 | 17.16 | 17.04 | 17.34 | |

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Notes(1) These data show average statuses. Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions. Corresponding refrigerant piping length :7.5m Level difference of Zero.

(3) Symbols are as follows. TC : Total cooling capacity (kW) SHC : Sensible heat capacity (kW) HC : Heating capacity (kW)

Model **FDUM140VNXVH** Indoor unit FDUM140VH Outdoor unit FDC140VNX

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.66 | 10.07 | 12.38 | 10.97 | 12.73 | 10.84 | 13.13 | 10.71 | 13.91 | 11.36 | 14.70 | 11.06 |
| 13 | | | | | 12.08 | 10.21 | 12.83 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.45 | 11.49 | 15.28 | 11.18 |
| 15 | | | | | 12.50 | 10.35 | 13.29 | 11.25 | 13.68 | 11.11 | 14.12 | 10.98 | 14.99 | 11.63 | 15.87 | 11.31 |
| 17 | | | | | 12.92 | 10.50 | 13.75 | 11.39 | 14.16 | 11.26 | 14.62 | 11.12 | 15.54 | 11.76 | 16.45 | 11.43 |
| 19 | | | | | 13.21 | 10.60 | 14.06 | 11.49 | 14.48 | 11.35 | 14.95 | 11.22 | 15.88 | 11.85 | 16.82 | 11.52 |
| 21 | | | | | 13.50 | 10.71 | 14.36 | 11.59 | 14.80 | 11.45 | 15.28 | 11.31 | 16.23 | 11.94 | 17.19 | 11.60 |
| 23 | | | | | 13.50 | 10.71 | 14.40 | 11.60 | 14.83 | 11.46 | 15.31 | 11.32 | 16.28 | 11.95 | 17.25 | 11.61 |
| 25 | | | 12.53 | 11.05 | 13.50 | 10.71 | 14.43 | 11.61 | 14.87 | 11.47 | 15.35 | 11.33 | 16.33 | 11.96 | 17.30 | 11.62 |
| 27 | | | 12.48 | 11.03 | 13.50 | 10.71 | 14.46 | 11.62 | 14.90 | 11.48 | 15.34 | 11.33 | 16.23 | 11.94 | | |
| 29 | | | 12.37 | 10.98 | 13.31 | 10.64 | 14.23 | 11.54 | 14.68 | 11.41 | 15.13 | 11.27 | 16.03 | 11.89 | | |
| 31 | | | 12.26 | 10.94 | 13.11 | 10.57 | 13.99 | 11.47 | 14.45 | 11.34 | 14.91 | 11.21 | 15.82 | 11.83 | | |
| 33 | 11.49 | 10.15 | 12.02 | 10.85 | 12.92 | 10.50 | 13.76 | 11.39 | 14.23 | 11.28 | 14.69 | 11.14 | 15.61 | 11.78 | | |
| 35 | 10.88 | 9.90 | 11.63 | 10.70 | 12.72 | 10.43 | 13.53 | 11.32 | 14.00 | 11.21 | 14.47 | 11.08 | 15.41 | 11.73 | | |
| 37 | 10.75 | 9.84 | 11.45 | 10.63 | 12.49 | 10.35 | 13.29 | 11.25 | 13.74 | 11.13 | 14.18 | 11.00 | 15.08 | 11.65 | | |
| 39 | 10.62 | 9.79 | 11.26 | 10.56 | 12.26 | 10.27 | 13.04 | 11.17 | 13.47 | 11.05 | 13.90 | 10.92 | 14.76 | 11.57 | | |
| 41 | 10.49 | 9.73 | 11.07 | 10.49 | 12.02 | 10.19 | 12.80 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.44 | 11.49 | | |
| 43 | 10.35 | 9.68 | 10.89 | 10.42 | 11.79 | 10.11 | 12.55 | 11.02 | 12.94 | 10.90 | 13.33 | 10.77 | 14.11 | 11.41 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|------------------------|------|-----------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 10.42 | 10.34 | 10.26 | 10.17 | 10.09 |
| -17.7 | -18 | 11.06 | 10.97 | 10.88 | 10.79 | 10.70 |
| -15.7 | -16 | 11.69 | 11.60 | 11.50 | 11.41 | 11.32 |
| -13.5 | -14 | 12.20 | 12.10 | 12.00 | 11.91 | 11.81 |
| -11.5 | -12 | 12.70 | 12.60 | 12.50 | 12.40 | 12.30 |
| -9.5 | -10 | 13.21 | 13.11 | 13.00 | 12.90 | 12.79 |
| -7.5 | -8 | 13.71 | 13.61 | 13.50 | 13.39 | 13.28 |
| -5.5 | -6 | 14.28 | 14.17 | 14.06 | 13.94 | 13.83 |
| -3.0 | -4 | 14.84 | 14.73 | 14.61 | 14.49 | 14.37 |
| -1.0 | -2 | 15.41 | 15.29 | 15.17 | 15.04 | 14.91 |
| 1.0 | 0 | 15.97 | 15.85 | 15.72 | 15.59 | 15.45 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 | 15.73 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 | 15.73 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 | 16.40 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 | 17.07 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 | 18.17 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 | 19.27 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 | 19.82 |

Model **FDUM140VSVXH** Indoor unit FDUM140VH Outdoor unit FDC140VNX

Cooling mode

(kW)

Heating mode:HC

(kW)

PJG00Z012

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.66 | 10.07 | 12.38 | 10.97 | 12.73 | 10.84 | 13.13 | 10.71 | 13.91 | 11.36 | 14.70 | 11.06 |
| 13 | | | | | 12.08 | 10.21 | 12.83 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.45 | 11.49 | 15.28 | 11.18 |
| 15 | | | | | 12.50 | 10.35 | 13.29 | 11.25 | 13.68 | 11.11 | 14.12 | 10.98 | 14.99 | 11.63 | 15.87 | 11.31 |
| 17 | | | | | 12.92 | 10.50 | 13.75 | 11.39 | 14.16 | 11.26 | 14.62 | 11.12 | 15.54 | 11.76 | 16.45 | 11.43 |
| 19 | | | | | 13.21 | 10.60 | 14.06 | 11.49 | 14.48 | 11.35 | 14.95 | 11.22 | 15.88 | 11.85 | 16.82 | 11.52 |
| 21 | | | | | 13.50 | 10.71 | 14.36 | 11.59 | 14.80 | 11.45 | 15.28 | 11.31 | 16.23 | 11.94 | 17.19 | 11.60 |
| 23 | | | | | 13.50 | 10.71 | 14.40 | 11.60 | 14.83 | 11.46 | 15.31 | 11.32 | 16.28 | 11.95 | 17.25 | 11.61 |
| 25 | | | 12.53 | 11.05 | 13.50 | 10.71 | 14.43 | 11.61 | 14.87 | 11.47 | 15.35 | 11.33 | 16.33 | 11.96 | 17.30 | 11.62 |
| 27 | | | 12.48 | 11.03 | 13.50 | 10.71 | 14.46 | 11.62 | 14.90 | 11.48 | 15.34 | 11.33 | 16.23 | 11.94 | | |
| 29 | | | 12.37 | 10.98 | 13.31 | 10.64 | 14.23 | 11.54 | 14.68 | 11.41 | 15.13 | 11.27 | 16.03 | 11.89 | | |
| 31 | | | 12.26 | 10.94 | 13.11 | 10.57 | 13.99 | 11.47 | 14.45 | 11.34 | 14.91 | 11.21 | 15.82 | 11.83 | | |
| 33 | 11.49 | 10.15 | 12.02 | 10.85 | 12.92 | 10.50 | 13.76 | 11.39 | 14.23 | 11.28 | 14.69 | 11.14 | 15.61 | 11.78 | | |
| 35 | 10.88 | 9.90 | 11.63 | 10.70 | 12.72 | 10.43 | 13.53 | 11.32 | 14.00 | 11.21 | 14.47 | 11.08 | 15.41 | 11.73 | | |
| 37 | 10.75 | 9.84 | 11.45 | 10.63 | 12.49 | 10.35 | 13.29 | 11.25 | 13.74 | 11.13 | 14.18 | 11.00 | 15.08 | 11.65 | | |
| 39 | 10.62 | 9.79 | 11.26 | 10.56 | 12.26 | 10.27 | 13.04 | 11.17 | 13.47 | 11.05 | 13.90 | 10.92 | 14.76 | 11.57 | | |
| 41 | 10.49 | 9.73 | 11.07 | 10.49 | 12.02 | 10.19 | 12.80 | 11.10 | 13.21 | 10.97 | 13.62 | 10.85 | 14.44 | 11.49 | | |
| 43 | 10.35 | 9.68 | 10.89 | 10.42 | 11.79 | 10.11 | 12.55 | 11.02 | 12.94 | 10.90 | 13.33 | 10.77 | 14.11 | 11.41 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|------------------------|------|-----------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 16.13 | 16.00 | 15.87 | 15.74 | 15.61 |
| -17.7 | -18 | 16.19 | 16.07 | 15.94 | 15.81 | 15.68 |
| -15.7 | -16 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -13.5 | -14 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -11.5 | -12 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -9.5 | -10 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -7.5 | -8 | 16.25 | 16.12 | 16.00 | 15.87 | 15.74 |
| -5.5 | -6 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -3.0 | -4 | 16.25 | 16.13 | 16.00 | 15.87 | 15.73 |
| -1.0 | -2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 1.0 | 0 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 | 15.73 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 | 15.73 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 | 16.40 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 | 17.07 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 | 18.17 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 | 19.27 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 | 19.82 |

PJG00Z012

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

(b) Twin type

Model **FDUM100VNXPVH** Indoor unit FDUM50VH (2 units) Outdoor unit FDC100VNX
Cooling mode (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.82 | 8.84 | 7.36 | 9.10 | 7.31 | 9.38 | 7.27 | 9.94 | 7.67 | 10.50 | 7.55 |
| 13 | | | | | 8.63 | 6.95 | 9.17 | 7.49 | 9.43 | 7.44 | 9.73 | 7.40 | 10.32 | 7.80 | 10.92 | 7.69 |
| 15 | | | | | 8.93 | 7.08 | 9.49 | 7.62 | 9.77 | 7.57 | 10.09 | 7.54 | 10.71 | 7.94 | 11.34 | 7.82 |
| 17 | | | | | 9.23 | 7.22 | 9.82 | 7.76 | 10.11 | 7.71 | 10.44 | 7.67 | 11.10 | 8.08 | 11.75 | 7.95 |
| 19 | | | | | 9.44 | 7.31 | 10.04 | 7.85 | 10.34 | 7.80 | 10.68 | 7.76 | 11.35 | 8.17 | 12.01 | 8.04 |
| 21 | | | | | 9.64 | 7.40 | 10.26 | 7.94 | 10.57 | 7.89 | 10.91 | 7.85 | 11.59 | 8.25 | 12.28 | 8.13 |
| 23 | | | | | 9.64 | 7.40 | 10.28 | 7.95 | 10.59 | 7.90 | 10.94 | 7.86 | 11.63 | 8.27 | 12.32 | 8.14 |
| 25 | | | 8.95 | 7.51 | 9.64 | 7.40 | 10.30 | 7.96 | 10.62 | 7.91 | 10.97 | 7.88 | 11.66 | 8.28 | 12.36 | 8.16 |
| 27 | | | 8.91 | 7.49 | 9.64 | 7.40 | 10.33 | 7.97 | 10.64 | 7.92 | 10.96 | 7.87 | 11.59 | 8.25 | | |
| 29 | | | 8.84 | 7.46 | 9.51 | 7.34 | 10.16 | 7.90 | 10.48 | 7.86 | 10.80 | 7.81 | 11.45 | 8.20 | | |
| 31 | | | 8.76 | 7.42 | 9.37 | 7.28 | 10.00 | 7.83 | 10.32 | 7.79 | 10.65 | 7.75 | 11.30 | 8.15 | | |
| 33 | 8.21 | 6.93 | 8.58 | 7.33 | 9.23 | 7.22 | 9.83 | 7.76 | 10.16 | 7.73 | 10.49 | 7.69 | 11.15 | 8.09 | | |
| 35 | 7.77 | 6.71 | 8.31 | 7.20 | 9.09 | 7.16 | 9.66 | 7.69 | 10.00 | 7.66 | 10.34 | 7.63 | 11.01 | 8.05 | | |
| 37 | 7.68 | 6.66 | 8.18 | 7.14 | 8.92 | 7.08 | 9.49 | 7.62 | 9.81 | 7.59 | 10.13 | 7.55 | 10.77 | 7.96 | | |
| 39 | 7.58 | 6.61 | 8.04 | 7.08 | 8.76 | 7.01 | 9.31 | 7.55 | 9.62 | 7.51 | 9.93 | 7.47 | 10.54 | 7.88 | | |
| 41 | 7.49 | 6.57 | 7.91 | 7.02 | 8.59 | 6.93 | 9.14 | 7.48 | 9.43 | 7.44 | 9.73 | 7.40 | 10.31 | 7.80 | | |
| 43 | 7.40 | 6.52 | 7.78 | 6.96 | 8.42 | 6.86 | 8.96 | 7.40 | 9.24 | 7.36 | 9.52 | 7.32 | 10.08 | 7.72 | | |

Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.30 | 7.24 | 7.18 | 7.12 | 7.06 | |
| -17.7 | -18 | 7.74 | 7.68 | 7.62 | 7.55 | 7.49 | |
| -15.7 | -16 | 8.18 | 8.12 | 8.05 | 7.99 | 7.92 | |
| -13.5 | -14 | 8.54 | 8.47 | 8.40 | 8.33 | 8.27 | |
| -11.5 | -12 | 8.89 | 8.82 | 8.75 | 8.68 | 8.61 | |
| -9.5 | -10 | 9.25 | 9.17 | 9.10 | 9.03 | 8.95 | |
| -7.5 | -8 | 9.60 | 9.53 | 9.45 | 9.38 | 9.30 | |
| -5.5 | -6 | 10.00 | 9.92 | 9.84 | 9.76 | 9.68 | |
| -3.0 | -4 | 10.39 | 10.31 | 10.23 | 10.14 | 10.06 | |
| -1.0 | -2 | 10.79 | 10.70 | 10.62 | 10.53 | 10.44 | |
| 1.0 | 0 | 11.18 | 11.09 | 11.01 | 10.91 | 10.82 | |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 | |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 | |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 | |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 | |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 | |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 | |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 | |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 | |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 | |

Model **FDUM100VSXPVH** Indoor unit FDUM50VH (2 units) Outdoor unit FDC100VSX
Cooling mode (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.33 | 6.82 | 8.84 | 7.36 | 9.10 | 7.31 | 9.38 | 7.27 | 9.94 | 7.67 | 10.50 | 7.55 |
| 13 | | | | | 8.63 | 6.95 | 9.17 | 7.49 | 9.43 | 7.44 | 9.73 | 7.40 | 10.32 | 7.80 | 10.92 | 7.69 |
| 15 | | | | | 8.93 | 7.08 | 9.49 | 7.62 | 9.77 | 7.57 | 10.09 | 7.54 | 10.71 | 7.94 | 11.34 | 7.82 |
| 17 | | | | | 9.23 | 7.22 | 9.82 | 7.76 | 10.11 | 7.71 | 10.44 | 7.67 | 11.10 | 8.08 | 11.75 | 7.95 |
| 19 | | | | | 9.44 | 7.31 | 10.04 | 7.85 | 10.34 | 7.80 | 10.68 | 7.76 | 11.35 | 8.17 | 12.01 | 8.04 |
| 21 | | | | | 9.64 | 7.40 | 10.26 | 7.94 | 10.57 | 7.89 | 10.91 | 7.85 | 11.59 | 8.25 | 12.28 | 8.13 |
| 23 | | | | | 9.64 | 7.40 | 10.28 | 7.95 | 10.59 | 7.90 | 10.94 | 7.86 | 11.63 | 8.27 | 12.32 | 8.14 |
| 25 | | | 8.95 | 7.51 | 9.64 | 7.40 | 10.30 | 7.96 | 10.62 | 7.91 | 10.97 | 7.88 | 11.66 | 8.28 | 12.36 | 8.16 |
| 27 | | | 8.91 | 7.49 | 9.64 | 7.40 | 10.33 | 7.97 | 10.64 | 7.92 | 10.96 | 7.87 | 11.59 | 8.25 | | |
| 29 | | | 8.84 | 7.46 | 9.51 | 7.34 | 10.16 | 7.90 | 10.48 | 7.86 | 10.80 | 7.81 | 11.45 | 8.20 | | |
| 31 | | | 8.76 | 7.42 | 9.37 | 7.28 | 10.00 | 7.83 | 10.32 | 7.79 | 10.65 | 7.75 | 11.30 | 8.15 | | |
| 33 | 8.21 | 6.93 | 8.58 | 7.33 | 9.23 | 7.22 | 9.83 | 7.76 | 10.16 | 7.73 | 10.49 | 7.69 | 11.15 | 8.09 | | |
| 35 | 7.77 | 6.71 | 8.31 | 7.20 | 9.09 | 7.16 | 9.66 | 7.69 | 10.00 | 7.66 | 10.34 | 7.63 | 11.01 | 8.05 | | |
| 37 | 7.68 | 6.66 | 8.18 | 7.14 | 8.92 | 7.08 | 9.49 | 7.62 | 9.81 | 7.59 | 10.13 | 7.55 | 10.77 | 7.96 | | |
| 39 | 7.58 | 6.61 | 8.04 | 7.08 | 8.76 | 7.01 | 9.31 | 7.55 | 9.62 | 7.51 | 9.93 | 7.47 | 10.54 | 7.88 | | |
| 41 | 7.49 | 6.57 | 7.91 | 7.02 | 8.59 | 6.93 | 9.14 | 7.48 | 9.43 | 7.44 | 9.73 | 7.40 | 10.31 | 7.80 | | |
| 43 | 7.40 | 6.52 | 7.78 | 6.96 | 8.42 | 6.86 | 8.96 | 7.40 | 9.24 | 7.36 | 9.52 | 7.32 | 10.08 | 7.72 | | |

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Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 11.29 | 11.20 | 11.11 | 11.02 | 10.93 | |
| -17.7 | -18 | 11.34 | 11.25 | 11.16 | 11.06 | 10.97 | |
| -15.7 | -16 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -13.5 | -14 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -11.5 | -12 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -9.5 | -10 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -7.5 | -8 | 11.37 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -5.5 | -6 | 11.38 | 11.29 | 11.20 | 11.11 | 11.02 | |
| -3.0 | -4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 | |
| -1.0 | -2 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 | |
| 1.0 | 0 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 | |
| 2.0 | 1 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 | |
| 3.0 | 2 | 11.38 | 11.29 | 11.20 | 11.10 | 11.01 | |
| 5.0 | 4 | 11.38 | 11.29 | 11.20 | 11.11 | 11.01 | |
| 7.0 | 6 | 11.37 | 11.29 | 11.20 | 11.11 | 11.01 | |
| 9.0 | 8 | 11.85 | 11.76 | 11.67 | 11.58 | 11.48 | |
| 11.5 | 10 | 12.32 | 12.23 | 12.15 | 12.05 | 11.95 | |
| 13.5 | 12 | 12.97 | 12.88 | 12.78 | 12.68 | 12.72 | |
| 15.5 | 14 | 13.62 | 13.52 | 13.41 | 13.32 | 13.49 | |
| 16.5 | 16 | 13.95 | 13.84 | 13.72 | 13.63 | 13.87 | |

Notes(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.

- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

- (3) Symbols are as follows.
TC : Total cooling capacity(KW)
SHC : Sensible heat capacity(KW)
HC : Heating capacity(KW)

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(c) Triple type

Model **FDUM140VNXTVH** Indoor unit **FDUM50VH (3 units)** Outdoor unit **FDC140VNX**

Cooling mode (kW)

Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| -19.8 | -20 | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | |
| 33 | 11.49 | 9.98 | 12.02 | 10.60 | 12.92 | 10.42 | 13.76 | 11.24 | 14.23 | 11.19 | 14.69 | 11.13 | 15.61 | 11.75 | | |
| 35 | 10.88 | 9.67 | 11.63 | 10.41 | 12.72 | 10.33 | 13.53 | 11.14 | 14.00 | 11.10 | 14.47 | 11.05 | 15.41 | 11.68 | | |
| 37 | 10.75 | 9.61 | 11.45 | 10.33 | 12.49 | 10.23 | 13.29 | 11.05 | 13.74 | 11.00 | 14.18 | 10.94 | 15.08 | 11.56 | | |
| 39 | 10.62 | 9.55 | 11.26 | 10.24 | 12.26 | 10.13 | 13.04 | 10.94 | 13.47 | 10.89 | 13.90 | 10.84 | 14.76 | 11.45 | | |
| 41 | 10.49 | 9.48 | 11.07 | 10.16 | 12.02 | 10.03 | 12.80 | 10.85 | 13.21 | 10.79 | 13.62 | 10.73 | 14.44 | 11.34 | | |
| 43 | 10.35 | 9.41 | 10.89 | 10.07 | 11.79 | 9.93 | 12.55 | 10.75 | 12.94 | 10.69 | 13.33 | 10.63 | 14.11 | 11.23 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|----------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 10.42 | 10.34 | 10.26 | 10.17 | 10.09 |
| -17.7 | -18 | 11.06 | 10.97 | 10.88 | 10.79 | 10.70 |
| -15.7 | -16 | 11.69 | 11.60 | 11.50 | 11.41 | 11.32 |
| -13.5 | -14 | 12.20 | 12.10 | 12.00 | 11.91 | 11.81 |
| -11.5 | -12 | 12.70 | 12.60 | 12.50 | 12.40 | 12.30 |
| -9.5 | -10 | 13.21 | 13.11 | 13.00 | 12.90 | 12.79 |
| -7.5 | -8 | 13.71 | 13.61 | 13.50 | 13.39 | 13.28 |
| -5.5 | -6 | 14.28 | 14.17 | 14.06 | 13.94 | 13.83 |
| -3.0 | -4 | 14.84 | 14.73 | 14.61 | 14.49 | 14.37 |
| -1.0 | -2 | 15.41 | 15.29 | 15.17 | 15.04 | 14.91 |
| 1.0 | 0 | 15.97 | 15.85 | 15.72 | 15.59 | 15.45 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 | 15.73 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 | 15.73 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 | 16.40 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 | 17.07 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 | 18.17 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 | 19.27 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 | 19.82 |

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Model **FDUM140VSXTVH** Indoor unit **FDUM50VH (3 units)** Outdoor unit **FDC140VSX**

Cooling mode (kW)

Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| -19.8 | -20 | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | |
| 33 | 11.49 | 9.98 | 12.02 | 10.60 | 12.92 | 10.42 | 13.76 | 11.24 | 14.23 | 11.19 | 14.69 | 11.13 | 15.61 | 11.75 | | |
| 35 | 10.88 | 9.67 | 11.63 | 10.41 | 12.72 | 10.33 | 13.53 | 11.14 | 14.00 | 11.10 | 14.47 | 11.05 | 15.41 | 11.68 | | |
| 37 | 10.75 | 9.61 | 11.45 | 10.33 | 12.49 | 10.23 | 13.29 | 11.05 | 13.74 | 11.00 | 14.18 | 10.94 | 15.08 | 11.56 | | |
| 39 | 10.62 | 9.55 | 11.26 | 10.24 | 12.26 | 10.13 | 13.04 | 10.94 | 13.47 | 10.89 | 13.90 | 10.84 | 14.76 | 11.45 | | |
| 41 | 10.49 | 9.48 | 11.07 | 10.16 | 12.02 | 10.03 | 12.80 | 10.85 | 13.21 | 10.79 | 13.62 | 10.73 | 14.44 | 11.34 | | |
| 43 | 10.35 | 9.41 | 10.89 | 10.07 | 11.79 | 9.93 | 12.55 | 10.75 | 12.94 | 10.69 | 13.33 | 10.63 | 14.11 | 11.23 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|----------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 16.13 | 16.00 | 15.87 | 15.74 | 15.61 |
| -17.7 | -18 | 16.19 | 16.07 | 15.94 | 15.81 | 15.68 |
| -15.7 | -16 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -13.5 | -14 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -11.5 | -12 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -9.5 | -10 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -7.5 | -8 | 16.25 | 16.12 | 16.00 | 15.87 | 15.74 |
| -5.5 | -6 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -3.0 | -4 | 16.25 | 16.13 | 16.00 | 15.87 | 15.73 |
| -1.0 | -2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 1.0 | 0 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 | 15.73 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 | 15.73 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 | 16.40 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 | 17.07 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 | 18.17 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 | 19.27 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 | 19.82 |

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

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(4) Ceiling suspended type (FDE)

(a) Single type

Cooling mode (kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | |
|------------------------|------------------------|-----|--------|-----|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|------------------------|-----------------------------|------|------|------|------|----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | °CDB | °CDB | | | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | | | | | | 3.38 | 3.03 | 3.56 | 3.28 | 3.65 | 3.25 | 3.75 | 3.23 | 3.95 | 3.42 | 4.15 | 3.36 | | | | | | |
| -17.7 | | | | | | 3.46 | 3.06 | 3.65 | 3.32 | 3.75 | 3.29 | 3.85 | 3.26 | 4.05 | 3.45 | 4.26 | 3.39 | | | | | | |
| -15.7 | | | | | | 3.54 | 3.09 | 3.74 | 3.35 | 3.84 | 3.32 | 3.95 | 3.30 | 4.15 | 3.49 | 4.36 | 3.42 | | | | | | |
| -13.5 | | | | | | 3.62 | 3.12 | 3.83 | 3.38 | 3.94 | 3.36 | 4.04 | 3.33 | 4.26 | 3.52 | 4.47 | 3.45 | 2.67 | 2.63 | 2.59 | 2.55 | 2.50 | |
| -11.5 | | | | | | 3.69 | 3.15 | 3.91 | 3.41 | 4.02 | 3.39 | 4.15 | 3.37 | 4.41 | 3.57 | 4.67 | 3.51 | 2.83 | 2.79 | 2.75 | 2.71 | 2.67 | |
| -9.5 | | | | | | 3.81 | 3.20 | 3.99 | 3.44 | 4.10 | 3.42 | 4.26 | 3.40 | 4.56 | 3.62 | 4.87 | 3.57 | 3.00 | 2.96 | 2.92 | 2.88 | 2.84 | |
| -7.5 | | | | | | 3.85 | 3.22 | 4.04 | 3.46 | 4.15 | 3.43 | 4.30 | 3.42 | 4.59 | 3.63 | 4.88 | 3.57 | 3.17 | 3.13 | 3.09 | 3.05 | 3.01 | |
| -5.5 | | | | | | 3.73 | 3.35 | 3.89 | 3.23 | 4.08 | 3.48 | 4.20 | 3.45 | 4.34 | 3.43 | 4.61 | 3.63 | 3.23 | 3.20 | 3.16 | 3.12 | 3.09 | |
| -3.0 | | | | | | 3.76 | 3.36 | 3.93 | 3.25 | 4.13 | 3.50 | 4.25 | 3.47 | 4.36 | 3.44 | 4.60 | 3.63 | 3.29 | 3.26 | 3.23 | 3.20 | 3.17 | |
| -1.0 | | | | | | 3.70 | 3.34 | 3.86 | 3.22 | 4.06 | 3.47 | 4.18 | 3.45 | 4.30 | 3.42 | 4.54 | 3.61 | 3.36 | 3.33 | 3.30 | 3.28 | 3.25 | |
| 1.0 | | | | | | 3.64 | 3.31 | 3.80 | 3.20 | 4.00 | 3.45 | 4.12 | 3.42 | 4.24 | 3.40 | 4.48 | 3.59 | 3.42 | 3.40 | 3.38 | 3.35 | 3.33 | |
| 2.0 | | | | | | 3.64 | 3.31 | 3.80 | 3.20 | 4.00 | 3.45 | 4.12 | 3.42 | 4.24 | 3.40 | 4.48 | 3.59 | 3.45 | 3.43 | 3.41 | 3.39 | 3.37 | |
| 3.0 | | | | | | 3.23 | 2.99 | 3.44 | 3.22 | 3.74 | 3.17 | 3.94 | 3.42 | 4.06 | 3.40 | 4.18 | 3.38 | 3.67 | 3.65 | 3.63 | 3.61 | 3.59 | |
| 5.0 | | | | | | 3.28 | 3.01 | 3.44 | 3.22 | 3.68 | 3.15 | 3.88 | 3.40 | 4.00 | 3.38 | 4.12 | 3.36 | 4.11 | 4.09 | 4.07 | 4.04 | 4.01 | |
| 7.0 | | | | | | 3.23 | 2.99 | 3.38 | 3.20 | 3.62 | 3.12 | 3.82 | 3.38 | 3.94 | 3.36 | 4.06 | 3.33 | 4.55 | 4.53 | 4.50 | 4.47 | 4.44 | |
| 9.0 | | | | | | 3.17 | 2.96 | 3.32 | 3.17 | 3.56 | 3.10 | 3.76 | 3.36 | 3.88 | 3.34 | 4.00 | 3.31 | 4.78 | 4.75 | 4.72 | 4.69 | 4.66 | |
| 11.5 | | | | | | 3.12 | 2.94 | 3.27 | 3.15 | 3.50 | 3.07 | 3.70 | 3.33 | 3.82 | 3.31 | 3.93 | 3.29 | 5.01 | 4.98 | 4.95 | 4.91 | 4.88 | |
| 13.5 | | | | | | 3.06 | 2.91 | 3.21 | 3.12 | 3.44 | 3.05 | 3.64 | 3.31 | 3.76 | 3.29 | 3.87 | 3.27 | 5.30 | 5.26 | 5.21 | 5.14 | 5.10 | |
| 15.5 | | | | | | | | | | | | | | | | | | 5.58 | 5.53 | 5.48 | 5.37 | 5.32 | |
| 16.5 | | | | | | | | | | | | | | | | | | 5.73 | 5.67 | 5.61 | 5.48 | 5.44 | |

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Model **FDE50ZSXVH** Indoor unit **FDE50VH** Outdoor unit **SRC50ZSX-S** (kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | |
|------------------------|------------------------|-----|--------|-----|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|------------------------|-----------------------------|------|------|------|------|----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | °CDB | °CDB | | | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | | | | | | 4.22 | 3.37 | 4.45 | 3.62 | 4.56 | 3.59 | 4.69 | 3.56 | 4.94 | 3.74 | 5.19 | 3.66 | | | | | | |
| -17.7 | | | | | | 4.32 | 3.42 | 4.56 | 3.66 | 4.68 | 3.63 | 4.81 | 3.60 | 5.07 | 3.78 | 5.32 | 3.70 | | | | | | |
| -15.7 | | | | | | 4.42 | 3.46 | 4.68 | 3.71 | 4.80 | 3.68 | 4.93 | 3.65 | 5.19 | 3.82 | 5.45 | 3.74 | 3.20 | 3.15 | 3.11 | 3.05 | 3.00 | |
| -13.5 | | | | | | 4.53 | 3.51 | 4.79 | 3.76 | 4.92 | 3.72 | 5.06 | 3.69 | 5.32 | 3.87 | 5.58 | 3.78 | 3.40 | 3.35 | 3.31 | 3.26 | 3.20 | |
| -11.5 | | | | | | 4.62 | 3.55 | 4.89 | 3.80 | 5.02 | 3.76 | 5.19 | 3.74 | 5.51 | 3.93 | 5.84 | 3.86 | 3.60 | 3.55 | 3.51 | 3.46 | 3.41 | |
| -9.5 | | | | | | 4.76 | 3.61 | 4.99 | 3.84 | 5.13 | 3.81 | 5.32 | 3.79 | 5.70 | 4.00 | 6.09 | 3.94 | 3.80 | 3.75 | 3.71 | 3.66 | 3.61 | |
| -7.5 | | | | | | 4.81 | 3.63 | 5.04 | 3.86 | 5.19 | 3.83 | 5.37 | 3.81 | 5.73 | 4.01 | 6.10 | 3.95 | 3.88 | 3.83 | 3.79 | 3.75 | 3.71 | |
| -5.5 | | | | | | 4.66 | 3.78 | 4.86 | 3.65 | 5.10 | 3.88 | 5.25 | 3.85 | 5.42 | 3.83 | 5.76 | 4.02 | 3.95 | 3.92 | 3.88 | 3.84 | 3.80 | |
| -3.0 | | | | | | 4.70 | 3.80 | 4.91 | 3.67 | 5.16 | 3.91 | 5.31 | 3.88 | 5.46 | 3.84 | 5.75 | 4.02 | 4.03 | 4.00 | 3.97 | 3.93 | 3.90 | |
| -1.0 | | | | | | 4.62 | 3.76 | 4.83 | 3.64 | 5.08 | 3.87 | 5.23 | 3.84 | 5.38 | 3.81 | 5.68 | 3.99 | 4.10 | 4.08 | 4.05 | 4.03 | 4.00 | |
| 1.0 | | | | | | 4.54 | 3.73 | 4.75 | 3.60 | 5.00 | 3.84 | 5.15 | 3.81 | 5.30 | 3.78 | 5.60 | 3.96 | 4.14 | 4.12 | 4.10 | 4.07 | 4.05 | |
| 2.0 | | | | | | 4.04 | 3.38 | 4.31 | 3.62 | 4.67 | 3.57 | 4.93 | 3.81 | 5.08 | 3.79 | 5.23 | 3.76 | 4.41 | 4.38 | 4.36 | 4.33 | 4.30 | |
| 3.0 | | | | | | 4.11 | 3.42 | 4.30 | 3.61 | 4.59 | 3.53 | 4.85 | 3.78 | 5.00 | 3.75 | 5.15 | 3.73 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 | |
| 5.0 | | | | | | 4.04 | 3.38 | 4.23 | 3.58 | 4.52 | 3.50 | 4.77 | 3.75 | 4.92 | 3.72 | 5.07 | 3.70 | 5.46 | 5.43 | 5.40 | 5.37 | 5.33 | |
| 7.0 | | | | | | 3.97 | 3.35 | 4.16 | 3.55 | 4.45 | 3.47 | 4.70 | 3.72 | 4.85 | 3.70 | 4.99 | 3.67 | 5.74 | 5.70 | 5.67 | 5.63 | 5.59 | |
| 9.0 | | | | | | 3.90 | 3.31 | 4.09 | 3.52 | 4.38 | 3.44 | 4.62 | 3.69 | 4.77 | 3.67 | 4.92 | 3.64 | 6.02 | 5.98 | 5.94 | 5.89 | 5.85 | |
| 11.5 | | | | | | 3.83 | 3.28 | 4.01 | 3.48 | 4.30 | 3.41 | 4.55 | 3.66 | 4.69 | 3.64 | 4.84 | 3.61 | 6.36 | 6.31 | 6.25 | 6.17 | 6.12 | |
| 13.5 | | | | | | | | | | | | | | | | | | 6.70 | 6.64 | 6.57 | 6.44 | 6.39 | |
| 15.5 | | | | | | | | | | | | | | | | | | 6.87 | 6.80 | 6.73 | 6.58 | 6.52 | |
| 16.5 | | | | | | | | | | | | | | | | | | | | | | | |

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Notes(1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference of Zero.
 (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model **FDE60ZSXVH** Indoor unit FDE60VH Outdoor unit SRC60ZSX-S

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.73 | 4.47 | 4.98 | 4.87 | 5.11 | 4.83 | 5.25 | 4.79 | 5.53 | 5.10 | 5.81 | 5.01 |
| 13 | | | | | 4.84 | 4.51 | 5.11 | 4.91 | 5.24 | 4.87 | 5.39 | 4.84 | 5.67 | 5.14 | 5.96 | 5.05 |
| 15 | | | | | 4.95 | 4.55 | 5.24 | 4.96 | 5.38 | 4.92 | 5.52 | 4.88 | 5.82 | 5.19 | 6.11 | 5.09 |
| 17 | | | | | 5.07 | 4.60 | 5.37 | 5.01 | 5.51 | 4.97 | 5.66 | 4.93 | 5.96 | 5.23 | 6.25 | 5.13 |
| 19 | | | | | 5.17 | 4.64 | 5.48 | 5.05 | 5.63 | 5.01 | 5.81 | 4.98 | 6.17 | 5.30 | 6.54 | 5.21 |
| 21 | | | | | 5.33 | 4.71 | 5.59 | 5.09 | 5.74 | 5.05 | 5.96 | 5.03 | 6.39 | 5.36 | 6.82 | 5.30 |
| 23 | | | | | 5.39 | 4.73 | 5.65 | 5.11 | 5.81 | 5.08 | 6.01 | 5.05 | 6.42 | 5.37 | 6.83 | 5.30 |
| 25 | | | | | 5.22 | 4.93 | 5.44 | 4.75 | 5.71 | 5.14 | 5.88 | 5.10 | 6.07 | 5.07 | 6.45 | 5.38 |
| 27 | | | | | 5.27 | 4.95 | 5.50 | 4.78 | 5.78 | 5.16 | 5.94 | 5.12 | 6.11 | 5.08 | 6.44 | 5.38 |
| 29 | | | | | 5.18 | 4.91 | 5.41 | 4.74 | 5.69 | 5.13 | 5.86 | 5.09 | 6.02 | 5.05 | 6.36 | 5.36 |
| 31 | | | | | 5.09 | 4.87 | 5.32 | 4.70 | 5.60 | 5.09 | 5.77 | 5.06 | 5.94 | 5.02 | 6.27 | 5.33 |
| 33 | 4.53 | 4.39 | 4.82 | 4.72 | 5.23 | 4.67 | 5.52 | 5.06 | 5.69 | 5.03 | 5.85 | 4.99 | 6.19 | 5.30 | | |
| 35 | 4.60 | 4.42 | 4.81 | 4.71 | 5.15 | 4.63 | 5.43 | 5.03 | 5.60 | 5.00 | 5.77 | 4.97 | 6.10 | 5.27 | | |
| 37 | 4.52 | 4.39 | 4.73 | 4.64 | 5.06 | 4.60 | 5.35 | 5.00 | 5.51 | 4.97 | 5.68 | 4.94 | 6.01 | 5.25 | | |
| 39 | 4.44 | 4.35 | 4.65 | 4.56 | 4.98 | 4.57 | 5.26 | 4.97 | 5.43 | 4.94 | 5.59 | 4.91 | 5.92 | 5.22 | | |
| 41 | 4.37 | 4.28 | 4.58 | 4.49 | 4.90 | 4.54 | 5.18 | 4.94 | 5.34 | 4.91 | 5.51 | 4.88 | 5.83 | 5.19 | | |
| 43 | 4.29 | 4.20 | 4.50 | 4.41 | 4.82 | 4.50 | 5.10 | 4.91 | 5.26 | 4.88 | 5.42 | 4.85 | 5.74 | 5.16 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature °CDB | | | | |
|----------------------|------|------|--------------------------------|------|------|------|----|
| | | | 16 | 18 | 20 | 22 | 24 |
| | | | -19.8 | -20 | | | |
| -17.7 | -18 | | | | | | |
| -15.7 | -16 | | | | | | |
| -13.5 | -14 | 3.97 | 3.91 | 3.85 | 3.79 | 3.73 | |
| -11.5 | -12 | 4.22 | 4.16 | 4.10 | 4.04 | 3.98 | |
| -9.5 | -10 | 4.47 | 4.41 | 4.35 | 4.29 | 4.23 | |
| -7.5 | -8 | 4.72 | 4.66 | 4.60 | 4.54 | 4.48 | |
| -5.5 | -6 | 4.81 | 4.76 | 4.70 | 4.65 | 4.60 | |
| -3.0 | -4 | 4.90 | 4.86 | 4.81 | 4.77 | 4.72 | |
| -1.0 | -2 | 5.00 | 4.96 | 4.92 | 4.88 | 4.84 | |
| 1.0 | 0 | 5.09 | 5.06 | 5.03 | 4.99 | 4.96 | |
| 2.0 | 1 | 5.14 | 5.11 | 5.08 | 5.05 | 5.02 | |
| 3.0 | 2 | 5.47 | 5.44 | 5.41 | 5.37 | 5.34 | |
| 5.0 | 4 | 6.12 | 6.09 | 6.05 | 6.01 | 5.98 | |
| 7.0 | 6 | 6.78 | 6.74 | 6.70 | 6.66 | 6.61 | |
| 9.0 | 8 | 7.12 | 7.08 | 7.03 | 6.98 | 6.94 | |
| 11.5 | 10 | 7.47 | 7.41 | 7.36 | 7.31 | 7.26 | |
| 13.5 | 12 | 7.89 | 7.82 | 7.76 | 7.65 | 7.59 | |
| 15.5 | 14 | 8.31 | 8.23 | 8.15 | 7.99 | 7.93 | |
| 16.5 | 16 | 8.53 | 8.44 | 8.35 | 8.16 | 8.09 | |

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Model **FDE71VNXVH** Indoor unit FDE71VH Outdoor unit FDC71VNX

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|----------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.87 | 4.52 | 6.02 | 5.25 | 6.59 | 5.36 | 6.79 | 5.32 | 7.19 | 5.62 | 7.59 | 5.52 |
| 13 | | | | | 5.33 | 4.71 | 6.32 | 5.37 | 6.82 | 5.44 | 7.03 | 5.41 | 7.45 | 5.71 | 7.88 | 5.61 |
| 15 | | | | | 5.79 | 4.90 | 6.63 | 5.49 | 7.05 | 5.53 | 7.27 | 5.49 | 7.71 | 5.79 | 8.16 | 5.69 |
| 17 | | | | | 6.26 | 5.09 | 6.94 | 5.61 | 7.27 | 5.61 | 7.51 | 5.58 | 7.97 | 5.88 | 8.44 | 5.78 |
| 19 | | | | | 6.59 | 5.23 | 7.16 | 5.70 | 7.44 | 5.68 | 7.68 | 5.64 | 8.15 | 5.94 | 8.63 | 5.83 |
| 21 | | | | | 6.93 | 5.38 | 7.38 | 5.78 | 7.60 | 5.74 | 7.84 | 5.70 | 8.33 | 6.00 | 8.82 | 5.89 |
| 23 | | | | | 6.91 | 5.37 | 7.35 | 5.77 | 7.57 | 5.73 | 7.81 | 5.69 | 8.30 | 5.99 | 8.78 | 5.88 |
| 25 | | | | | 6.46 | 5.49 | 6.89 | 5.36 | 7.32 | 5.76 | 7.54 | 5.72 | 7.78 | 5.68 | 8.26 | 5.98 |
| 27 | | | | | 6.45 | 5.48 | 6.87 | 5.35 | 7.30 | 5.75 | 7.52 | 5.71 | 7.74 | 5.66 | 8.18 | 5.95 |
| 29 | | | | | 6.34 | 5.43 | 6.75 | 5.30 | 7.19 | 5.71 | 7.41 | 5.67 | 7.64 | 5.63 | 8.09 | 5.92 |
| 31 | | | | | 6.23 | 5.38 | 6.64 | 5.25 | 7.08 | 5.66 | 7.31 | 5.63 | 7.54 | 5.59 | 7.99 | 5.89 |
| 33 | 5.77 | 4.98 | 6.05 | 5.30 | 6.53 | 5.21 | 6.97 | 5.62 | 7.20 | 5.59 | 7.44 | 5.55 | 7.90 | 5.85 | | |
| 35 | 5.67 | 4.93 | 5.95 | 5.25 | 6.42 | 5.16 | 6.86 | 5.58 | 7.10 | 5.55 | 7.34 | 5.52 | 7.81 | 5.82 | | |
| 37 | 5.58 | 4.89 | 5.85 | 5.21 | 6.31 | 5.11 | 6.72 | 5.52 | 6.95 | 5.49 | 7.18 | 5.46 | 7.64 | 5.77 | | |
| 39 | 5.49 | 4.85 | 5.76 | 5.17 | 6.20 | 5.07 | 6.59 | 5.47 | 6.81 | 5.44 | 7.03 | 5.41 | 7.46 | 5.71 | | |
| 41 | 5.39 | 4.80 | 5.67 | 5.13 | 6.09 | 5.02 | 6.45 | 5.42 | 6.66 | 5.39 | 6.87 | 5.35 | 7.29 | 5.65 | | |
| 43 | 5.30 | 4.75 | 5.57 | 5.08 | 5.97 | 4.97 | 6.31 | 5.36 | 6.51 | 5.33 | 6.71 | 5.29 | 7.12 | 5.60 | | |

| Outdoor air temp. | °CDB | °CWB | Indoor air temperature °CDB | | | | |
|----------------------|------|------|--------------------------------|------|------|------|------|
| | | | 16 | 18 | 20 | 22 | 24 |
| | | | -19.8 | -20 | 3.95 | 3.93 | 3.91 |
| -17.7 | -18 | 4.18 | 4.16 | 4.14 | 4.11 | 4.09 | |
| -15.7 | -16 | 4.42 | 4.39 | 4.37 | 4.34 | 4.32 | |
| -13.5 | -14 | 4.68 | 4.65 | 4.63 | 4.60 | 4.57 | |
| -11.5 | -12 | 4.94 | 4.91 | 4.88 | 4.85 | 4.82 | |
| -9.5 | -10 | 5.20 | 5.17 | 5.14 | 5.11 | 5.08 | |
| -7.5 | -8 | 5.46 | 5.43 | 5.40 | 5.36 | 5.33 | |
| -5.5 | -6 | 5.59 | 5.55 | 5.52 | 5.48 | 5.44 | |
| -3.0 | -4 | 5.71 | 5.68 | 5.64 | 5.60 | 5.56 | |
| -1.0 | -2 | 5.84 | 5.80 | 5.76 | 5.72 | 5.67 | |
| 1.0 | 0 | 5.97 | 5.92 | 5.88 | 5.83 | 5.79 | |
| 2.0 | 1 | 6.03 | 5.98 | 5.94 | 5.89 | 5.85 | |
| 3.0 | 2 | 6.45 | 6.40 | 6.35 | 6.30 | 6.25 | |
| 5.0 | 4 | 7.29 | 7.23 | 7.18 | 7.12 | 7.06 | |
| 7.0 | 6 | 8.13 | 8.06 | 8.00 | 7.93 | 7.87 | |
| 9.0 | 8 | 8.42 | 8.36 | 8.29 | 8.23 | 8.16 | |
| 11.5 | 10 | 8.72 | 8.65 | 8.59 | 8.52 | 8.46 | |
| 13.5 | 12 | 9.20 | 9.13 | 9.06 | 9.00 | 8.92 | |
| 15.5 | 14 | 9.69 | 9.61 | 9.53 | 9.47 | 9.39 | |
| 16.5 | 16 | 9.93 | 9.85 | 9.77 | 9.71 | 9.62 | |

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Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.(Cooling only)

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDE140VSXTVH** Indoor unit FDE50VH (3 units) Outdoor unit FDC140VSX

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.66 | 9.70 | 12.38 | 10.49 | 12.73 | 10.41 | 13.13 | 10.34 | 13.91 | 10.92 | 14.70 | 10.73 |
| 13 | | | | | 12.08 | 9.87 | 12.83 | 10.66 | 13.21 | 10.58 | 13.62 | 10.51 | 14.45 | 11.10 | 15.28 | 10.91 |
| 15 | | | | | 12.50 | 10.05 | 13.29 | 10.84 | 13.68 | 10.76 | 14.12 | 10.69 | 14.99 | 11.28 | 15.87 | 11.08 |
| 17 | | | | | 12.92 | 10.23 | 13.75 | 11.02 | 14.16 | 10.94 | 14.62 | 10.87 | 15.54 | 11.46 | 16.45 | 11.26 |
| 19 | | | | | 13.21 | 10.35 | 14.06 | 11.14 | 14.48 | 11.06 | 14.95 | 10.99 | 15.88 | 11.58 | 16.82 | 11.38 |
| 21 | | | | | 13.50 | 10.48 | 14.36 | 11.26 | 14.80 | 11.19 | 15.28 | 11.12 | 16.23 | 11.70 | 17.19 | 11.49 |
| 23 | | | | | 13.50 | 10.48 | 14.40 | 11.28 | 14.83 | 11.20 | 15.31 | 11.13 | 16.28 | 11.71 | 17.25 | 11.51 |
| 25 | | | 12.53 | 10.67 | 13.50 | 10.48 | 14.43 | 11.29 | 14.87 | 11.21 | 15.35 | 11.14 | 16.33 | 11.73 | 17.30 | 11.52 |
| 27 | | | 12.48 | 10.64 | 13.50 | 10.48 | 14.46 | 11.30 | 14.90 | 11.23 | 15.34 | 11.14 | 16.23 | 11.70 | | |
| 29 | | | 12.37 | 10.59 | 13.31 | 10.40 | 14.23 | 11.21 | 14.68 | 11.14 | 15.13 | 11.06 | 16.03 | 11.63 | | |
| 31 | | | 12.26 | 10.54 | 13.11 | 10.31 | 13.99 | 11.12 | 14.45 | 11.05 | 14.91 | 10.98 | 15.82 | 11.56 | | |
| 33 | 11.49 | 9.83 | 12.02 | 10.43 | 12.92 | 10.23 | 13.76 | 11.03 | 14.23 | 10.97 | 14.69 | 10.90 | 15.61 | 11.49 | | |
| 35 | 10.88 | 9.53 | 11.63 | 10.25 | 12.72 | 10.14 | 13.53 | 10.93 | 14.00 | 10.88 | 14.47 | 10.82 | 15.41 | 11.42 | | |
| 37 | 10.75 | 9.47 | 11.45 | 10.17 | 12.49 | 10.05 | 13.29 | 10.84 | 13.74 | 10.78 | 14.18 | 10.71 | 15.08 | 11.31 | | |
| 39 | 10.62 | 9.41 | 11.26 | 10.09 | 12.26 | 9.95 | 13.04 | 10.74 | 13.47 | 10.68 | 13.90 | 10.61 | 14.76 | 11.20 | | |
| 41 | 10.49 | 9.34 | 11.07 | 10.00 | 12.02 | 9.85 | 12.80 | 10.65 | 13.21 | 10.58 | 13.62 | 10.51 | 14.44 | 11.10 | | |
| 43 | 10.35 | 9.28 | 10.89 | 9.92 | 11.79 | 9.75 | 12.55 | 10.55 | 12.94 | 10.48 | 13.33 | 10.41 | 14.11 | 10.99 | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | °CDB | | | | |
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 16.13 | 16.00 | 15.87 | 15.74 | 15.61 |
| -17.7 | -18 | 16.19 | 16.07 | 15.94 | 15.81 | 15.68 |
| -15.7 | -16 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -13.5 | -14 | 16.26 | 16.13 | 16.00 | 15.87 | 15.74 |
| -11.5 | -12 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -9.5 | -10 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -7.5 | -8 | 16.25 | 16.12 | 16.00 | 15.87 | 15.74 |
| -5.5 | -6 | 16.25 | 16.13 | 16.00 | 15.87 | 15.74 |
| -3.0 | -4 | 16.25 | 16.13 | 16.00 | 15.87 | 15.73 |
| -1.0 | -2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 1.0 | 0 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 2.0 | 1 | 16.26 | 16.13 | 16.00 | 15.86 | 15.73 |
| 3.0 | 2 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 5.0 | 4 | 16.25 | 16.13 | 16.00 | 15.86 | 15.73 |
| 7.0 | 6 | 16.25 | 16.12 | 16.00 | 15.87 | 15.73 |
| 9.0 | 8 | 16.93 | 16.80 | 16.68 | 16.54 | 16.40 |
| 11.5 | 10 | 17.61 | 17.48 | 17.35 | 17.21 | 17.07 |
| 13.5 | 12 | 18.53 | 18.39 | 18.25 | 18.12 | 18.17 |
| 15.5 | 14 | 19.46 | 19.31 | 19.16 | 19.02 | 19.27 |
| 16.5 | 16 | 19.93 | 19.77 | 19.61 | 19.48 | 19.82 |

Notes(1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed.(Cooling only)

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference of Zero.

(3) Symbols are as follows.

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

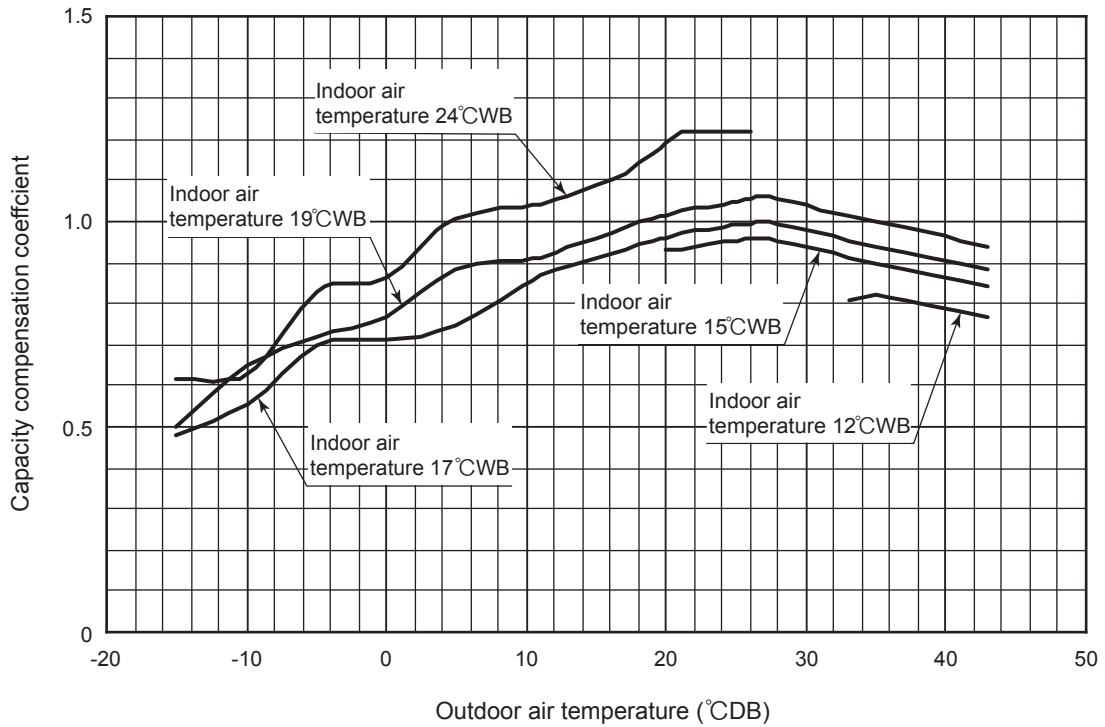
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[References data]

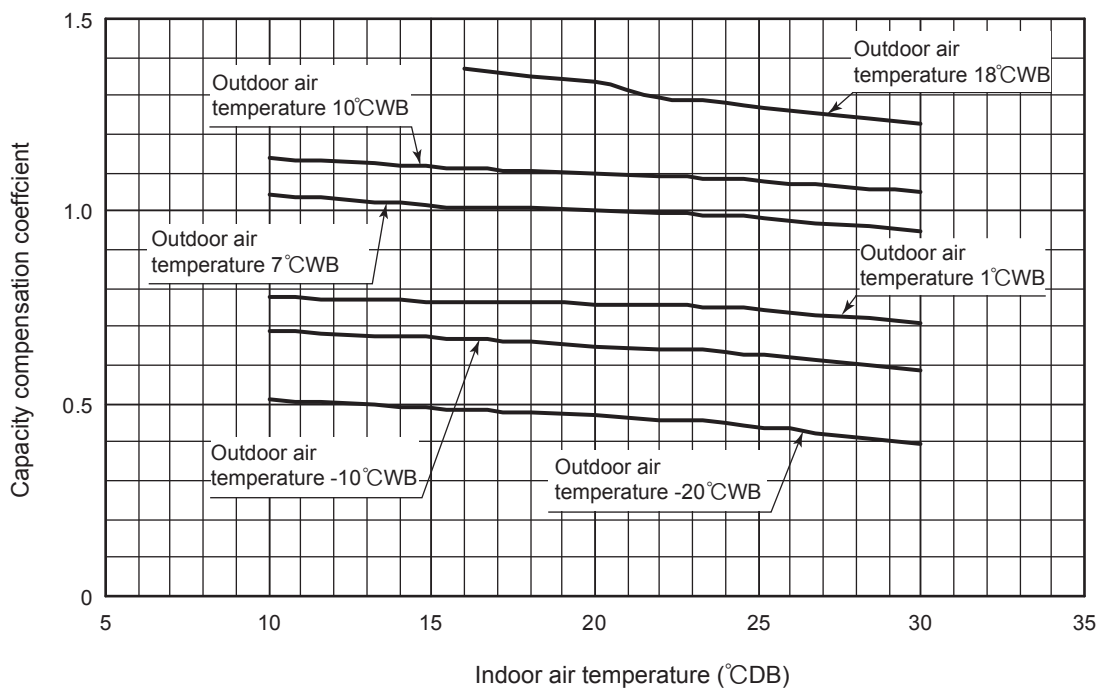
Capacity variation against outdoor and indoor temperature at the maximum compressor speed capacity compensation coefficient shows the ratio to nominal capacity.

(I) Models SRC40, 50, 60ZSX-S

① Cooling

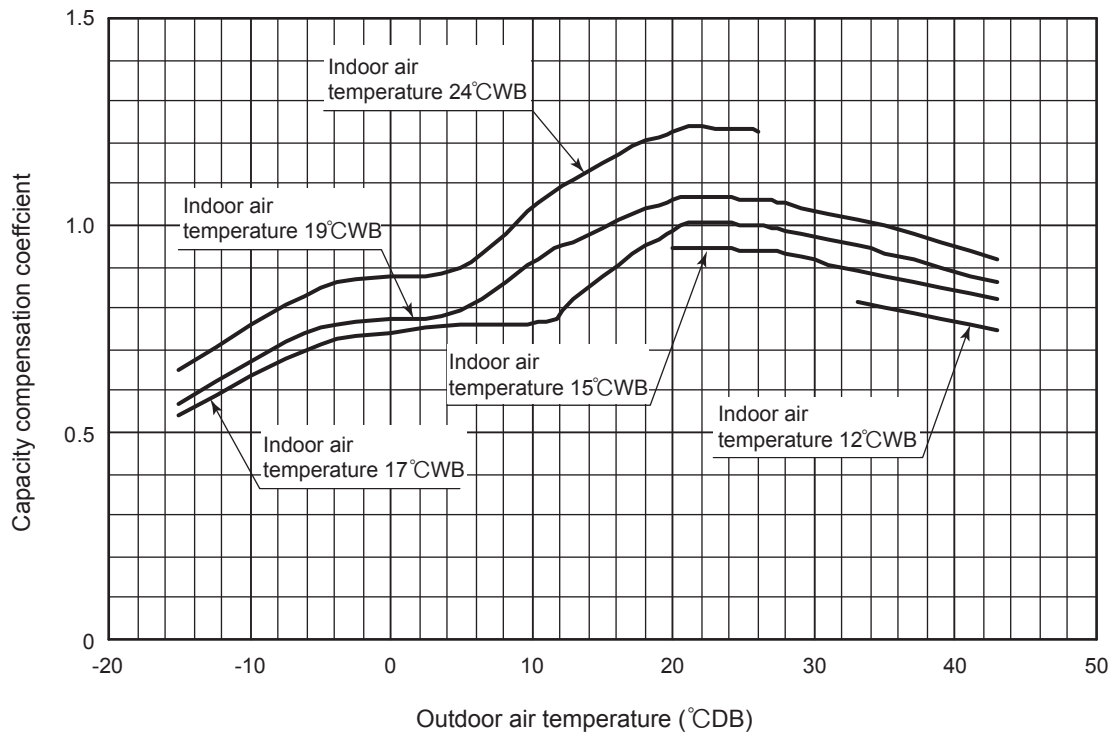


② Heating

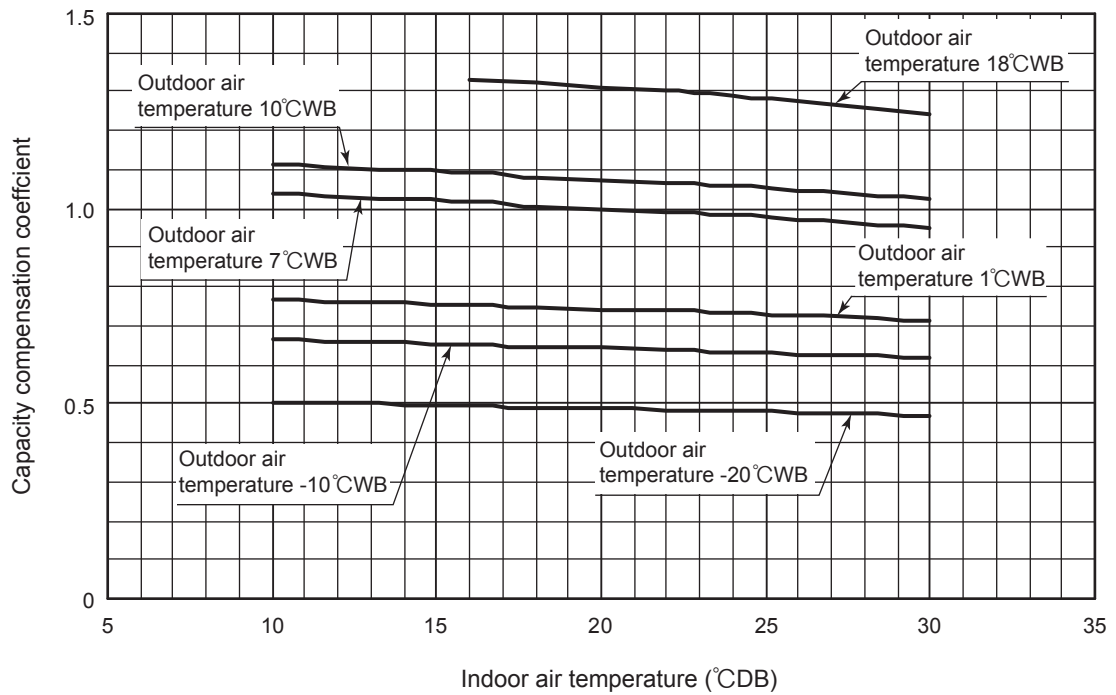


(II) Model FDC71VNX

① Cooling

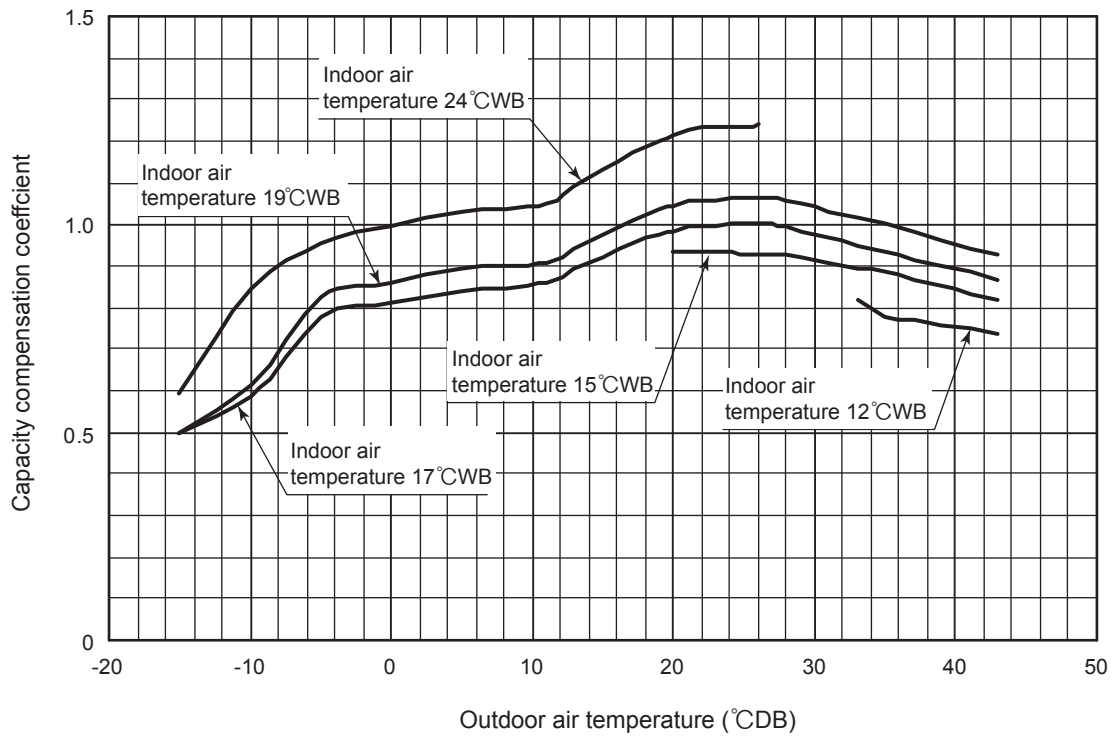


② Heating

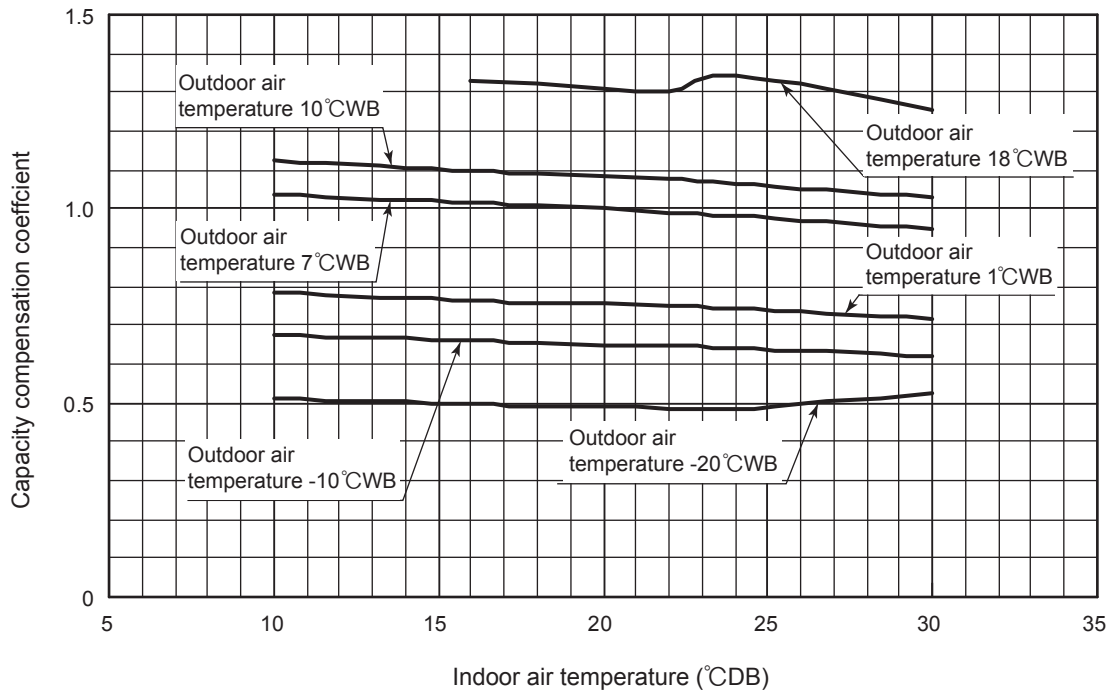


Ⅲ Models FDC100, 125, 140VNX, 100, 125, 140VSX

① Cooling



② Heating



1.9.2 Correction of cooling and heating capacity in relation to air flow rate control (Fan speed)

| Fan speed | P-Hi or Hi | Me | Lo |
|-------------|------------|------|------|
| Coefficient | 1.00 | 0.97 | 0.95 |

1.9.3 Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

(1) Models SRC40-60

| Piping length (m) | 7 | 10 | 15 | 20 | 25 | 30 |
|-------------------|---|------|-------|-------|------|-------|
| Cooling | 1 | 0.99 | 0.975 | 0.965 | 0.95 | 0.935 |
| Heating | 1 | 1 | 1 | 1 | 1 | 1 |

(2) Models FDC71-140

| Equivalent piping length ⁽¹⁾ (m) | | 7.5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | |
|---|--------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Heating | | 1 | 1 | 1 | 1 | 1 | 0.998 | 0.998 | 0.993 | 0.993 | 0.988 | 0.988 | |
| Cooling | FDC71 model | φ 15.88 | 1 | 0.996 | 0.989 | 0.982 | 0.975 | 0.968 | 0.961 | 0.954 | 0.947 | 0.940 | 0.933 |
| | FDC100 model | | 1 | 0.991 | 0.978 | 0.964 | 0.951 | 0.937 | 0.924 | 0.910 | 0.897 | 0.883 | 0.870 |
| | FDC125 model | | 1 | 0.986 | 0.968 | 0.950 | 0.932 | 0.914 | 0.896 | 0.878 | 0.860 | 0.842 | 0.824 |
| | FDC140 model | | 1 | 0.985 | 0.966 | 0.946 | 0.927 | 0.907 | 0.888 | 0.868 | 0.849 | 0.829 | 0.810 |
| | FDC71 model | φ 19.05 | 1.008 | 1.006 | 1.003 | 1 | 0.997 | 0.994 | 0.991 | 0.988 | 0.985 | 0.982 | 0.979 |
| | FDC100 model | | 1.016 | 1.013 | 1.007 | 1.002 | 0.996 | 0.991 | 0.985 | 0.980 | 0.974 | 0.969 | 0.963 |
| | FDC125 model | | 1.022 | 1.018 | 1.009 | 1.001 | 0.992 | 0.984 | 0.975 | 0.967 | 0.958 | 0.950 | 0.941 |
| | FDC140 model | | 1.026 | 1.021 | 1.011 | 1.002 | 0.992 | 0.983 | 0.973 | 0.964 | 0.954 | 0.945 | 0.935 |

| Equivalent piping length ⁽¹⁾ (m) | | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | |
|---|--------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Heating | | 0.983 | 0.983 | 0.978 | 0.978 | 0.973 | 0.973 | 0.968 | 0.968 | 0.963 | 0.963 | |
| Cooling | FDC71 model | φ 15.88 | — | — | — | — | — | — | — | — | — | |
| | FDC100 model | | 0.856 | 0.843 | 0.829 | 0.816 | 0.803 | 0.789 | 0.776 | 0.762 | 0.749 | 0.736 |
| | FDC125 model | | 0.806 | 0.788 | 0.770 | 0.752 | 0.734 | 0.716 | 0.698 | 0.680 | 0.662 | 0.644 |
| | FDC140 model | | 0.790 | 0.771 | 0.751 | 0.732 | 0.712 | 0.693 | 0.673 | 0.654 | 0.634 | 0.615 |
| | FDC71 model | φ 19.05 | — | — | — | — | — | — | — | — | — | |
| | FDC100 model | | 0.959 | 0.955 | 0.951 | 0.948 | 0.944 | 0.940 | 0.936 | 0.932 | 0.929 | 0.926 |
| | FDC125 model | | 0.935 | 0.929 | 0.924 | 0.919 | 0.912 | 0.908 | 0.902 | 0.897 | 0.892 | 0.887 |
| | FDC140 model | | 0.928 | 0.920 | 0.913 | 0.907 | 0.900 | 0.894 | 0.888 | 0.882 | 0.876 | 0.870 |

Note (1) Calculate the equivalent length using the following formula.

However, install the piping so that the piping length is within +5 m of the limit length (actual length) for the respective types.

- Equivalent length = Actual length + (Equivalent bend length x number of bends in the piping.)
- Equivalent length per bend. (Models FDC71-140 only)

| Gas pipe diameter (mm) | φ 12.7 | φ 15.88 | φ 19.05 |
|------------------------|--------|---------|---------|
| Equivalent bend length | 0.20 | 0.25 | 0.30 |

1.9.4 Height difference between the indoor unit and outdoor unit

When the outdoor unit is located below indoor units in cooling mode, or when the outdoor unit is located above indoor units in heating mode, the correction coefficient mentioned in the below table should be subtracted from the value in the above table.

| Height difference between the indoor unit and outdoor unit in the vertical height difference | 5m | 10m | 15m | 20m | 25m | 30m |
|--|------|------|------|------|------|------|
| Adjustment coefficient | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 |

Piping length limitations

| Item | Model | SRC40, 50, 60 | FDC71 | FDC100, 125, 140 |
|---------------------------------|-------|---|---|------------------|
| Max. one way piping length | | 30m | 50m | 100m |
| Max. vertical height difference | | Outdoor unit is higher 20m Outdoor unit is lower 20m | Outdoor unit is higher 30m Outdoor unit is lower 15m | |

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling and heating capacity

Example : The net cooling capacity of the model FDTC100VNXPVH with the air flow “P-Hi”, the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulb temperature at 19.0°C and outdoor dry-bulb temperature 35°C is

$$\text{Net cooling capacity} = \frac{10.0}{\text{Net cooling total capacity of FDTC100VNXPVH (Outdoor temp. : 35°CDB Indoor temp. : 19°CWB) shown in table 1.9.1}} \times \frac{1.00}{\text{Air flow : P-Hi shown in table 1.9.2}} \times \frac{0.978}{\text{Piping length : 15m (Gas pipe size is } \phi 15.88 \text{) shown in table 1.9.3}} \times \frac{0.99}{\text{Height diff. : 5m (Outdoor unit : below) shown in table 1.9.4}} = 9.7\text{kW}$$

1.10. APPLICATION DATA

PJF012D509

1.10.1 Installation of indoor unit

(1) Ceiling cassette-4 way compact type(FDTC)

This manual is for the installation of the indoor unit.
 For electrical wiring work (Indoor unit), refer to page165. For remote control installation, refer to page169.
 For wireless kit installation, refer to page632. For electrical wiring work (Outdoor unit) and refrigerant pipe work installation for outdoor unit, refer to page181. For motion sensor kit installation, refer to page656. This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, [WARNING] and [CAUTION].
 [WARNING]: Wrong installation would cause serious consequences such as injuries or death.
 [CAUTION]: Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
 [⚠] Never do it under any circumstances. [⚡] Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
 Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- **Installation should be performed by the specialist.** [⚡] [!]
 If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.** [!]
 Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **Check the density referred by the formula (accordance with ISO5149).** [!]
 If the density exceeds the limit density, please consult the dealer and installate the ventilation system.
- **Use the genuine accessories and the specified parts for installation.** [!]
 If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.** [⚠] [!]
 If the refrigerant contacts the fire, toxic gas is produced.
 In case of R32, the refrigerant could be ignited because of its flammability.
- **Install the unit in a location that can hold heavy weight.** [!]
 Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.** [!]
 Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.** [!]
 If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.** [!]
 Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.** [!]
 Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.** [!]
 Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.** [!]
 If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R32 or R410A.** [!]
 Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.** [!]
 If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.** [!]
 Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.** [!]
 If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.** [!]
 If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.** [!]
 If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.** [!]
 Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air-conditioner.** [!]
 Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.** [!]
 If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.** [!]
 Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.** [!]
 It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.** [!]
 Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short-circuit.
- **Earth leakage breaker must be installed.** [!]
 If the earth leakage breaker is not installed, it can cause electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.** [!]
 Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.** [!]
 Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.** [!]
 If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfuric acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.** [!]
 It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.** [!]
 Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.** [!]
 Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.** [!]
 It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.** [!]
 Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote control at the direct sunlight.** [!]
 It could cause breakdown or deformation of the remote control.
- **Do not install the indoor unit at the place listed below.** [!]
 - Places where flammable gas could leak.
 - Places where carbon fiber, metal powder or any powder is floated.
 - Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammoniac atmospheres.
 - Places exposed to oil mist or steam directly.
 - On vehicles and ships
 - Places where machinery which generates high harmonics is used.
 - Places where cosmetics or special sprays are frequently used.
 - Highly salted area such as beach.
 - Heavy snow area
 - Places where the system is affected by smoke from a chimney.
 - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)** [!]
 - Locations with any obstacles which can prevent inlet and outlet air of the unit.
 - Locations where vibration can be amplified due to insufficient strength of structure.
 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely. It can affect performance or function and etc..
 - Do not install the motion sensor mounting panel at following places. It could cause detection error, incapacity of detection, or characteristic degradation.
 - Place where vibration is applied to it for a long period of time.
 - Place where static electricity or electromagnetic wave generates.
 - Place where it is exposed to high temperature or humidity for a long period of time.
 - Dusty place or where the lens face could be fouled or damaged.
- **Do not put any valuables which will break down by getting wet under the air-conditioner.** [!]
 Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.** [!]
 It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.** [!]
 If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.** [!]
 Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.** [!]
 If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.** [!]
 Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.** [!]
 Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.** [!]
 Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.** [!]
 Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.** [!]
 Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.** [!]
 It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.** [!]
 It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.** [!]
 The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air-conditioner with water.** [!]
 It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.** [!]
 Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.** [!]
 It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items

When moving the indoor unit, hold only the hanging hardware (4 places) only, with care not to apply forces to any other parts of the unit (particularly the refrigerant pipe, drain pipe, and resin parts).

Accessory item

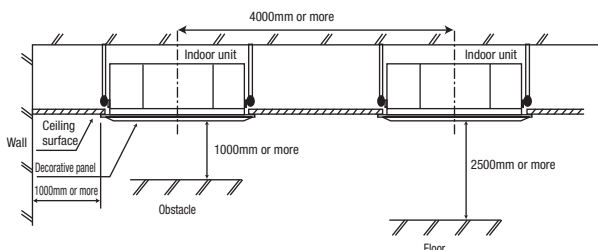
| For unit hanging | | For refrigerant pipe | | For drain pipe | | | | |
|-------------------|------------------------------------|---------------------------------|------------------------------------|-----------------------|-------------------------------------|-------------------------------------|---------------------------|-------------------------|
| Flat washer (M10) | Level gage | Pipe cover(big) | Pipe cover (small) | Strap | Pipe cover(big) | Pipe cover(small) | Drain hose | Hose clamp |
| 1 | 1 | 1 | 1 | 4 | 1 | 1 | 1 | 1 |
| | | | | | | | | |
| For unit hanging | For leveling and alignment of unit | For heat insulation of gas pipe | For heat insulation of liquid tube | For pipe cover fixing | For heat insulation of drain socket | For heat insulation of drain socket | For drain pipe connecting | For drain hose mounting |

② Selection of installation location for the indoor unit

- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - In case of the panel having the motion sensor, the installation height must be no higher than 4 m. It could reduce the sensitivity of motion sensor, disabling the detection.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - Areas where there is no obstruction of air flow on both air return grille and air supply port.
 - Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation. (A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.
- If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.
- When plural indoor units are installed nearby, keep them away for more than 4m.

Space for installation and service

- When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short-circuit of air flow.
- Install the indoor unit at a height of more than 2.5m above the floor.



Set blow-out pattern

- Select the most proper number of blow-out air supply port direction from 4 way, 3 way or 2 way according to the shape of the room and installation position. (1 way is not available.)
- If it is necessary to change the number of air supply port, prepare the covering materials. (sold as accessory)
- Instruct the user not to use low fan speed when 2way or 3way air supply is used.
- Do not use 2way air supply port under high temperature and humidity environment. (Otherwise it could cause condensation and leakage of water.)
- It is possible to set the air flow direction port by port independently. Refer to the user's manual for details.

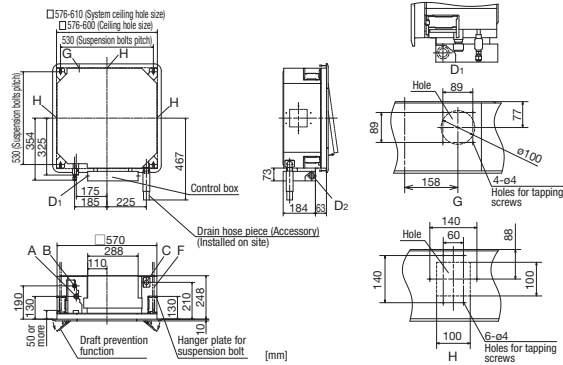
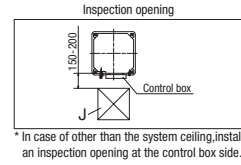
Where there are pipe joints on the way of embedded piping, provide adequate openings for inspection of the joints.

③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
 - When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

Ceiling opening, Suspension bolts pitch, Pipe position

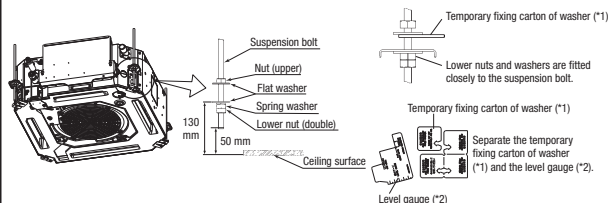
| Symbol | Content |
|--------|--|
| A | Gas piping |
| B | Liquid piping |
| C | Drain piping |
| D | Power source connection |
| Dz | Remote control code and signal wiring connection |
| F | Suspension bolts |
| G | Outside air opening for ducting |
| H | Air outlet opening for ducting |
| J | Inspection opening |



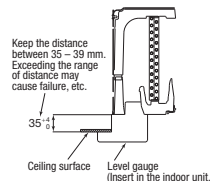
④ Installation of indoor unit

Work procedure

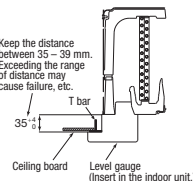
- This unit is designed to install on a system ceiling. If necessary, remove T bars temporarily before installing the unit. When it is installed on a ceiling other than the system ceiling, install an inspection port at the control box side.
- Determine the position of suspension bolts (530 mm × 530 mm).
- Use 4 suspension bolts, and fix them such that each bolt can withstand a pull-out load of 500 N.
- Set the suspension bolt length to about 50 mm from the ceiling.
- Temporarily locate the lower nuts of the suspension bolts (4 places) at a position approximately 130 mm from the ceiling.
- Temporarily locate the upper nuts of the suspension bolts (4 places) at positions sufficiently distance from the lower nuts so that they do not interfere with the suspension of the indoor unit and with its height adjustment.
- Set the upper nuts of the suspension bolts and upper washers (4 places) at positions sufficiently distance from the lower nuts. Then, push and insert the temporary fixing carton of washers (*1) onto suspension bolts. Make sure that the upper washers do not slide down.
- Suspend the indoor unit.
- After suspending the indoor unit, mount the level gauge (*2) to the air outlet of the indoor unit, and adjust the suspension height of the indoor unit. Loosen the upper nuts (4 places), and adjust the suspension height using the lower nuts (4 places). Confirm there is no slack between the lower nuts and flat washers of the indoor unit hanger plate (4 places).
- Remove the temporary fixing carton of washers (from all 4 places).
- Make sure that the indoor unit is installed horizontally. Confirm the levelness of the indoor unit using a level gauge or transparent hose filled with water. (Keep the height difference at both ends of the indoor unit within 3 mm.)
- Tighten the upper nuts of the suspension bolts (4 places).



<-In case of other than the system ceiling->



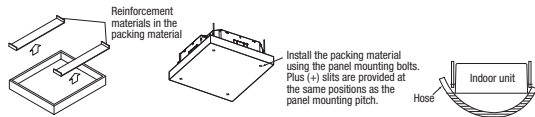
<-In case of the system ceiling->



④ Installation of indoor unit (continued)

Protection of the indoor unit

- If it is not possible to install the panel for a while or if attaching the ceiling board after installing the indoor unit, protect the indoor unit by using upper carton.



Caution

- Do not adjust the unit height by adjusting the upper nuts. Doing so will cause unexpected stress on the indoor unit and cause the unit to become deformed, prevent the panel from being installed, and be generated fan interference noise.
- Make sure that the indoor unit is installed horizontally and set the appropriate gap between the underside of the unit and the ceiling plane. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Make sure there is no gap between the panel and the ceiling surface, and between the panel and the indoor unit. Any gap may cause air and/or water to leak, or condensation to form.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product. Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
 - 1) In case of reuse: Do not use old flare nut, but use the nut attached to the unit.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R32 or R410A.

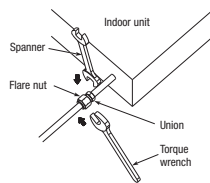
⚠ WARNING : When flared joints are reused indoors, the flare part shall be re-fabricated. (only for R32)

| Pipe dia. d mm | Min. pipe wall thickness mm | Protruding dimension for flare, mm | | Flare O.D. D mm | Flare nut tightening torque N·m |
|-------------------|--------------------------------|---|-------------------|-----------------------|------------------------------------|
| | | Rigid (Clutch type) For R32 For R410A | Conventional tool | | |
| 6.35 | 0.8 | 0 - 0.5 | 0.7 - 1.3 | 8.9 - 9.1 | 14 - 18 |
| 9.52 | 0.8 | | | 12.8 - 13.2 | 34 - 42 |
| 12.7 | 0.8 | | | 16.2 - 16.6 | 49 - 61 |
| 15.88 | 1 | | | 19.3 - 19.7 | 68 - 82 |
| 19.05 | 1.2 | | | 23.6 - 24.0 | 100 - 120 |

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than the designated refrigerant. Using other refrigerant except the designated refrigerant, may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R32 or R410A refrigerant.

Work procedure

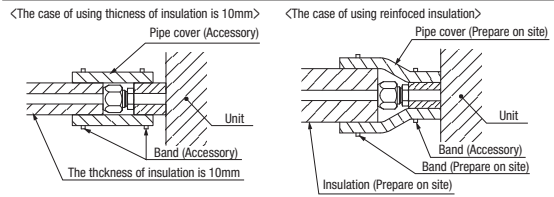
1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
 - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 - ※ Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - Make sure to use flare nuts assembled on the unions. Usage of other flare nuts could cause refrigerant leakage.
 - ※ Do a flare connection as follows:
 - Make sure to hold the nut on indoor unit pipe side using double spanner method as indicated when fastening / loosening flare nuts in order to prevent unintentional twisting of the copper pipe.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water dropping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes. Surface of insulation may cause dew condition or water dropping, if insulations are not reinforced.
4. Refrigerant is charged in the outdoor unit. As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.



⑤ Refrigerant pipe (continued)

Caution:

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion. Refrigerating machine oil may be applied to the internal surface of flare only.



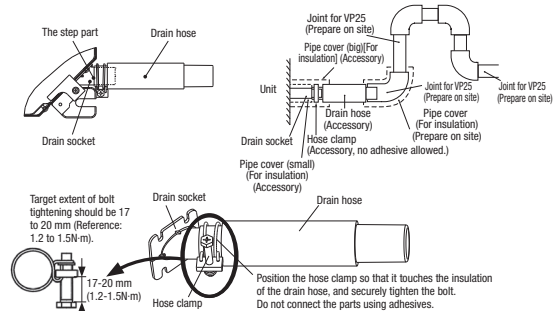
⑥ Drain pipe

Caution

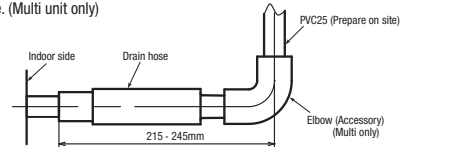
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

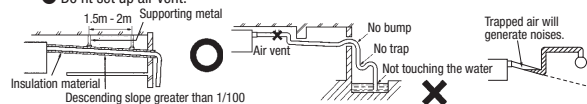
1. Make sure that the drain hose (the soft PVC side) is inserted into the end of the step part of the drain socket. Fix the hose clamp so that its bolt is located on the outside of the indoor unit, and the bolt are fastened in a vertical orientation.
 - Do not apply adhesives on this end.
2. Position the hose clamp so that it touches the insulation of the drain hose, and then tighten the bolt.
3. Turn the bolt several times until it is securely tightened, but do not tighten it excessively.



4. Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the rigid PVC side), and adhere and connect VP25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.
 - As for drain pipe, apply VP25 (OD32). If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)

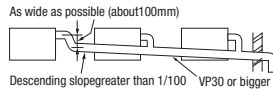


5. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set up air vent.



⑥ Drain pipe (continued)

- When sharing a drain pipe for more than 1 unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe.

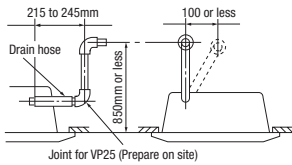


6. Insulate the drain pipe.

- Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
- After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gasless.

Drain up

- The position for drain pipe outlet can be raised up to 850mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.

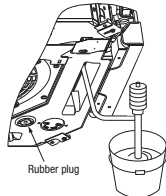


Drain test

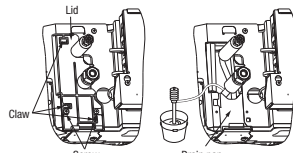
- After installing the drain pipe, make sure that drain system works correctly and that no water leaks from the joint and drain pan. Check whether the motor sound of the drain pump is normal.
- Conduct a drain test when installing, even during the heating season.
- In the case of new buildings, be sure to complete the test before fixing the ceiling.

- Pour about 1,000 cc of test water into the drain pan of the indoor unit. Exercise care not to allow electrical equipment such as the drain pump and other components to become wet while filling water. Pour test water through the pipe lid using a feed water pump or a similar device, or through the refrigerant pipe joint.

- In case of pouring water from the air outlet



- In case of pouring water from the pipe lid



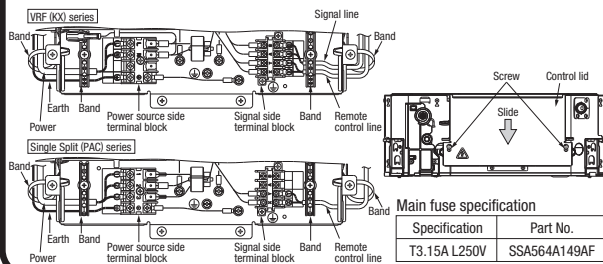
- Make sure that water drains out completely and that no water leaks from any joints of the drain pipe during the test. Test to confirm that the water drains out correctly while listening to the drain pump motor operating sound. At the drain socket (transparent), it is possible to check whether the water drains out correctly.
- Unplug the rubber plug on the indoor unit so that the remaining water drains from the drain pan after the draining test. After checking the water drainage, fix the rubber plug correctly. Installation work for the drain pipe must be performed for the entire drain pipe up to the indoor unit. If the pipe lid has been removed in order to pour water, mount the pipe lid again.

Drain pump operation

- In case electrical wiring work completed
Drain pump can be operated by the wired remote control. For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not completed
Drain pump will run continuously when the dip switch "SW7-1" on the indoor unit PCB is turned ON, the connector CnB is disconnected, and then the power source (230VAC on the terminal block ① and ②) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the connector CnB after the test.

⑦ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
 - Be sure to use an exclusive circuit.
 - Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
 - Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
 - Be sure to do D type earth work.
 - For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
- Loosen screws (2 pcs.) on the control box of the unit.
 - Remove the control lid by sliding it in the arrow direction in the figure.
 - Introduce the wiring in the control box, and connect it securely to the terminal block.
 - Fix the wiring with bands as shown below.
 - Install the control lid, with care not to pinch the wiring, and fix the lid with screws (2 pcs.).



⑧ Panel installation

- Install the panel on the indoor unit after electrical wiring work.
- Refer to the attached manual for panel installation for details.

⑨ Check list after installation

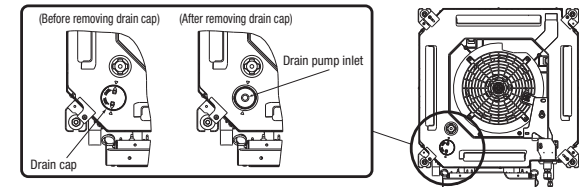
- Check the following items after all installation work completed.

| Check if; | Expected trouble | Check |
|--|-----------------------------------|-------|
| The indoor and outdoor units are fixed securely? | Falling, vibration, noise | |
| Inspection for leakage is done? | Insufficient capacity | |
| Insulation work is properly done? | Water leakage | |
| Water is drained properly? | Water leakage | |
| Power source voltage is same as mentioned in the model name plate? | PCB burnt out, not working at all | |
| There is mis-wiring or mis-connection of piping? | PCB burnt out, not working at all | |
| Earth wiring is connected properly? | Electric shock | |
| Cable size comply with specified size? | PCB burnt out, not working at all | |
| Any obstacle blocks airflow on air inlet and outlet? | Insufficient capacity | |

⑩ How to check the dirt of drain pan and cleaning the inlet of the drain pump. (Maintenance)

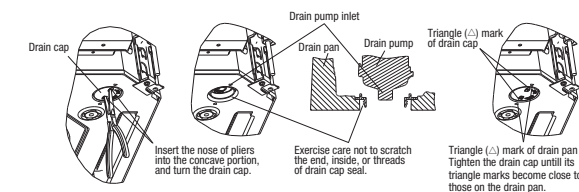
The method of checking the dirt of drain pan

- Remove the panel according to the installation manual of the panel.
- Check the dirt on the drain pan from the drain cap, and check the drain pump inlet. If the drain pan is very dirty, remove the drain pan and clean it.



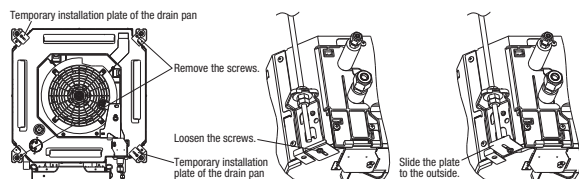
Cleaning of drain pump inlet

- It is possible to clean the drain pump inlet and surrounding area by removing the drain cap only; it is not necessary to remove the drain pan.
 - Before removing the drain cap, remove the rubber plug and drain water from the drain pan.
- Insert the nose of the pliers into the concave portions (2 places) of the drain cap, and rotate the pliers about 1 turn in the CCW direction. The drain cap is removed.
 - When cleaning the drain pump inlet, use a soft plastic tool. If a metallic tool is used, the drain cap mounting portion may be scratched and water may leak.
 - Before mounting the drain cap, rinse it and **remove any foreign material from the inside of the cap**. If the drain cap is installed with foreign material inside it, it may cause water to leak.
 - Insert the nose of the pliers into the concave portions of the drain cap and rotate the pliers to install the drain cap. Rotate the drain cap about 1 turn in the CW direction until it stops rotating. If the drain cap is not rotated for 1 or more turns, the cap will not have been installed correctly. Remove the drain cap, and then install it again correctly.
 - After tightening the drain cap, make sure the triangle (▲) mark of the drain cap comes close to the triangle mark on the drain pan. If these triangle marks are not close to each other, tighten the drain cap further.
 - Refix the rubber plug securely. If the cover is not refixed correctly, it may cause condensation to form and/or water to leak.



Notes for removing the drain pan

- Before removing the drain pan, drain water from the drain pan. Remove the rubber plug and drain water.
- The drain pan is installed by the temporary installation plate. Remove the 2 drain pan fixing screws, and loosen the 2 screws of the temporary installation plate. Slide the temporary installation plate to the outside of the drain pan. And then, it is possible to remove the drain pan.
- When reinstalling the drain pan, slide the temporary installation plate to the inside and temporarily fix the drain pan. Then, tighten the 2 drain pan fixing screws and the 2 screws of the temporary installation plate. Also, refix the rubber plug securely.



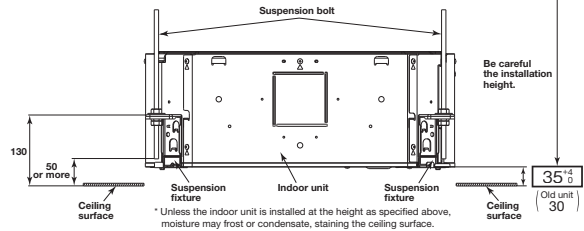
Panel installation

PJF012D503

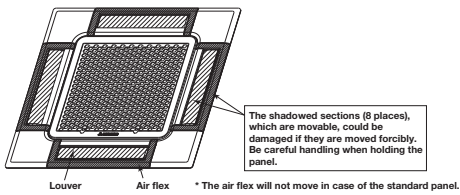
Read this manual together with the indoor unit's installation manual.

* Caution before use

- ① Be careful the installation height when installing the indoor unit. Also note that the installation height of this indoor unit is different from that of current (old) unit.
Installation height from the ceiling surface to the indoor unit.
• Old unit: 30 mm → This unit: 35 ± 4 mm



- ② Do not attempt to move forcibly the louver and the air flex.



WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power source is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur.

Function

The draft prevention panel has the draft prevention mechanism. If the draft prevention panel is installed and the draft prevention function is set, the draft prevention function will be operated and reduce the draft feeling. (Refer to ⑩ Panel setting for details.)

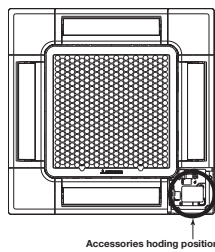
- Standard panel : without the draft prevention mechanism
- Draft prevention panel : with the draft prevention mechanism

① Before installation

- Follow installation manual carefully, and install the panel properly.
- Check the following items.
- Accessories

| Accessories | | |
|-------------|----------|--|
| Bolt | 4 pieces | For panel installation |
| Strap | 4 pieces | For avoiding the corner panel from falling |
| Grille hook | 1 piece | For avoiding the grille from falling |
| Screw | 4 pieces | For fixing the corner panel |

Note: Accessories are laid in the position removing the corner lid.

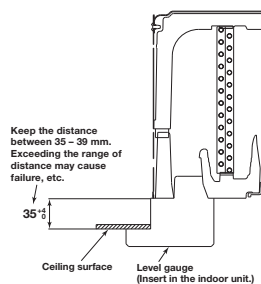


② Checking the indoor unit installation height

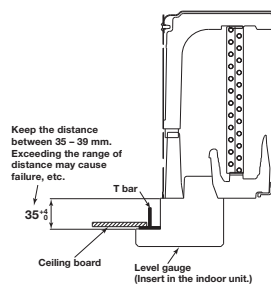
- Read this manual together with the air-conditioner installation manual carefully.
- Check if the opening size for the indoor unit is correct with the level gauge supplied in the indoor unit.
- Check if the gap between the plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.
- Remove the level gauge before installing the panel.

Caution
If there is a height difference beyond the design limit between the installation level of the indoor unit and the panel, the panel may be subject to excessive stress during installation and it may cause distortion and damage.

<In case of other than the system ceiling>

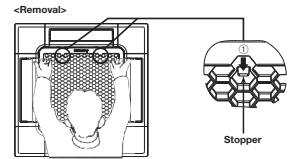


<In case of the system ceiling>



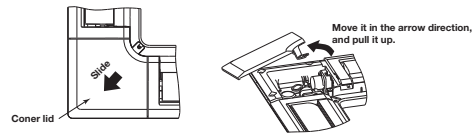
③ Removing the inlet grille

1. While placing a finger behind the stopper (2 places) and pressing it in the direction of arrow ①, pull the grille downward to open the grille.
2. Release the hooks of the inlet grille from the panel while it is in the open position.



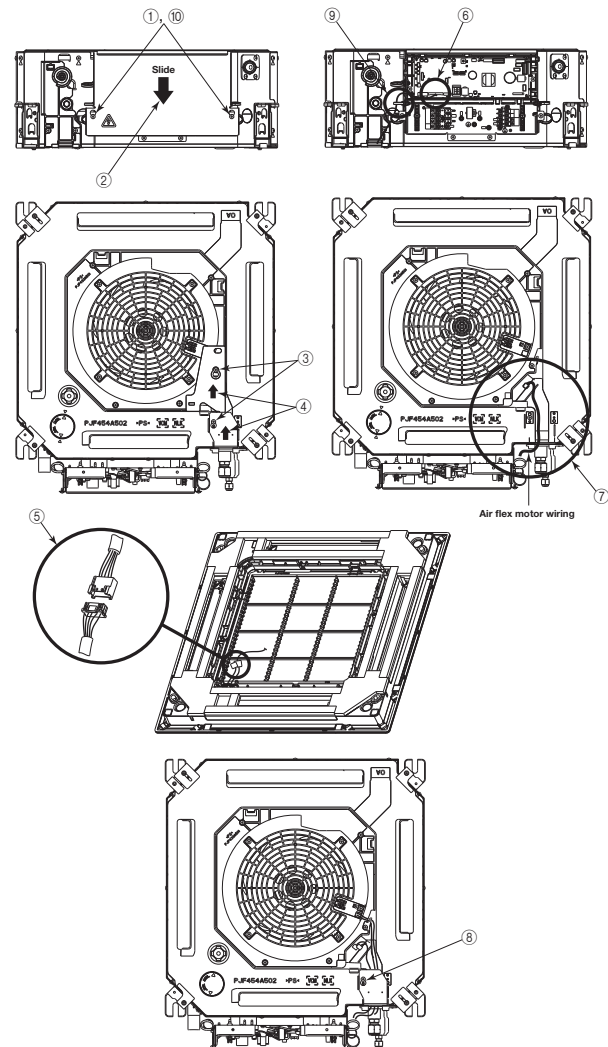
④ Removing the corner lid

- Pull the corner lid toward the direction indicated by the arrow and remove it. (Same way for all 4 corner lids)



⑤ Before installing the panel <Only Draft prevention panel>

- ① Loosen screws (2 pcs.) on the control lid of the unit.
- ② Slide the control lid in the arrow direction in the figure, and remove it.
- ③ Loosen screws on the wiring cover (2 places).
- ④ Slide the wiring cover (2 places) in the arrow direction in the figure, and remove it.
- ⑤ Disconnect the relay connector of the air flex motor wiring attached to the panel.
- ⑥ Connect the air flex motor wiring to CNJ2 (20 P, gray) on PCB in the control box of the unit.
- ⑦ Pass the air flex motor wiring as shown in the figure.
- ⑧ Install the wiring cover (1 place) with care not to pinch wiring, and fix it with a screw.
- ⑨ Fix the air flex motor wiring with a band as shown in the figure.
- ⑩ Install the control lid with care not to pinch wiring, and fix with screws (2 places).

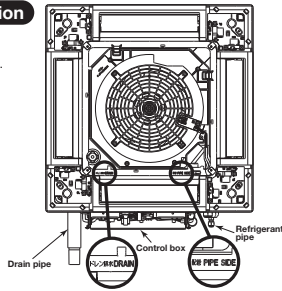


⑥ Orientation of the panel installation

- Take note that there is an orientation to install the panel.
- Install the panel with the orientation shown on the right.
 - Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
 - Align the "DRAIN" mark (on the panel) with the drain pipe on the indoor unit.

CAUTION

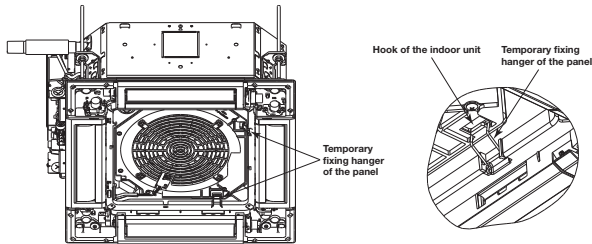
In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the motor wiring.



⑦ Installing the panel

1. Temporary hanging

- Lift up the hanger (2 places) on the panel for temporary support.
- Hang the panel on the hook on the indoor unit.



2. Fix the panel on the indoor unit

- Fasten the panel on the indoor unit with the 4 bolts supplied with the panel.

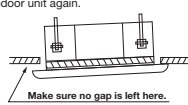
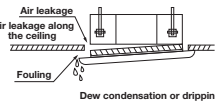
Caution

Be careful not to pinch the motion sensor wiring.

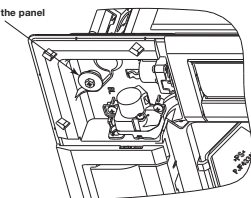
Caution

• Improperly tightened fixing bolts cause the problems listed below, so make sure that bolts are securely tightened.

• If there is a gap between the ceiling and the panel even after the fixing bolts are tightened, adjust the installation level of the indoor unit again.



Bolt for installing the panel



Caution

Do not give any stress on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the inlet grille, and the parts of the draft prevention mechanism.

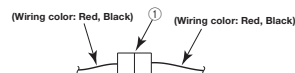
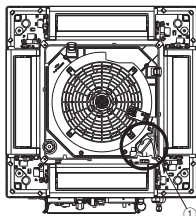
⑧ Electrical wiring

The wiring work varies depending on the panel type. Select the wiring work appropriate for the panel type.

<For the standard panel>

- ① Connect the connector of the lower motor wiring (Wiring color: Red, Black) at the panel side to the connector CnJ3 (20 P, White) of the lower motor wiring (Wiring color: Red, Black) at the unit side.

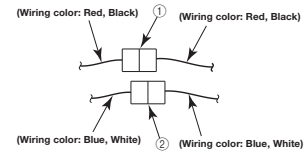
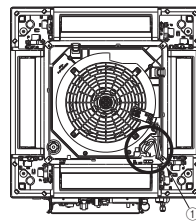
For the Standard panel



<For the draft prevention panel>

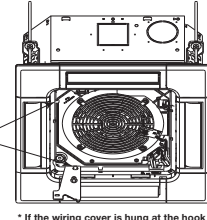
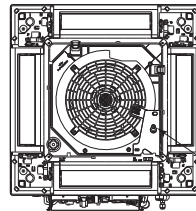
- ① Connect the connector of the lower motor wiring (Wiring color: Red, Black) at the panel side to the connector CnJ3 (20 P, White) of the lower motor wiring (Wiring color: Red, Black) at the unit side.
- ② Connect the connector of the air flex motor wiring (Wiring color: Blue, White) at the panel side to the connector CnJ4 (20 P, White) of the air flex motor wiring (Wiring color: Blue, White) at the unit side.

For the Draft prevention panel



Motor wiring connection - Detail view

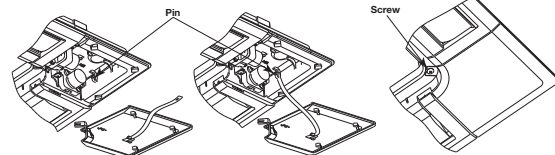
Install the wiring cover with care not to pinch wiring, and fix it with screws.



* If the wiring cover is hung at the hook on panel, it will become easier to work.

⑨ Installing a corner lid

1. To avoid unexpected falling of the corner lid, put the strap onto the corner lid's pin with turning the strap up.
2. Then hang the strap of a corner lid onto the panel's pin.
3. Hook the corner lid claws at 3 places, and fix the corner lid with attached screws.



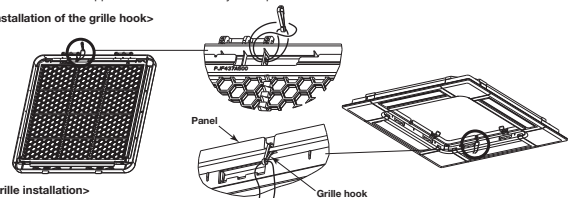
⑩ Installing the inlet grille

The panel and the inlet grille have no directional limitation to install. (Hinges of the inlet grille can be hooked at any side.)

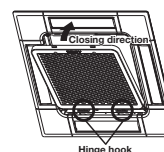
Install the inlet grille in the reverse order of the steps described at **④ Removing the inlet grille**.

- ① Attach the fall grille hook to the panel.
- ② Insert the hinges of inlet grille in the insert holes on the panel.
- Close then the inlet grille while pressing the stoppers (2 places).
Confirm that both stoppers are inserted securely in the panel.

<① Installation of the grille hook>



<② Grille installation>



Caution

- Install the grille hook securely at the panel.
- The inlet grille must be installed starting from the hinge side.
- Install the inlet grille securely. It may drop if it is installed insecurely.
- When the stoppers have been deformed or damaged, repair them immediately. Unless they are repaired properly, the inlet grille may drop off.

⑪ Panel setting

<Louver swing range setting (Individual louver control setting)>

It is possible to change the swing range of the louver by the wired remote control. Once the upper and lower limit positions are set, the louver will swing within the set range. It is also possible to set the different range to each louver.

<Draft prevention setting>

The draft prevention function will not be operated if the draft prevention panel is installed and its wirings are only connected. To operate the draft prevention function, enable the draft prevention setting by using the wired or wireless remote control.

Note: It is not possible to set by the following remote control models or older.

- Wired: RC-EX3, RC-E5, RCH-E3
- Wireless: RCN-E1R

Once you have enabled the settings in this mode, the draft prevention function is operated when the air-conditioner is started, and the parts of the draft prevention mechanism are always open when the air-conditioner is operating. When the air-conditioner is stopped, they are closed. It is possible to enable or disabled the draft prevention function for each air outlet.

For the setting details, refer to the user's manual supplied with the remote control.

FRESH AIR INTAKE (Location for installation) FOR FDTC

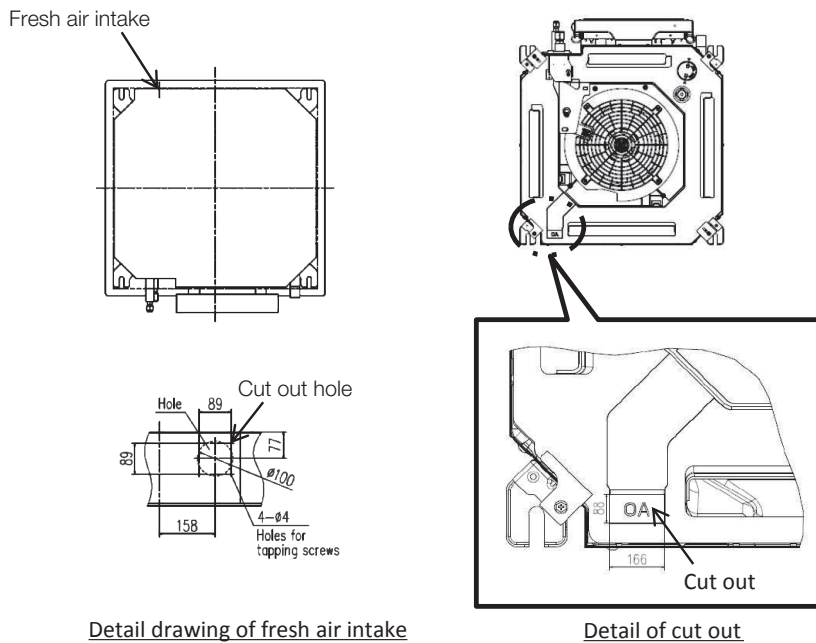
At the time of installation use the duct hole (cut out) located at the positions shown in following diagram, as and when required.

(1) Temperature conditions for OA spacer ⁽¹⁾

- Adjust the temperature conditions of mixed air with outdoor air and indoor air within the usage range of suction air temperature for the air-conditioner.
- The usage temperature conditions of intake outdoor air and indoor air around the ducts are shown in the following table.
- If the temperature conditions of intake outdoor air do not meet, process the outdoor air before intaking.

| Operation mode | Usage temperature conditions | |
|----------------|--------------------------------------|--|
| | Intake outdoor air | Indoor air around the ducts |
| In heating | 5°C DB or higher | 18.5°C WB or lower and 60% RH or lower |
| In cooling | 29°C DB or lower and 80% RH or lower | 20°C DB or higher |

Note(1) : For the OA spacer, refer to page 678.

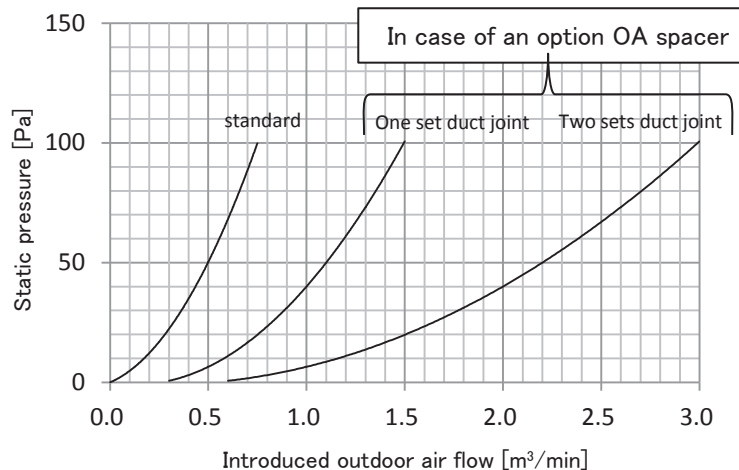


Detail drawing of fresh air intake

Detail of cut out

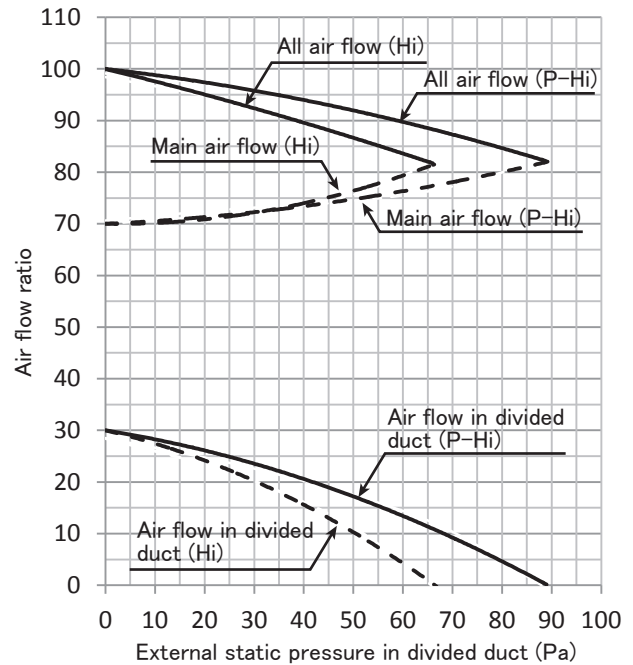
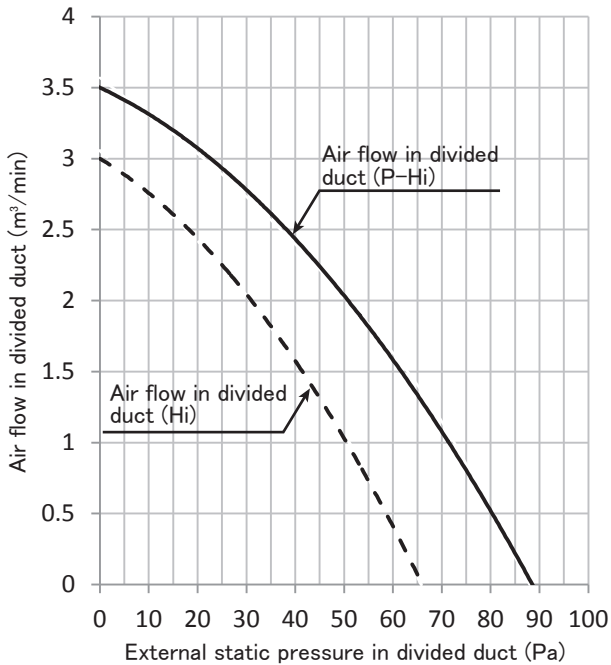
■ Fresh air intake amount & static pressure characteristics

FDTC40, 50, 60VH



CHARACTERISTICS OF AIR FLOW IN DIVIDED DUCT FOR FDTC

Models FDTC40, 50, 60VH



■ Divided duct connection method

1. Open some one during 4 knockout holes, and please connect a divided duct.

It isn't possible to use more than one hole at the same time.

2. Please make the wind shielding a blowout vent or the side where a divided duct was connected.

3. The shortage of the external static pressure by pressure loss for a connected divided duct and blowout unit is made up by a booster fan.

example : When 2.5m³/min of ventilation by divided duct is needed in model FDTC60VH (In case of connection duct ϕ 125 x 5m)

① Duct resistance : Pressure loss by a flexible duct = 35Pa (7Pa/m x 5m)

② Blowout unit : Pressure loss by a blowout unit = 10Pa

③ External static pressure when being 2.5m³/min = 17Pa (See upper table.)

⇒ Correspondence by a booster fan = ① + ② - ③ = 28Pa

(2) Duct connected-High static pressure type (FDU)

PJG012D022

(a) Indoor unit

- This manual is for installation of an indoor unit and an outdoor air processing unit (FDU-F).
- This manual is for the installation of an indoor unit.
- For electrical wiring work (Indoor), refer to page 165. For remote control installation, refer to page 169. For wireless kit installation, refer to page 640. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 181.

The case of FDU-F

- The total connection capacity of the other air-conditioning units and the outdoor air processing units must be from 50% to 100% (the total includes the outdoor air processing unit). The connection capacity of the outdoor air processing unit must not exceed 30% of the capacity of the outdoor unit.
- Single outdoor air processing unit can be used alone. The connection capacity of the outdoor air processing unit must be from 50% to 100% of the total capacity of the outdoor unit. Maximum number of outdoor air processing units that can be connected to the outdoor unit is 2units.
- Capacities of the suction air processing units can be calculated with the following formulas. FDU650FKXZE1 = 90, FDU1100FKXZE1 = 140

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
WARNING: Wrong installation would cause serious consequences such as injuries or death.
CAUTION: Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
 The meanings of "Marks" used here are as shown on the right:
 ⚠ Never do it under any circumstances. ⚡ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

WARNING

- **Installation should be performed by the specialist.**
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. ⚠
- **Install the system correctly according to these installation manuals.**
Improper installation may cause explosion, injury, water leakage, electric shock, and fire. ⚠
- **Check the density referred by the formula (accordance with ISO5149).**
If the density exceeds the limit density, please consult the dealer and installate the ventilation system. ⚠
- **Use the genuine accessories and the specified parts for installation.**
If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit. ⚠
- **Ventilate the working area well in case the refrigerant leaks during installation.**
If the refrigerant contacts the fire, toxic gas is produced. In case of R32, the refrigerant could be ignited because of its flammability. ⚠
- **Install the unit in a location that can hold heavy weight.**
Improper installation may cause the unit to fall leading to accidents. ⚠
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
Improper installation may cause the unit to fall leading to accidents. ⚠
- **Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.**
If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries. ⚠
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
Power source with insufficient capacity and improper work can cause electric shock and fire. ⚠
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
Loose connections or hold could result in abnormal heat generation or fire. ⚠
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.**
Improper fitting may cause abnormal heat and fire. ⚠
- **Check for refrigerant gas leakage after installation is completed.**
If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced. ⚠
- **Use the specified pipe, flare nut, and tools for R32 or R410A.**
Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle. ⚠
- **Tighten the flare nut according to the specified method by with torque wrench.**
If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period. ⚠
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak. ⚠
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system. ⚠
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle. ⚠
- **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. ⚠
- **Do not repair by yourself. And consult with the dealer about repair.**
Improper repair may cause water leakage, electric shock or fire. ⚠
- **Consult the dealer or a specialist about removal of the air-conditioner.**
Improper installation may cause water leakage, electric shock or fire. ⚠
- **Turn off the power source during servicing or inspection work.**
If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan. ⚠
- **Do not run the unit when the panel or protection guard are taken off.**
Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock. ⚠
- **Shut off the power before electrical wiring work.**
It could cause electric shock, unit failure and improper running. ⚠

CAUTION

- **Perform earth wiring surely.**
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock or fire due to a short-circuit. ⚠
- **Earth leakage breaker must be installed.**
If the earth leakage breaker is not installed, it could cause electric shocks or fire. ⚠
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
Using the incorrect one could cause the system failure and fire. ⚠
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
Connecting the circuit by wire or copper wire could cause unit failure and fire. ⚠
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
If the gas leaks and gathers around the unit, it could cause fire. ⚠
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire. ⚠
- **Secure a space for installation, inspection and maintenance specified in the manual.**
Insufficient space can result in accident such as personal injury due to falling from the installation place. ⚠
- **Do not use the indoor unit at the place where water splashes such as laundry.**
Indoor unit is not waterproof. It could cause electric shock and fire. ⚠
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
It could cause the damage of the items. ⚠
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming. ⚠
- **Do not install the remote control at the direct sunlight.**
It could cause breakdown or deformation of the remote control. ⚠
- **Do not install the indoor unit at the place listed below.**
 - Places where flammable gas could leak.
 - Places where carbon fiber, metal powder or any powder is floated.
 - Place where the substances which affect the air-conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammoniac atmospheres.
 - Places exposed to oil mist or steam directly.
 - On vehicles and ships
 - Places where machinery which generates high harmonics is used.
 - Places where cosmetics or special sprays are frequently used.
 - Highly salted area such as beach.
 - Heavy snow area
 - Places where the system is affected by smoke from a chimney.
 - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
 - Locations with any obstacles which can prevent inlet and outlet air of the unit
 - Locations where vibration can be amplified due to insufficient strength of structure.
 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely.
 - It can affect performance or function and etc..
 - Do not install the motion sensor at following places. It could cause detection error, incapacity of detection, or characteristic degradation.
 - Place where vibration is applied to it for a long period of time.
 - Place where static electricity or electromagnetic wave generates.
 - Place where it is exposed to high temperature or humidity for a long period of time.
 - Dusty place or where the lens face could be fouled or damaged.
- **Do not put any valuables which will break down by getting wet under the air-conditioner.**
Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings. ⚠
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
It could cause the unit falling down and injury. ⚠
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit. ⚠
- **Install the drain pipe to drain the water surely according to the installation manual.**
Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings. ⚠
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety. ⚠
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. ⚠
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance. ⚠
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables. ⚠
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean. ⚠
- **Pay extra attention, carrying the unit by hand.**
Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin. ⚠
- **Make sure to dispose of the packaging material.**
Leaving the materials may cause injury as metals like nail and woods are used in the package. ⚠
- **Do not operate the system without the air filter.**
It may cause the breakdown of the system due to clogging of the heat exchanger. ⚠
- **Do not touch any button with wet hands.**
It could cause electric shock. ⚠
- **Do not touch the refrigerant piping with bare hands when in operation.**
The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite. ⚠
- **Do not clean up the air-conditioner with water.**
It could cause electric shock. ⚠
- **Do not turn off the power source immediately after stopping the operation.**
Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown. ⚠
- **Do not control the operation with the circuit breaker.**
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury. ⚠

○ This model is high static ducted type air-conditioning unit. Therefore, do not use this model for direct blow type air-conditioning unit.

1 Before installation

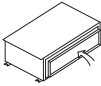
● Install correctly according to the installation manual.

● Confirm the following points:

- Unit type/Power source specification
- Pipes/Wires/Small parts
- Accessory items

Accessory item

| For hanging | | For refrigerant pipe | | | | For drain pipe | | | |
|-------------------|---------------------------------|------------------------------------|-----------------------|-----------------------------------|-------------------------------------|---------------------------|-------------------------|---------------------------|--|
| Flat washer (M10) | Pipe cover (big) | Pipe cover (small) | Strap | Pipe cover (big) | Pipe cover (small) | Drain hose | Hose clamp | Elbow (Multi only) | |
| | | | | | | | | | |
| 8 | 1 | 1 | 4 | 1 | 1 | 1 | 1 | 1 | |
| For unit hanging | For heat insulation of gas pipe | For heat insulation of liquid tube | For pipe cover fixing | For heat insulation of gas socket | For heat insulation of drain socket | For drain pipe connecting | For drain hose mounting | For drain pipe connecting | |



Accessory parts are stored inside this suction side.

2 Selection of installation location for the indoor unit

① Select the suitable areas to install the unit under approval of the user.

- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of air flow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air-conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.

This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.

- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.

(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)

• When operating the suction air processing unit independently, it operates in the outdoor air processing mode.

Blowout temperatures are not same at the standard unit operation and the outdoor air processing mode operations.

Since the temperatures become higher during cooling or lower during heating, take care of the direction of blowout outlet.

Avoid directing the blowout outlet to the space where people are present.

② Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

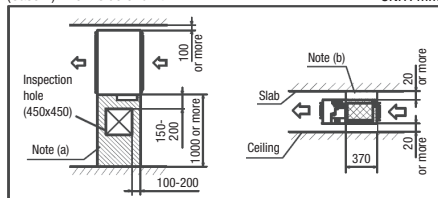
Space for installation and service

● Make installation altitude over 2.5m.

(Indoor Unit)

Select either of two cases to keep space for installation and services.

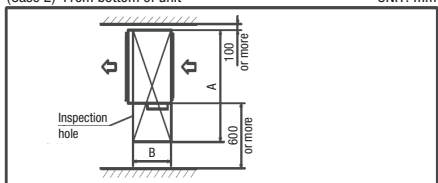
(Case 1) From side of unit



Notes (a) There must not be obstacle to draw out fan motor. (marked area)

(b) Install refrigerant pipe, drain pipe, and wiring so as not to cross marked area.

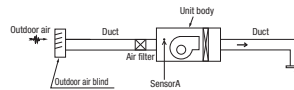
(Case 2) From bottom of unit



| Size of inspection hole | | UNIT: mm | | |
|-------------------------|--------|----------|---------|--|
| Single type | — | 71 | 100-140 | |
| Multi type | 45, 56 | 71, 90 | 112-160 | |
| FDU-F | — | 650 | 1100 | |
| A | 1100 | 1300 | 1720 | |
| B | 620 | 725 | | |

3 Cautions for the handling and installation place of outdoor air processing unit

① This unit monitors the outdoor air temperature at the position of sensor A in the figure, and controls the start and stop with the thermostat based on the value of sensor A and the setting temperature by the remote control.



Remote control's setting temperature indicates the outdoor air temperature that controls the start and stop of operation by the thermostat.

When the thermostat is turned off, the operation is changed to the fan mode so that the outdoor air is blown out directly into the room. For example if the remote control is set to 22°C in cooling operation, and if the outdoor air temperature is 22°C or lower at that time, the unit will go into fan operation.

② When there is a difference between the air-conditioning temperature in the room during cooling operation and the temperature of air blown out from the outdoor air processing unit, dewing water may drip from the unit. To prevent the dewing, provide a sufficient heat insulation means at the air blow outlet.

③ Since the air blow outlet on the outdoor air processing unit may blow out the outdoor air directly, orient the outlet in such a way that it will not blow air directly to persons in the room.

④ Since the unit controls the thermostat start and stop by monitoring the outdoor air temperature, it is prohibited to monitor the room temperature by means of the room temperature monitoring by changing the thermostat setting at the remote control side and the option remote thermostat. Otherwise, dewing water may drip from the unit at lower outdoor air temperatures during cooling operation.

⑤ Install the remote control of the outdoor air processing unit at a place closer to the administrator to avoid the end user from using the remote control.

When handing over the unit to the end user, make sure to explain sufficiently about the foregoing cautions, the installation place of the remote control for the outdoor air processing unit and the position of air blow outlet.

4 Preparation before installation

● If suspension bolt becomes longer, do reinforcement of earthquake resistant.

○ For grid ceiling

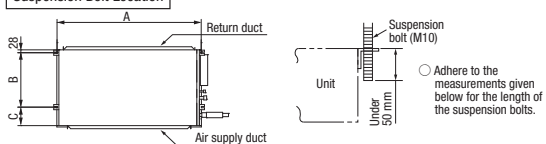
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

○ In case the unit is hung directly from the slab and is installed on the ceiling plane which has enough strength.

When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.

● Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

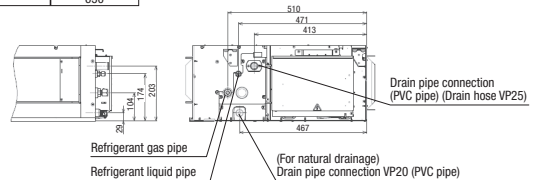
Suspension Bolt Location



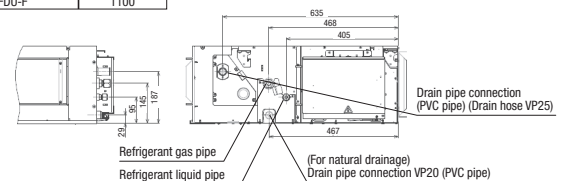
| UNIT: mm | | | |
|-------------|--------|--------|---------|
| Single type | — | 71 | 100-140 |
| Multi type | 45, 56 | 71, 90 | 112-160 |
| FDU-F | — | 650 | 1100 |
| A | 786 | 986 | 1720 |
| B | 472 | 472 | 725 |
| C | 135 | 135 | 180 |

Pipe locations

| UNIT: mm | |
|-------------|-------|
| Single type | 71 |
| Multi type | 45-90 |
| FDU-F | 650 |



| | |
|-------------|---------|
| Single type | 100-140 |
| Multi type | 112-160 |
| FDU-F | 1100 |



⑤ Installation of indoor unit

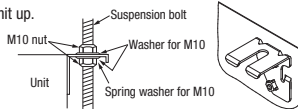
Work procedure

1. Prepare a hole of specified size on the ceiling.
2. Install suspension bolts at specified positions.
3. Make sure to use four suspension bolts.
4. Adjust the indoor unit position in order to fit with it.
5. Make sure to install the indoor unit horizontally. Confirm the levelness of the indoor unit with a level gauge or transparent hose filled with water. Keep the height difference at both ends of the indoor unit within 3mm.
6. Tighten four upper nuts and fix the unit after height and levelness adjustment.

Installation

[Hanging]

Hang the unit up.

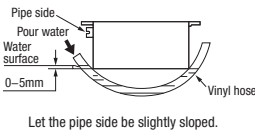


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

Adjustment for horizontality

● Either use a level vial, or adjust the level according to the method below.

- Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.



○ If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

⑥ Duct Work

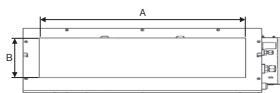
- ① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.

- An air filter can be provided on the main body of the air-conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.

- ② Blowout duct

- Use rectangular duct to connect with unit.
- Duct size for each unit is as shown below.

| | UNIT: mm | | |
|-------------|----------|--------|---------|
| Single type | — | 71 | 100-140 |
| Multi type | 45, 56 | 71, 90 | 112-160 |
| FDU-F | — | 650 | 1100 |
| A | 682 | 882 | 1202 |
| B | 172 | 172 | 172 |



- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.

- ③ Inlet port

- When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
- Inlet port size for each unit is as shown below.

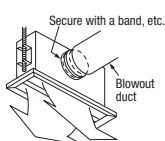
| | UNIT: mm | | |
|-------------|----------|--------|---------|
| Single type | — | 71 | 100-140 |
| Multi Type | 45, 56 | 71, 90 | 112-160 |
| FDU-F | — | 650 | 1100 |
| A | 582 | 742 | 1282 |
| B | 202 | 202 | 237 |



- Make sure to insulate the duct to prevent dewing on it.

- ④ Install the specific blowout duct in a location where the air will circulate to the entire room.

- Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
- Insulate the area where the duct is secured by a band for dew condensation prevention.



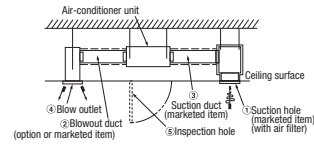
- ⑤ Make sure provide an inspection hole on the ceiling. It is indispensable to service electric equipment, motor, functional components and cleaning of heat exchanger.

⑥ Duct Work (continued)

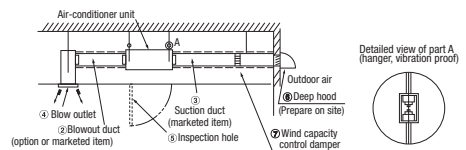
- ⑥ Make sure to insulate ducts, in order to prevent dewing on them.

- ⑦ Connect the duct with care not to touch the blower (fan motor) with fingers. Or, when inhaling air directly from the suction side, install an air filter at the air suction inlet.

FDU

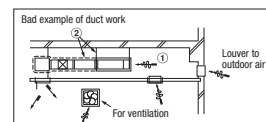


FDU-F



Bad example of duct work

- ① If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the outdoor air louver, weather (rainy day) and others.
 - a) Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)
 - b) It may run out the allowable limit of unit operation (Example, the case of FDU: When outdoor air temperature is 35°CDB, suction air temperature is 27°CWB) and it could result in such troubles as compressor overload, etc..
 - c) There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.
- ② If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.

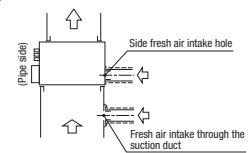


Connecting the air intake/vent ducts the case of FDU

- ① Fresh Air Intake

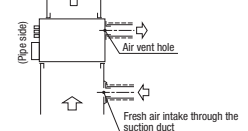
[for air intake duct only]

- Use the side fresh air intake hole, or supply through a part of the suction duct.



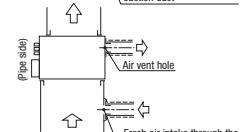
[for simultaneous air intake/vent]

- Intake air through the suction duct. (the side cannot be used)



- ② Air Vent

- Use the side air vent hole. (always use together with the air intake)



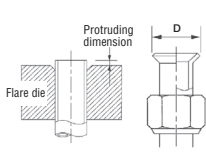
- Insulate the duct to protect it from dew condensation.

⑦ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product. Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
 - 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R32 or R410A.

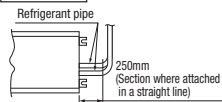
⚠WARNING : When flared joints are reused indoors, the flare part shall be re-fabricated. (only for R32)



| Pipe dia. d mm | Min. pipe wall thickness mm | Protruding dimension for flare, mm | | Flare O.D. D mm | Flare nut tightening torque N·m |
|-------------------|--------------------------------|---|-------------------|--------------------|------------------------------------|
| | | Rigid (Clutch type) For R32 For R410A | Conventional tool | | |
| 6.35 | 0.8 | 0-0.5 | 0.7-1.3 | 8.9 - 9.1 | 14 - 18 |
| 9.52 | 0.8 | | | 12.8 - 13.2 | 34 - 42 |
| 12.7 | 0.8 | | | 16.2 - 16.6 | 49 - 61 |
| 15.88 | 1 | | | 19.3 - 19.7 | 68 - 82 |
| 19.05 | 1.2 | | | 23.6 - 24.0 | 100 - 120 |

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R32 or R410A. Using other refrigerant except R32 or R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R32 or R410A refrigerant.

Piping work



When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

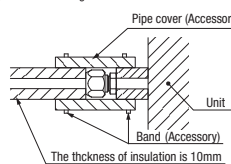
Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
 - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 - ※ Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - Make sure to use flare nuts assembled on the unions. Usage of other flare nuts could cause refrigerant leakage.
 - ※ Do a flare connection as follows:
 - Make sure to hold the nut on indoor unit pipe side using double spanner method as indicated when fastening / loosening flare nuts in order to prevent unintentional twisting of the copper pipe.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water dropping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes. Surface of insulation may cause dew condition or water dropping, if insulations are not reinforced.
4. Refrigerant is charged in the outdoor unit. As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

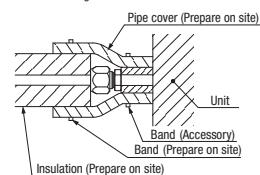
Caution:

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion. Refrigerating machine oil may be applied to the internal surface of flare only.

<The case of using thickness of insulation is 10mm>



<The case of using reinforced insulation>



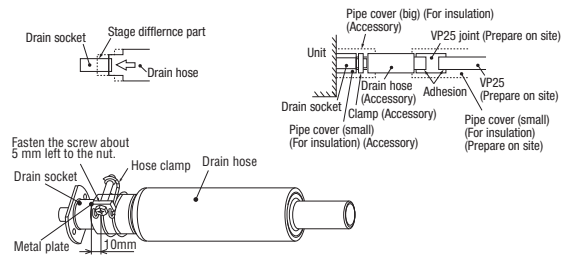
⑧ Drain pipe

Caution

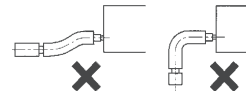
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

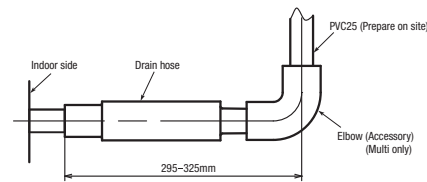
1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket. Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw about 5mm left to the nut.
 - Do not apply adhesives on this end.
 - Do not use acetone-based adhesives to connect to the drain socket.



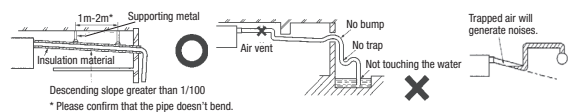
2. Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the indoor unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



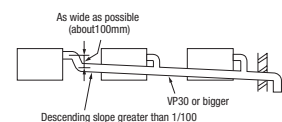
- As for drain pipe, apply VP25 (O.D.32). If apply PVC25 (O.D.25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set up air vent.



- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe.

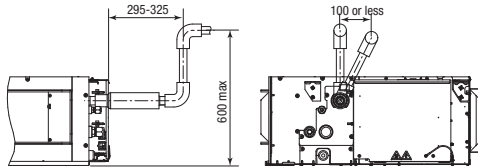


⑧ Drain pipe (continued)

4. Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
 - ※ After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



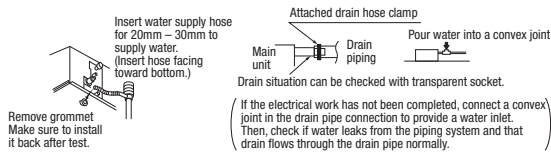
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.
3. In case of a new building, conduct the test before it is furnished with the ceiling.
4. Be sure to conduct this test even when the unit is installed in the heating season.

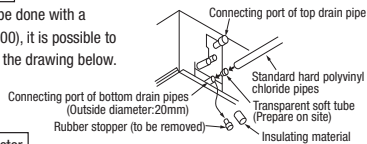
Procedures

1. Supply about 2000 cc of water to the unit through the air outlet by using a feed water pump.
2. Check the drain while cooling operation.



Outline of bottom drain piping work

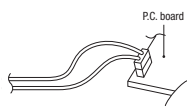
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

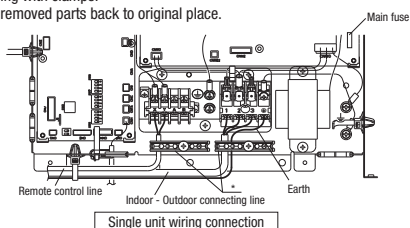
- Uncouple the connector CnR for the drain motor as illustrated in the drawing on the right.

(Note: If the unit is run with the connector coupled, drain water will be discharged from the upper drain pipe joint, causing a water leak.)

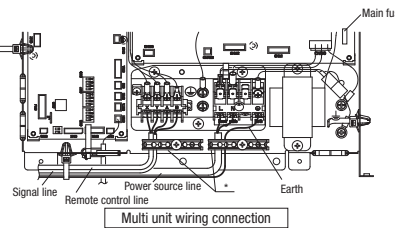


⑨ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power source provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
 - Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
 1. Remove a lid of the control box (2 screws).
 2. Hold each wiring inside the unit and fasten them to terminal block securely.
 3. Fix the wiring with clamps.
 4. Install the removed parts back to original place.



⑨ Wiring-out position and wiring connection (continued)



Main fuse specification

| Model | FDU-F | Specification | Part No. |
|---------|-------|---------------|--------------|
| 45-90 | 650 | T 5A L 250V | SSA564A149AH |
| 112-160 | 1100 | T 6.3A L 250V | SSA564A149AJ |

* Please fix the wiring in the band not to move even if it pulls.

⑩ External static pressure setting

You can set External Static Pressure (E.S.P.) by method of MANUAL SETTING on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting (Lo-UH). You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.

- How to set E.S.P. by wired remote control
 - ① Push "◆" marked button (E.S.P. button).
 - ② Select indoor unit No. by using "◀" button.
 - ③ Select setting No. by using "▶" button and set E.S.P. by "□" button.

Notice

You can not set E.S.P. by wireless remote control.



With E.S.P. setting, confirm that actual E.S.P. agrees with E.S.P. setting. When E.S.P. setting is higher than actual E.S.P., the air flow rate becomes excessively higher. This will cause water leakage if water splashes. When E.S.P. setting is lower than actual E.S.P., the air flow rate becomes excessively lower and the cooling or heating may become ineffective. In order to reduce the risk above the factory E.S.P. setting is set within the range of 80 - 150 Pa (E.S.P. setting No. 8 - 15). Be sure to use within the range of 80 - 150 Pa in actual operations. If actual E.S.P. is lower than 80 Pa, it may cause water leakage.

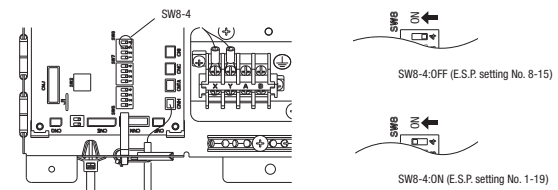
| Setting No. | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------|----|----|-----|-----|-----|-----|-----|-----|
| E.S.P. (Pa) | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |

- ※ If 1 - 7 is selected for the setting No. on the remote control, the setting No. shows No. 8.
- ※ If 16 - 20 is selected for the setting No. on the remote control, the setting No. shows No. 15.
- Factory default is No. 8.

The Case of FDU-F

| Setting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|
| E.S.P. (Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |

- ※ If 13-20 is selected for the setting No. on the remote control, the setting No. shows No. 12.
- ※ Factory default is No. 8.



If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa (E.S.P. setting No. 1 - 19). This should not be used when actual E.S.P. cannot be confirmed, because the risk above becomes higher.

| Setting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|-------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E.S.P. (Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 200 |

- ※ If 20 is selected for the setting No. on the remote control, the setting No. shows No. 19.

⑪ Check list after installation

- Check the following items after all installation work completed.

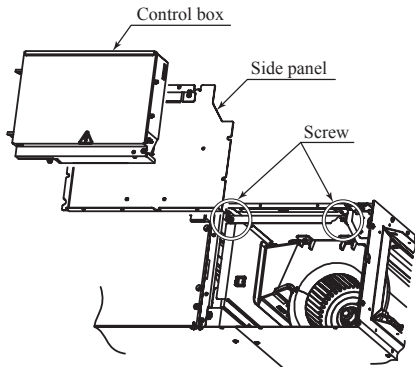
| Check if | Expected trouble | Check |
|--|---|-------|
| The indoor and outdoor units are fixed securely? | Falling, vibration, noise | |
| Inspection for leakage is done? | Insufficient capacity | |
| Insulation work is properly done? | Water leakage | |
| Water is drained properly? | Water leakage | |
| Power source voltage is same as mentioned in the model name plate? | PCB burnt out, not working at all | |
| No mis-wiring or mis-connection of piping? | PCB burnt out, not working at all | |
| Earth wiring is connected properly? | Electric shock | |
| Cable size comply with specified size? | PCB burnt out, not working at all | |
| Any obstacle blocks air flow on air inlet and outlet? | Insufficient capacity | |
| Is setting of E.S.P. finished? | Excessive air flow, water drop blow out | |

(b) Replacement procedure of the fan unit

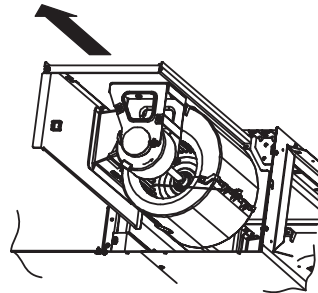
- Notes(1) The unit is a heavy item. It must be supported securely and handled with care not to drop when it is necessary to replace.
 (2) For the maintenance space, refer to page 150.

(i) Model FDU71VH

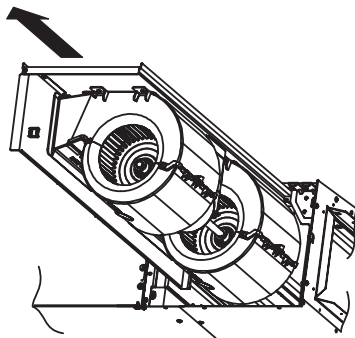
- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) in the figure.



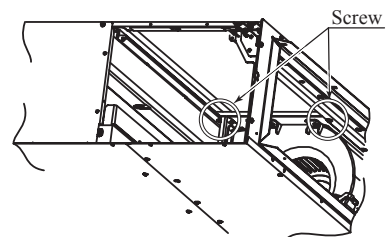
- 2) Take out the fan unit located at the near side in the arrow direction.



- 2) Take out the fan unit in the arrow direction.

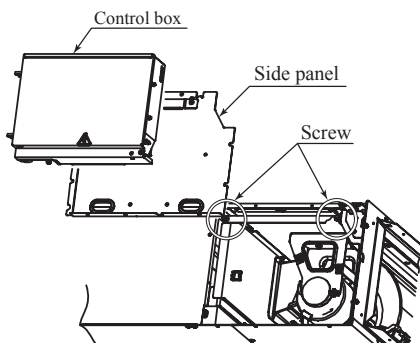


- 3) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.

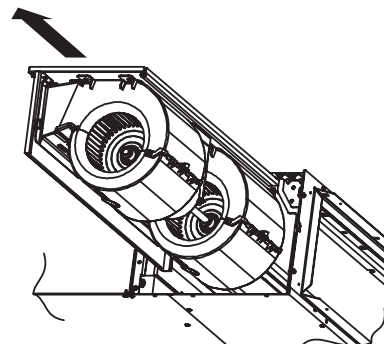


(ii) Models FDU100VH, 125VH, 140VH

- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



- 4) Take out the fan unit in the arrow direction.



(3) Duct connected-Low/Middle static pressure type (FDUM)

PJG012D021























(a) Indoor unit

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to page 165. For remote control installation, refer to page 169. For wireless kit installation, refer to page 640. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 181































SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, [WARNING] and [CAUTION].
[WARNING]: Wrong installation would cause serious consequences such as injuries or death.
[CAUTION]: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
⊗ Never do it under any circumstances. ⚠ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- **Installation should be performed by the specialist.** 
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.** 
Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **Check the density referred by the formula (accordance with IS05149).** 
If the density exceeds the limit density, please consult the dealer and install the ventilation system.
- **Use the genuine accessories and the specified parts for installation.** 
If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.** 
If the refrigerant contacts the fire, toxic gas is produced.
In case of R32, the refrigerant could be ignited because of its flammability.
- **Install the unit in a location that can hold heavy weight.** 
Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.** 
Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.** 
If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.** 
Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.** 
Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.** 
Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.** 
If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R32 or R410A.** 
Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.** 
If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.** 
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.** 
If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.** 
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.** 
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.** 
Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air-conditioner.** 
Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.** 
If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.** 
Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.** 
It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.** 
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock or fire due to a short circuit.
- **Earth leakage breaker must be installed.** 
If the earth leakage breaker is not installed, it could cause electric shocks or fire.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.** 
Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.** 
Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.** 
If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.** 
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.** 
Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.** 
Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.** 
It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.** 
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote control at the direct sunlight.** 
It could cause breakdown or deformation of the remote control.
- **Do not install the indoor unit at the place listed below.** 
 - Places where flammable gas could leak.
 - Places where carbon fiber, metal powder or any powder is floated.
 - Place where the substances which affect the air-conditioner are generated such as sulfide gas, chlorine gas, acid, alkali or ammoniac atmospheres.
 - On vehicles and ships
 - Places where machinery which generates high harmonics is used.
 - Places where cosmetics or special sprays are frequently used.
 - Highly salted area such as beach.
 - Heavy snow area
 - Places where the system is affected by smoke from a chimney.
 - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)** 
 - Locations with any obstacles which can prevent inlet and outlet air of the unit
 - Locations where vibration can be amplified due to insufficient strength of structure.
 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely. It can affect performance or function and etc..
 - Do not install the motion sensor at following places. It could cause detection error, incapacity of detection, or characteristic degradation.
 - Place where vibration is applied to it for a long period of time.
 - Place where static electricity or electromagnetic wave generates.
 - Place where it is exposed to high temperature or humidity for a long period of time.
 - Dusty place or where the lens face could be fouled or damaged.
- **Do not put any valuables which will break down by getting wet under the air-conditioner.** 
Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.** 
It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.** 
If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.** 
Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.** 
Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.** 
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.** 
Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.** 
Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.** 
Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.** 
Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.** 
Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.** 
It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.** 
It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.** 
The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air-conditioner with water.** 
It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.** 
Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.** 
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

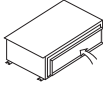
○ This model is middle static ducted type air conditioning unit. Therefore, do not use this model for direct blow type air conditioning unit.

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items

Accessory item

| For hanging | For refrigerant pipe | | | For drain pipe | | | |
|-------------------|---------------------------------|------------------------------------|-----------------------|-------------------------------------|-------------------------------------|---------------------------|-------------------------|
| Flat washer (M10) | Pipe cover (big) | Pipe cover (small) | Strap | Pipe cover (big) | Pipe cover (small) | Drain hose | Hose clamp |
| 8 | 1 | 1 | 4 | 1 | 1 | 1 | 1 |
| For unit hanging | For heat insulation of gas pipe | For heat insulation of liquid tube | For pipe cover fixing | For heat insulation of drain socket | For heat insulation of drain socket | For drain pipe connecting | For drain hose mounting |



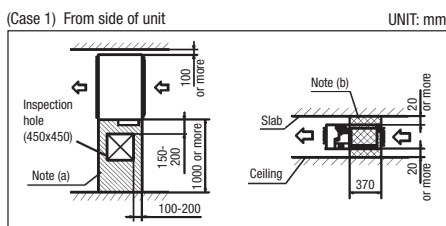
Accessory parts are stored inside this suction side.

② Selection of installation location for the indoor unit

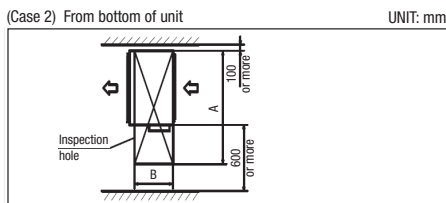
- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - Areas where there is no obstruction of air flow on both air return grille and air supply port.
 - Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
 (This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigerant pipe and drain pipe.)
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
 (A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air conditioner might not work properly.)
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

- Make installation altitude over 2.5m.
(Indoor Unit)
- Select either of two cases to keep space for installation and services.



- Notes (a) There must not be obstacle to draw out fan motor. (▨ marked area)
 (b) Install refrigerant pipe, drain pipe, and wiring so as not to cross (▨ marked area).

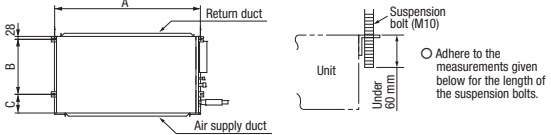


| (Size of inspection hole) | UNIT: mm | | |
|---------------------------|----------|--------|---------|
| Single type | 40-50 | 60, 71 | 100-140 |
| Multi type | 22-56 | 71, 90 | 112-160 |
| A | 1100 | 1300 | 1720 |
| B | 620 | 725 | |

③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
 When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

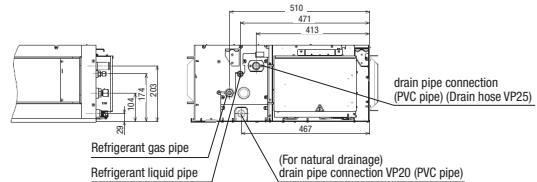
Suspension Bolt Location



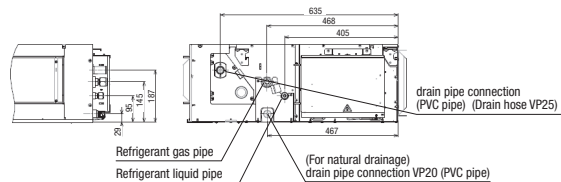
| | UNIT: mm | | |
|-------------|----------|--------|---------|
| Multi type | 22-56 | 71, 90 | 112-160 |
| Single type | 40-50 | 60, 71 | 100-140 |
| A | 786 | 986 | 1404 |
| B | 472 | 472 | 530 |
| C | 135 | 135 | 180 |

Pipe locations

| | UNIT: mm |
|-------------|----------|
| Multi type | 22-90 |
| Single type | 40-71 |



| | UNIT: mm |
|-------------|----------|
| Multi type | 112-160 |
| Single type | 100-140 |

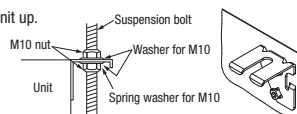


④ Installation of indoor unit

Installation

[Hanging]

Hang the unit up.

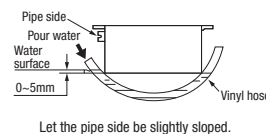


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

Adjustment for horizontality

○ Either use a level vial, or adjust the level according to the method below.

- Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.

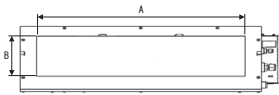


○ If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

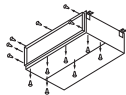
⑤ Duct Work

- ① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.
 - An air filter can be provided on the main body of the air-conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.
- ② Blowout duct
 - Use rectangular duct to connect with unit.
 - Duct size for each unit is as shown below.

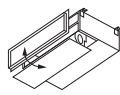
| | UNIT: mm | | |
|-------------|----------|--------|---------|
| Single type | 40-50 | 60, 71 | 100-140 |
| Multi type | 22-56 | 71, 90 | 112-140 |
| A | 682 | 882 | 1202 |
| B | 172 | 172 | 172 |



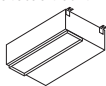
- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.
- ③ Inlet port
 - When shipped the inlet port lies on the back.
 - When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
 - When placing the inlet port to carry out suction from the bottom side, use the following procedure to replace the suction duct joint and the bottom plate.



● Remove the screws which fasten the bottom plate and the duct joint on the inlet port side of the unit.

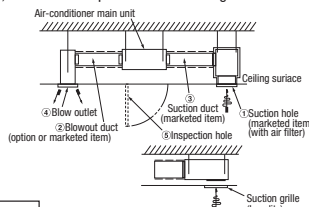


● Replace the removed bottom plate and duct joint.



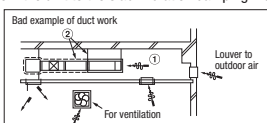
● Fit the duct joint with a screw; fit the bottom plate.

- Make sure to insulate the duct to prevent dewing on it.
- ④ Install the specific blowout duct in a location where the air will circulate to the entire room.
 - Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
 - Insulate the area where the duct is secured by a band for dew condensation prevention.
- ⑤ Make sure provide an inspection hole on the ceiling. It is indispensable to service electric equipment, motor, functional components and cleaning of heat exchanger.



Bad example of duct work

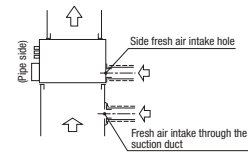
- ① If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the out door air louver, weather (rainy day) and others.
 - a) Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)
 - b) It may run out the allowable limit of unit operation (Example: When outdoor air temperature is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload, etc..
 - c) There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.
- ② If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



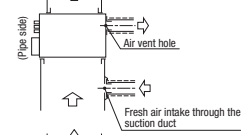
⑤ Duct Work (continued)

Connecting the air intake/vent ducts

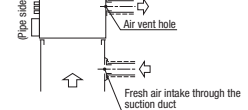
- ① Fresh Air Intake [for air intake duct only]
 - Use the side fresh air intake hole, or supply through a part of the suction duct.



- [for simultaneous air intake/vent]
 - Intake air through the suction duct. (the side cannot be used)



- ② Air Vent
 - Use the side air vent hole. (always use together with the air intake)



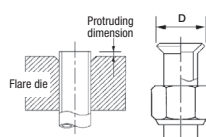
○ Insulate the duct to protect it from dew condensation.

⑥ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product. Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
 - 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R32 or R410A.

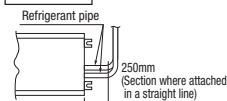
⚠WARNING: When flared joints are reused indoors, the flare part shall be re-fabricated. (only for R32)



| Pipe dia. d mm | Min. pipe wall thickness mm | Protruding dimension for flare, mm | | Flare O.D. D mm | Flare nut lighting torque N·m |
|----------------|-----------------------------|---------------------------------------|-------------------|-----------------|-------------------------------|
| | | Rigid (Clutch type) For R32 For R410A | Conventional tool | | |
| 6.35 | 0.8 | 0 - 0.5 | 0.7 - 1.3 | 8.9 - 9.1 | 14 - 18 |
| 9.52 | 0.8 | | | 12.8 - 13.2 | 34 - 42 |
| 12.7 | 0.8 | | | 16.2 - 16.6 | 49 - 61 |
| 15.88 | 1 | | | 19.3 - 19.7 | 68 - 82 |
| 19.05 | 1.2 | | | 23.6 - 24.0 | 100 - 120 |

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R32 or R410A. Using other refrigerant except R32 or R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R32 or R410A refrigerant.

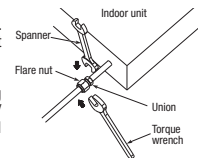
Piping work



When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

Work procedure

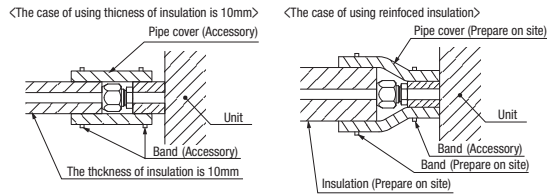
1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
 - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 - ※ Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - Make sure to use flare nuts assembled on the unions. Usage of other flare nuts could cause refrigerant leakage.
 - ※ Do a flare connection as follows:
 - Make sure to hold the nut on indoor unit pipe side using double spanner method as indicated when fastening / loosening flare nuts in order to prevent unintentional twisting of the copper pipe.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water dropping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes. Surface of insulation may cause dew condition or water dropping, if insulations are not reinforced.



⑥ Refrigerant pipe (continued)

4. Refrigerant is charged in the outdoor unit. As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Caution:
Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion.
Refrigerating machine oil may be applied to the internal surface of flare only.



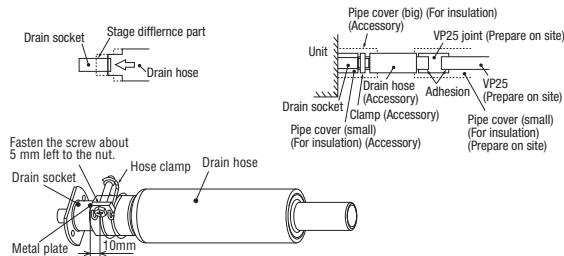
⑦ Drain pipe

Caution

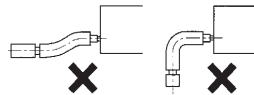
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

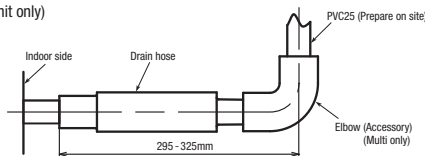
1. Make sure to insert the drain hose (the end made of soft PVC) to the end of the step part of drain socket.
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw about 5mm left to the nut.
● Do not apply adhesives on this end.
● Do not use acetone-based adhesives to connect to the drain socket.



2. Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP25 pipe (prepare on site).
※As for drain pipe, apply VP25 made of rigid PVC which is on the market.
● Make sure that the adhesive will not get into the supplied drain hose.
It may cause the flexible part broken after the adhesive is dried up and gets rigid.
● The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.

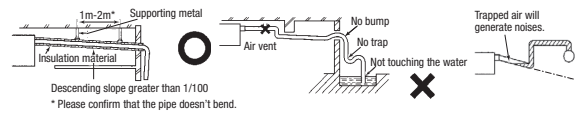


- As for drain pipe, apply VP25 (OD32).
If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)

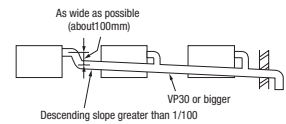


⑦ Drain pipe (continued)

3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
● Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
● Do not set up air vent.



- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe.

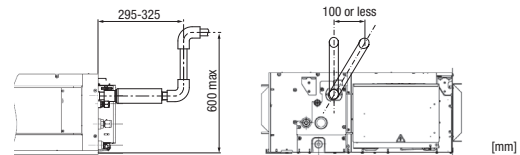


4. Insulate the drain pipe.

- Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
※After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



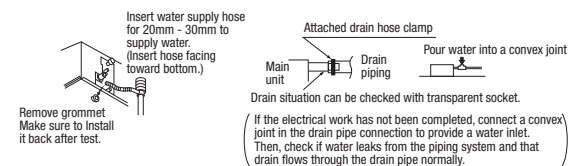
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.
3. In case of a new building, conduct the test before it is furnished with the ceiling.
4. Be sure to conduct this test even when the unit is installed in the heating season.

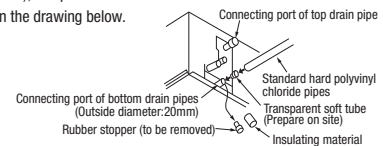
Procedures

1. Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
2. Check the drain while cooling operation.



Outline of bottom drain piping work

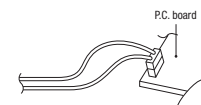
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

- Uncouple the connector CnR for the drain motor as illustrated in the drawing on the right.

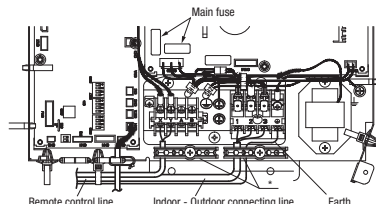
(Note: If the unit is run with the connector coupled,) drain water will be discharged from the upper drain pipe joint, causing a water leak.



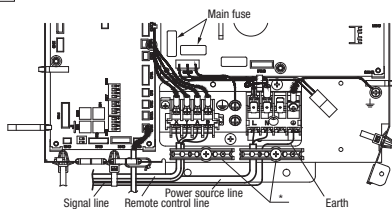
⑧ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
Be sure to use an exclusive circuit.
 - Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
 - Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
 - Be sure to do D type earth work.
 - For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
1. Remove a lid of the control box (2 screws).
 2. Hold each wiring inside the unit and fasten them to terminal block securely.
 3. Fix the wiring with clamps.
 4. Install the removed parts back to original place.

Single unit wiring connection



Multi unit wiring connection



* Please fix the wiring in the band not to move even if it pulls.

Main fuse specification

| Model | Specification | Part No. |
|--------|---------------|--------------|
| 22-56 | T3.15A L250V | SSA564A149AF |
| 71-160 | T5A L250V | SSA564A149AH |

⑨ External static pressure setting

You can set External Static Pressure (E.S.P.) by either method of MANUAL SETTING or AUTOMATIC SETTING by remote control.
Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting (Lo-Uhi)

1. MANUAL SETTING

You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.
Select No.1-10 (10Pa-100Pa) from following table according to calculation result.
Refer to technical manual for details of air flow characteristic.

| Setting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------------------------|----|----|----|----|----|----|----|----|----|-----|
| External Static Pressure (Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

※ When you set No.11-19 by remote control, unit will control fan-speed with setting of No.10 Factory default is at No.5.

● How to set E.S.P. by wired remote control

- ① Push "◆" marked button(E.S.P. button).
 - ② Select indoor unit No. by using ◆ button.
 - ③ Select setting No. by using ◆ button and set E.S.P. by □ button.
- See detailed procedure in technical manual.

Notice

You can not set E.S.P. by wireless remote control.

E.S.P. button



Caution

Be sure to set E.S.P. according to actual duct connected.
Wrong settings causes excessive air flow volume or water drop blown out.

2. AUTOMATIC SETTING

Indoor unit will recognize E.S.P. by itself automatically and select appropriate fan speed No.1-10.

⑨ External static pressure setting (continued)

● How to start automatic setting

- ①, ② Same setting as MANUAL SETTING.
- ③ Select [AUT] by using ◆ button and press □ button.
- ② After setting E.S.P. at "AUT", operate unit in FAN mode with certain fan speed (Lo-Uhi).

Indoor unit fan will run automatically and recognize E.S.P. by itself.

The operation for automatic E.S.P. recognition will last about 6 minutes, and it will be stopped after recognition is completed.

Caution

- Be sure to execute AUTOMATIC SETTING by remote control AFTER ducting work is completed.
When duct specification is changed after AUTOMATIC SETTING, be sure to execute AUTOMATIC SETTING again after power resetting and turning on again.
- Be sure to execute AUTOMATIC SETTING before trial cooling operation.
(See ELECTRICAL WIRING WORK INSTRUCTION about trial cooling operation)
- Before AUTOMATIC SETTING, be sure to check that return air filter in duct is installed and damper is opened.
Wrong procedure causes excessive air flow or water drop blown out.

Notice

- During operation for automatic recognition (the Auto Operation), fan rotates with certain speeds regardless of set fan speed by remote control.
- When duct is set with low static pressure (around 10-50Pa), even if indoor unit operate with higher air flow volume than rated one, but it is not abnormal.
- When you changed operation mode or stop operation with ON/OFF button during Auto Operation, the Auto operation will be canceled.
- In such case, be sure to execute AUTOMATIC SETTING again according to above procedure.

⑩ Check list after installation

● Check the following items after all installation work completed.

| Check if | Expected trouble | Check |
|--|--|-------|
| The indoor and outdoor units are fixed securely? | Falling, vibration, noise | |
| Inspection for leakage is done? | Insufficient capacity | |
| Insulation work is properly done? | Water leakage | |
| Water is drained properly? | Water leakage | |
| Power source voltage is same as mentioned in the model name plate? | PCB burnt out, not working at all | |
| No mis-wiring or mis-connection of piping? | PCB burnt out, not working at all | |
| Earth wiring is connected properly? | Electric shock | |
| Cable size comply with specified size? | PCB burnt out, not working at all | |
| Any obstacle blocks air flow on air inlet and outlet? | Insufficient capacity | |
| Is setting of E.S.P. finished? | Excessive air flow, water drop blown out | |

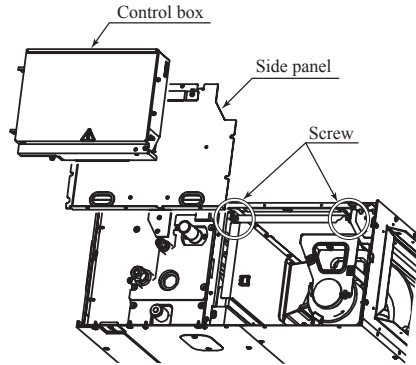
(b) Replacement procedure of the fan unit

Notes(1) The unit is a heavy item. It must be supported securely and handled with care not to drop when it is necessary to replace.

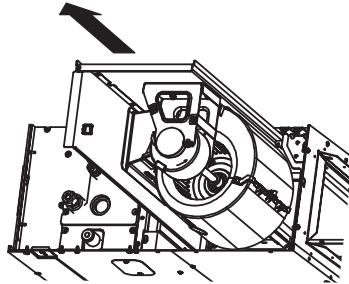
(2) For the maintenance space, refer to page 156.

(i) Models FDUM40VH, 50VH

- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) in the figure.

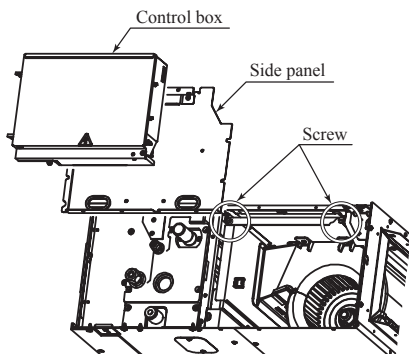


- 2) Take out the fan unit in the arrow direction.

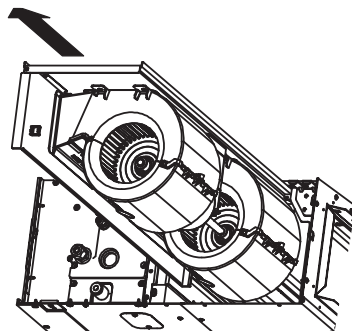


(ii) Models FDUM60VH, 71VH

- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) in the figure.

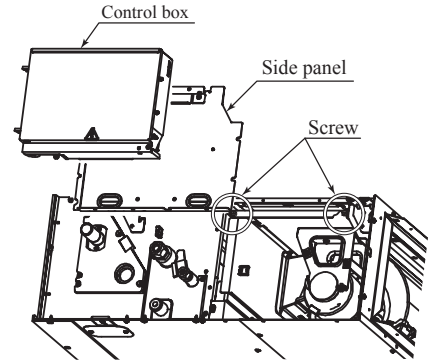


- 2) Take out the fan unit in the arrow direction.

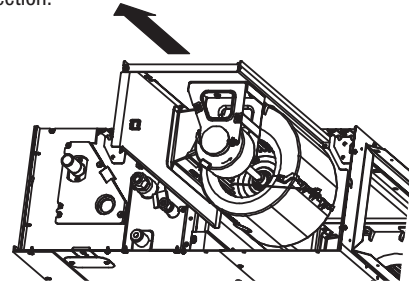


(iii) Models FDUM100VH, 125VH, 140VH

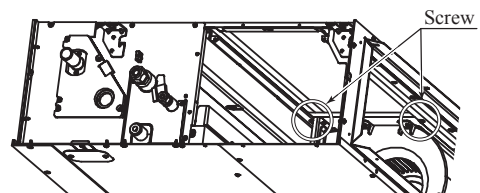
- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



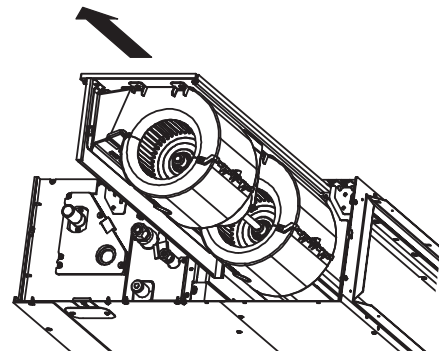
- 2) Take out the fan unit located at the near side in the arrow direction.



- 3) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.



- 4) Take out the fan unit in the arrow direction.



(4) Ceiling suspended type (FDE)

PFA012D636

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to page 165. For remote control installation, refer to page 169. For wireless kit installation, refer to page 648. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 181.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels. **⚠️ WARNING** and **⚠️ CAUTION**.
⚠️ WARNING: Wrong installation would cause serious consequences such as injuries or death.
⚠️ CAUTION: Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown as follows:
⊘ Never do it under any circumstances. **Ⓜ** Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠️ WARNING

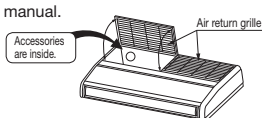
- **Installation should be performed by the specialist.** **Ⓜ**
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.** **Ⓜ**
Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).** **Ⓜ**
If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accidents.
- **Use the genuine accessories and the specified parts for installation.** **Ⓜ**
If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.** **Ⓜ**
If the refrigerant contacts the fire, toxic gas is produced.
In case of R32, the refrigerant could be ignited because of its flammability.
- **Install the unit in a location that can hold heavy weight.** **Ⓜ**
Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.** **Ⓜ**
Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.** **⊘**
If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.** **Ⓜ**
Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.** **Ⓜ**
Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.** **Ⓜ**
Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.** **Ⓜ**
If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R32 or R410A.** **Ⓜ**
Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.** **Ⓜ**
If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.** **⊘**
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.** **Ⓜ**
If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.** **Ⓜ**
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.** **Ⓜ**
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.** **⊘**
Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air-conditioner.** **Ⓜ**
Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.** **Ⓜ**
If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.** **⊘**
Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.** **Ⓜ**
It could cause electric shock, unit failure and improper turning.

⚠️ CAUTION

- **Perform earth wiring surely.** **Ⓜ**
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure, electric shock and fire due to a short circuit.
- **Earth leakage breaker must be installed.** **Ⓜ**
If the earth leakage breaker is not installed, it can cause fire and electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.** **Ⓜ**
Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.** **⊘**
Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.** **⊘**
If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.** **⊘**
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.** **Ⓜ**
Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.** **⊘**
Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.** **⊘**
It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.** **⊘**
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote control at the direct sunlight.** **⊘**
It could cause breakdown or deformation of the remote control.
- **Do not install the indoor unit at the place listed below.** **⊘**
 - Places where flammable gas could leak.
 - Places where carbon fiber, metal powder or any powder is floated.
 - Places where the substances which affect the air-conditioner are generated such as sulfide gas, chlorine gas, acid, alkali or amionic atmospheres.
 - Places exposed to oil mist or steam directly.
 - On vehicles and ships
 - Places where machinery which generates high harmonics is used.
 - Places where cosmetics or special sprays are frequently used.
 - Highly salted area such as beach.
 - Heavy snow area
 - Places where the system is affected by smoke from a chimney.
 - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)** **⊘**
 - Locations with any obstacles which can prevent inlet and outlet air of the unit.
 - Locations where vibration can be amplified due to insufficient strength of structure.
 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely.
 - It can affect performance or function and etc..
 - Do not install the motion sensor at following places. It could cause detection error, incapacity of detection, or characteristic degradation.
 - Place where vibration is applied to it for a long period of time.
 - Place where static electricity or electromagnetic wave generates.
 - Place where it is exposed to high temperature or humidity for a long period of time.
 - Dusty place or where the lens face could be fouled or damaged.
- **Do not put any valuables which will break down by getting wet under the air-conditioner.** **⊘**
Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.** **⊘**
It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.** **Ⓜ**
If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.** **Ⓜ**
Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.** **⊘**
Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.** **Ⓜ**
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.** **Ⓜ**
Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.** **Ⓜ**
Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.** **⊘**
Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.** **Ⓜ**
Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.** **Ⓜ**
Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.** **⊘**
It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.** **⊘**
It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.** **⊘**
The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air-conditioner with water.** **⊘**
It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.** **⊘**
Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.** **⊘**
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items



Accessory item

| For unit hanging | For refrigerant pipe | For drain pipe | For air return grille |
|---------------------------|---------------------------------|------------------------------------|----------------------------------|
| Flat washer (M10) | Paper pattern | Pipe cover (large) | Pipe cover (small) |
| Strap | Drain hose (with clamp) | Hose clamp | Fixing bracket |
| Screw | Heavy insulation | Screw | |
| 8 | 1 | 1 | 1 |
| For unit hanging | For heat insulation of gas pipe | For heat insulation of liquid pipe | For fixing of pipe cover |
| For drain pipe connection | For drain hose mounting | For fixing of drain hose | For installing of fixing bracket |
| For drain hose | For drain hose | For fixing of air return grille | |
| 1 | 1 | 1 | 4 |

② Selection of installation location for the indoor unit

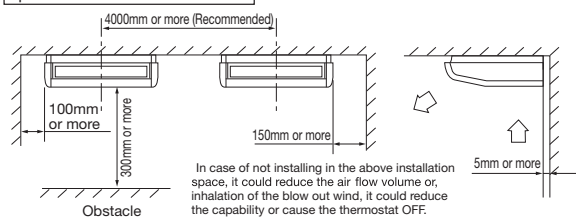
- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - In case of having the motion sensor, the installation height must be no higher than 4 m. It could reduce the sensitivity of motion sensor, disabling the detection.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - Areas where there is no obstruction of air flow on both air return grille and air supply port.
 - Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.

This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.

If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigerant pipe and drain pipe.
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.

(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air conditioner might not work properly.)
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.
 - If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.
 - When plural indoor units are installed nearby, it is recommended to separate each other more than 4m.

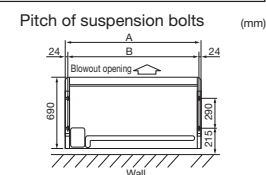
Space for installation and service



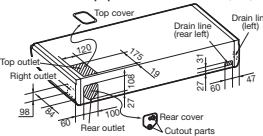
③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hung directly from the slab and is installed on the ceiling plane which has enough strength.
 - When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Pitch of suspension bolts and pipe position



Location of pipe outlets (mm)



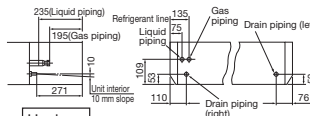
③ Preparation before installation (continued)

| Series | type | (mm) | |
|---------------------------|----------------|------|------|
| | | A | B |
| Single split (PAC) series | 40 to 50type | 1070 | 1022 |
| | 60 to 71type | 1320 | 1272 |
| | 100 to 140type | 1620 | 1572 |
| VRF (KX) series | 36 to 56type | 1070 | 1022 |
| | 71type | 1320 | 1272 |
| | 112 to 140type | 1620 | 1572 |

※Pipes can be taken out in 3 directions (rear, right or top).

- Cut out holes using nippers, etc.
- Cut out holes to take out pipes along the cutoff line on the rear cover.
- Cut out the top face cover aligning to the piping position.
- When taking pipe out to right-hand side, cut out a hole along the groove at the inside of panel.
- After installing pipes and wires, seal clearances around pipes and wires with putty, etc. to shut off dust.

Pipe position (mm)



Make sure to install the covers at rear and top in order to protect the inside of unit from intrusion of dust or protect wires from damages by sharp edges. When taking them out to the right-hand side, remove burrs or sharp edges from the cutout.

Haulage

- Move the box as close to the installation area as possible packed.
- If it must be unpacked, wrap the unit with a nylon sling, and be careful not to damage the unit.
 - ※Do not hold fragile plastic parts, such as the side panel, blow louver, etc.
- If you need to lay the unit on a floor after unpacking, always put it with the intake grille facing upward.



Preparation before installation

- Remove the air return grille.**
 - Slide stoppers (4 places) of the catches, then pull out the pins (4 or 6 places).
- Remove the side panel.**
 - Remove the screw and detach the side panel by sliding it toward the direction indicated by the arrow mark.
 - Side panel screw (1 each on the left and right) (M4)
- Remove the hanging plate.**
 - Remove the screw, and then loosen the fixing bolts.
 - Unscrew 8-12mm
 - Hanging plate
 - Hanging plate screw (M4)
 - Hanging plate fixing bolts (M8)

④ Installation of indoor unit

- WARNING** Completely seal the hole in the wall with putty. If not sealed properly, dust, insects, small animals, and highly humid air may enter the room from outside, which could result in fire or other hazards.
- CAUTION** Completely seal the hole in the wall with putty. If not sealed properly, furniture and other fixtures may be damaged by water leakage or condensation.

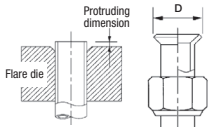
Work procedure

- Select the suspension bolt locations and the pipe hole location.
 - (1) Use enclosed paper pattern as a reference, and drill the holes for the suspension bolts and pipe.
 - ※Decide the locations based on direct measurements.
 - (2) Once the locations are properly placed, the paper pattern can be removed.
 - Install the suspension bolts in place.
 - Fix with 4 suspension bolts, which can endure load of 500N.
 - Check the measurements given at the right figure for the length of the suspension bolts.
 - Fasten the hanging plate onto the suspension bolts.
 - <When installed against a ceiling material>
 - <No ceiling material to install against>
 - Fasten at the front end of an elongated hole.
 - Suspension bolt
 - Hanging plate
 - Ceiling surface Washer (accessory)
 - Unit
 - Double nuts
 - ※Please fasten firmly with double nuts.
 - Hanging plate
 - Suspension bolt
 - Nut
 - Washer (accessory)
 - Unit
 - Double nuts
 - ※Double nuts
 - Install the unit to the hanging plate. (See the figure at right.)
 - (1) Slide the unit in from front side to get it hanged on the hanging plate with the bolts.
 - (2) Fasten the four fixing bolts (M8: 2 each on the left and right sides) firmly.
 - (3) Fasten the two screws (M4: 1 each on the left and right sides).
- WARNING** : Hang a side panel on from the panel side to the rear side and then fasten it securely onto the indoor unit with screws.
- ※To ensure smooth drain flow, install the unit with a descending slope toward the drain outlet.
- CAUTION** : Do not give the reversed slope, which may cause water leaks.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product. Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
 - 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R32 or R410A.
- ⚠ **WARNING** : When flared joints are reused indoors, the flare part shall be re-fabricated. (only for R32)

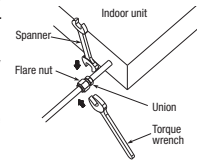


| Pipe dia. d mm | Min. pipe wall thickness mm | Protruding dimension for flare, mm | | Flare O.D. D mm | Flare nut tightening torque N·m |
|-------------------|--------------------------------|---|-------------------|-----------------------|------------------------------------|
| | | Rigid (Clutch type) For R32 For R410A | Conventional tool | | |
| 6.35 | 0.8 | 0 - 0.5 | 0.7 - 1.3 | 8.9 - 9.1 | 14 - 18 |
| 9.52 | 0.8 | | | 12.8 - 13.2 | 34 - 42 |
| 12.7 | 0.8 | | | 16.2 - 16.6 | 49 - 61 |
| 15.88 | 1 | | | 19.3 - 19.7 | 68 - 82 |
| 19.05 | 1.2 | | | 23.6 - 24.0 | 100 - 120 |

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R32 or R410A.
- Using other refrigerant except R32 or R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R32 or R410A refrigerant.

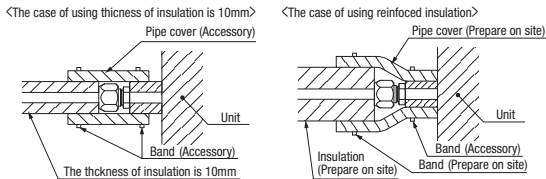
Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
 - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressurized.)
 - Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 - When pulling out pipes backward or upward, install them passing through the attached cover together with the electrical cabling.
 - Seal the gap with putty, or other, to protect from dust, etc.
 - ※ Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - Make sure to use flare nuts assembled on the unions. Usage of other flare nuts could cause refrigerant leakage.
 - ※ Do a flare connection as follows:
 - Make sure to hold the nut on indoor unit pipe side using double spanner method as indicated when fastening / loosening flare nuts in order to prevent unintentional twisting of the copper pipe.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water drooping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes. Surface of insulation may cause dew condensation or water drooping, if insulations are not reinforced.
4. Refrigerant is charged in the outdoor unit. As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

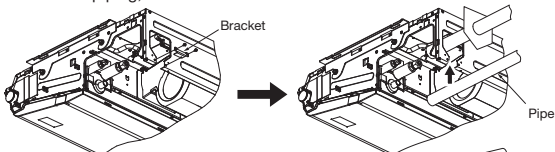


Caution:

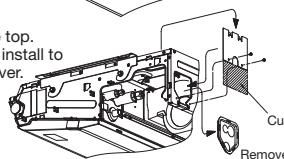
Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the side friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion. Refrigerating machine oil may be applied to the internal surface of flare only.



- The pipe can be connected from three different directions. (back, right, top)
- When the pipe is routed through the back. If the bracket is removed, piping work will become easy. ※After piping, reinstall the removed bracket.



- When the pipe is routed through the top. Cut the removed top cover, and install to the rear panel instead of rear cover.



⑥ Drain pipe

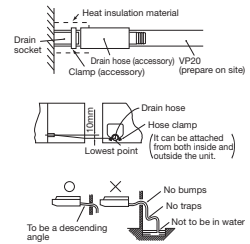
- The drain pipes may pull out either from back, right or left side.

Caution

- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

1. Insert drain hose completely to the base, and tighten the drain hose clamp securely. (adhesive must not be used.)
 - ※ When plumbing on the left side, move the rubber plug and the cylindrical insulating materials by the pipe connecting hole on the left side of the unit to the right side.
2. Fix the drain hose at the lowest point with a hose clamp supplied as an accessory.
 - ※ Give a drain hose a gradient of 10mm as illustrated in the right drawing by laying it without leaving a slack.
 - Take head of electrical cables so that they may not run beneath the drain hose.
3. Connect VP20(prepare on site) to drain hose. (Adhesive must not be used.)
 - ※ Use commercially available rigid PVC general pipe VP20 for drain pipe.
4. Do not to make the up-down bending and trap in the mid-way while assuming that the drain pipes is downhill. (more than 1/100)
 - Never set up air vent.
5. Insulate the drain pipe.
 - Insulate the drain hose clamp with the heat insulation supplied as accessories.
 - When the unit is installed in a humid place, consider precautions against dew condensation such as heat insulation for the drain pipe.



Drain test

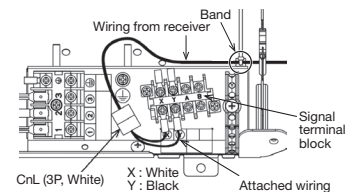
- After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan.
- Do drain test even if installation of heating season.

⑦ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country. Be sure to use an exclusive circuit.
 - Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
 - Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
 - Be sure to do D type earth work.
 - For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
1. Remove wiring from clips.
 2. Remove the control box (Screw ①, 2pcs).
 3. Pull out the control box by sliding along the groove on the bracket (Direction A→B).
 4. Remove the lid of control box (Screw ②, 2pcs).
 5. Hold each wiring inside the unit and connect to the terminal block surely.
 6. Fix the wiring by clamp.
 7. Install the lid of control box (Screw ②, 2pcs).
 8. Return the control box to the original place by sliding along the groove on the bracket (Direction B→A).
 9. Install the removed parts at their original places.
- ※ 1 Wiring for the signal receiving section of wireless kit (Option) and motion sensor kit (Option) are connected at the time of shipping from the factory. It is not necessary to disconnect these wiring when wired remote control is connected. When the wired/wireless kits are used together, it becomes necessary to set the slaves and remote control. For the methods of installing the wireless kit and the motion sensor kit, refer to the attached installation manuals.

NOTICE

When installing the Superlink adapter, remove the band fixed the wiring from receiver.



⑦ Wiring-out position and wiring connection (continued)

1. FDE (small) Clip
FDE (medium) Clip
FDE (large) Clip

2. Screw ① Screw ①

3. Control box Sliding Method
Bracket
* Disconnect each wiring from clips before pulling out the control box.

4. Screw ② Lid of control box Screw ②

5 · 6. Single split (PAC) Series
Wireless and motion sensor receiver line (②-1)
Remote control line
Wiring between indoor and outdoor unit.
Wiring clamp
Signal side terminal block
Earth terminal block
CnL connector (3P, white)
Power source side terminal block

VRF (KX) Series
Wireless and motion sensor receiver line (②-1)
Signal line (Shielded cord)
Remote control line
Indoor power source line
Wiring clamp
Signal side terminal block
Earth terminal block
CnL connector (3P, white)
Power source side terminal block

7 · 8. Control box hook
Screw ② Screw ②
* Install it as to fit the form of control box.

⑧ Control mode switching

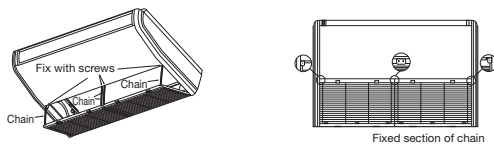
- The control content of indoor units can be switched in following way. (is the default setting)

| Switch No. | Control Content | |
|------------|-----------------|-------------------------|
| SW8-4 | ON | Indoor unit silent mode |
| | OFF | Normal operation |

⑨ Attaching the air return grille

- The air return grille must be attached when electrical cabling work is completed.

- Fix the chains tied to the air return grille onto the indoor unit with screws supplied as accessories (4 pieces).
- Close the air return grille. This completes the unit installation work.



⑩ Check list after installation

- Check the following items after all installation work completed.

| Check if | Expected trouble | Check |
|--|-----------------------------------|-------|
| The indoor and outdoor units are fixed securely? | Falling, vibration, noise | |
| Inspection for leakage is done? | Insufficient capacity | |
| Insulation work is properly done? | Water leakage | |
| Water is drained properly? | Water leakage | |
| Power source voltage is same as mentioned in the model name plate? | PCB burnt out, not working at all | |
| There is mis-wiring or mis-connection of piping? | PCB burnt out, not working at all | |
| Earth wiring is connected properly? | Electric shock | |
| Cable size comply with specified size? | PCB burnt out, not working at all | |
| Any obstacle blocks air flow on air inlet and outlet? | Insufficient capacity | |


1.10.2 Electric wiring work installation


Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.


Security instructions


- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
 - WARNING** : Wrong installation would cause serious consequences such as injuries or death.
 - CAUTION** : Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
 - ⊗ Never do it under any circumstances.
 - ⊙ Always do it according to the instruction.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short-circuit.


WARNING


- Be sure to have the electric wiring work done by qualified electrical installer, and use exclusive circuit. 


Power source with insufficient capacity and improper work can cause electric shock and fire.
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal. 


Loose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly. 

Improper fitting may cause abnormal heat and fire.
- Use the genuine option parts. And installation should be performed by a specialist. 

If you install the unit by yourself, it could cause water leakage, electric shock and fire.
- Do not repair by yourself. And consult with the dealer about repair. 


Improper repair may cause water leakage, electric shock or fire.
- Consult the dealer or a specialist about removal of the air-conditioner. 


Improper installation may cause water leakage, electric shock or fire.
- Turn off the power source during servicing or inspection work. 


If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- Shut off the power before electrical wiring work. 


It could cause electric shock, unit failure and improper running.


CAUTION


- Perform earth wiring surely. 


Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short-circuit.
- Earth leakage breaker must be installed. 


If the earth leakage breaker is not installed, it can cause electric shocks.
- Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.) 


Absence of breaker could cause electric shock.
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current. 

Using the incorrect one could cause the system failure and fire.
- Do not use any materials other than a fuse of correct capacity where a fuse should be used. 

Connecting the circuit by wire or copper wire could cause unit failure and fire.
- Use power source line of correct capacity. 

Using incorrect capacity one could cause electric leak, abnormal heat generation and fire.
- Do not mingle solid cord and stranded cord on power source and signal side terminal block. 

In addition, do not mingle difference capacity solid or stranded cord. Inappropriate cord setting could cause loosening screw on terminal block, bad electrical contact, smoke and fire.
- Do not turn off the power source immediately after stopping the operation. 

Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- Do not control the operation with the circuit breaker. 

It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

Control mode switching

- The control content of indoor units can be switched in following way. (is the default setting)

| Switch No. | Control Content | |
|------------|---|---------------------------------------|
| SW2 | Indoor unit address (0-Fh) | |
| SW5-1 | Master/Slave Switching (plural /Slave unit Setting) | |
| SW5-2 | | |
| SW6-1~4 | Model capacity setting | |
| SW7-1 | ON | Operation check, Drain motor test run |
| | OFF | Normal operation |

① Electrical wiring connection

- Electrical wiring work must be performed by an electrician qualified by a local power provider. These wiring specifications are determined on the assumption that the following instructions are observed:

- Do not use cords other than copper ones.
 - Do not use any source line lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51), if allowed in the relevant part 2;
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53);
 - flat twin tinsel cord (code designation 60227 IEC 41);
 - ordinary polyvinyl chloride sheathed cord (code designation 60227 IEC 53);
- Connect the power source to the outdoor unit.
- Pay extra attention so as not to confuse signal line and power source line connection, because an error in their connection can be burn all the boards at once.

- Connect ground wires before connecting wires between the indoor and outdoor units and between indoor units. The ground wires need to be longer than the wires between the indoor and outdoor units, and protected from undue stress.

- Do not turn on the power source before completing the work.
- The ground wires must be connected by the Class D grounding connection.
- Use the round crimp terminals for connections to the terminal block.
- Use dedicated branch circuits, avoiding combination with other devices. Otherwise, it could trip the power source breaker, resulting in secondary accidents.
- Install the overcurrent and earth leakage breakers (sensitivity current: 30 mA) specified to respective models.

- Do not connect indoor and outdoor signal cables to extension cables on the way. If the joint is wetted with intruding water, it could cause a ground insulation failure or poor connection, resulting in communication errors. (If it is inevitable to connect cables on the way, make sure to prevent the water intrusion completely.)

- When running wires (wires for power source, remote controller, connecting between indoor and outdoor units, or other) behind the ceiling, protect them using copper or other pipes against assault by rat, or other.

- It is up to 3.5 mm² the size of power supply cables connected to indoor units. When using cables of 5.5 mm² or larger, provide a dedicated pull box for branching connection to indoor units.

- If signal and power source cables are connected mistakenly, it could burn down all PCBs.

- Even if the power source of 220/240/380/415 V is connected mistakenly to A-B signal cable, it is protected at initial occasion only.
- If the remote control fails to detect the unit No. (address) at 15 minutes after turning the power on, check and repair all signal cables for misconnection.

- 3 Cut the jumper wire J10SL1 of burnt PCB, and reconnect connectors CnK (yellow) and CnK1 (white) to CnK2 (black).
- 4 If any anomaly is found on wires between the A-B terminal block and the PCB, replace them.

- At the outside of indoor and outdoor units, take care to avoid direct contacts between remote control and power source cables.

- In no event connect the power source of 220/240/380/415 V to the remote control terminal block. It could cause failures.

- Connections of wiring between units, ground wire and remote control cable

- When connecting wires between units, ground wire or remote control wire, connect them according to the number of terminals on the power source terminal block or signal terminal block in the control box. Connect the ground wire to the ground terminal on the power source terminal block.
- Make sure to install an earth leakage breaker for the power source. Select a breaker for inverter circuit.

- When the earth leakage breaker is exclusive for the earth leakage protection, it is necessary to connect also an isolating switch (Switch + Class B fuse) or wiring circuit breaker in series to the earth leakage breaker.
- Install the isolating switch close to the unit.

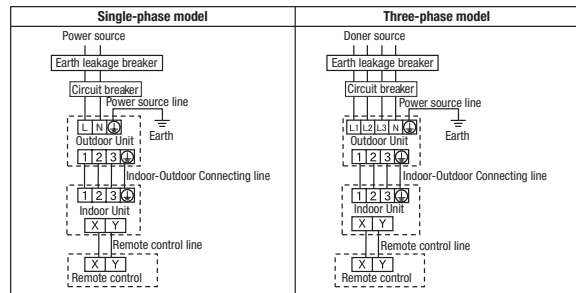
- Connect wires securing by tightening screws firmly. Confirm also no connector or wire (from terminal) is disconnected in the control box.
- When installing an auxiliary electric heater, consult the electric heater manual or technical data.

Cable connection for single unit installation



- As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect power source line to inside unit.

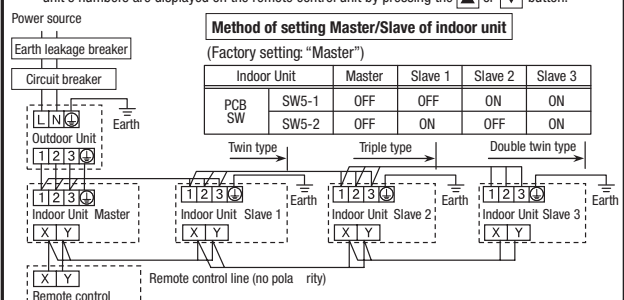
- ※As for exceptional connecting method of power source, discuss with the power provider of the country with referring to technical documents, and follow its instruction.

- For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- Connect the same pairs number of terminal block "①", "②", and "③" and "ⓧ" and "Ⓞ" between master and slave indoor units.
- Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).
- Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.
- When the AIR CON NO. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the  or  button.



② Remote control, wiring and functions

● Do not install it on the following places

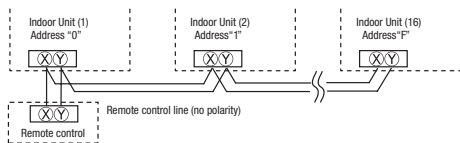
- ① Places exposed to direct sunlight
- ② Places near heat devices
- ③ High humidity places
- ④ Hot surface or cold surface enough to generate condensation
- ⑤ Places exposed to oil mist or steam directly.
- ⑥ Uneven surface

Installation and wiring of remote control

- ① Install remote control referring to the attached installation manual.
- ② Wiring of remote control should use 0.3mm² × 2 core wires or cables.
The insulation thickness is 1mm or more. (on-site configuration)
- ③ Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
100 - 200m 0.5mm² × 2 cores
Under 300m 0.75mm² × 2 cores
Under 400m 1.25mm² × 2 cores
Under 600m 2.0mm² × 2 cores
- ④ Avoid using multi-core cables to prevent malfunction.
- ⑤ Keep remote control line away from earth (frame or any metal of building).
- ⑥ Make sure to connect remote control line to the remote control and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote control

- ① A remote control can control plural indoor units (Up to 16).
- In above setting, all plural indoor units will operate under same mode and temperature setting.
- ② Connect all indoor units with 2 core remote control line.
- ③ Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.



Master/ slave setting when more than one remote control unit are used

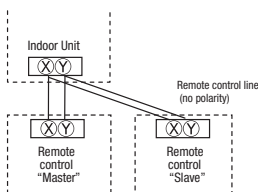
A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it.

Acceptable combination is "two (2) wired remote controls", "one (1) wired remote control and one (1) wireless kit" or "two (2) wireless kits".

Set one to "Master" and the other to "Slave".

Note: The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.

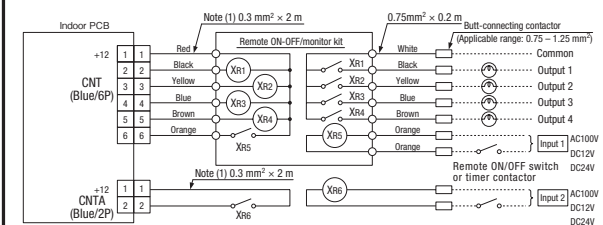


③ Operation and confirmation from remote control

| No. | Item | Operation from the eco touch remote control (RC-EX series) | Operation from the standard remote control (RC-E series) |
|-----|---|--|--|
| 1 | Check the number of units connected in the multi remote control system. | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address] | ① Press the [AIR CON NO] button to display the IU address. ② Press the [▲] or [▼] button and check addresses of connected indoor units one by one. |
| 2 | Check if each unit is connected properly in the remote control system. | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address] ⇒ [Check run mode] | ① Press the [AIR CON NO] button to display the IU address. ② Press the [▲] or [▼] button and select one of IU addresses. ③ Press the [MODE] button. The unit starts to blow air. |
| 3 | Setting main/sub remote controls | [Menu] ⇒ [Service setting] ⇒ [R/C function settings] ⇒ [Service password] ⇒ [Main/Sub of R/C] | Set SW1 to "Sub" for the sub remote control unit. |
| 4 | Checking operation data | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [Operation data] | Press the [CHECK] button. ⇒ "OFF DATA" is displayed. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Select one of addresses for connected indoor units by pressing the [▲] or [▼] button. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Select data by pressing the [▲] or [▼] button. |
| 5 | Checking inspection display | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [Error display] | Press the [CHECK] button. ⇒ "OFF DATA" is displayed. ⇒ Press the [▼] button. ⇒ "ERROR DATA" is displayed. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Data is displayed. |
| 6 | Cooling test run from remote control | [Menu] ⇒ [Service setting] ⇒ [Installation settings] ⇒ [Service password] ⇒ [Test run] ⇒ [Cooling test run] ⇒ [Start] | ① Start the system by pressing the [ON/OFF] button. ② Select "Cool" with the [MODE] button. ③ Press the [TEST] button for 3 seconds or longer. The screen display will switch to "TEST RUN". ④ Pressing the [SET] button, while the "TEST RUN" is displayed, starts the cooling test run. The screen display will switch to "TEST RUN". |
| 7 | Trial operation of drain pump from remote control | [Menu] ⇒ [Service setting] ⇒ [Installation settings] ⇒ [Service password] ⇒ [Test run] ⇒ [Drain pump test run] ⇒ [Run] | ① Start the system by pressing the [ON/OFF] button. The display will change to "TEST RUN". ② Press the [▼] button once to display "RAIN PUMP". ③ Pressing the [SET] button starts the drain pump operation. The display will show "STOP". |

The menu configuration may vary depending on models of the remote control. If the model of your remote control is different, refer to the installation manual attached to the remote control.

④ Function of CnT connector of indoor printed circuit board



Note (1) To be no longer than 2 m.

- XR1-4 are DC 12 V relays. (Equivalent to Omron's LY2F)
- XR5 is a DC 12 V, 24 V or 100 V relay. (Equivalent to Omron's MY2F)
- Maker and model of CnT connector (Site side)
Connector : Molex 5264-06
Terminal : Molex 5263T
- CnTA connector is used on FDT, or other. <Check with the specifications.> (Site side) Maker and model
Connector : J.S.T. Mfg. XAP02V-1-E
Terminal : J.S.T. Mfg. SXA-01T-P0.6
- Output 1 - 4 and input 1/2 can be selected/set as required from following items.
Factory default is set as shown below.

| Output | |
|-----------------------------|--------------------------------|
| ① RUN output | ⑧ Fan ON output 3 |
| ② Heating output | ⑨ Defrost/oil return output |
| ③ Compressor ON output | ⑩ Ventilation output |
| ④ Inspection (error) output | ⑪ Heater output |
| ⑤ Cooling output | ⑫ Free cleaning output |
| ⑥ Fan ON output 1 | ⑬ Indoor overload error output |
| ⑦ Fan ON output 2 | |

| Input | |
|--------------------------|-----------------------------|
| ① RUN/STOP | ⑤ Setting temp. shift |
| ② RUN permit prohibition | ⑥ Compulsory thermostat OFF |
| ③ Emergency stop | ⑦ Temporary stop |
| ④ Cooling/Heating | ⑧ Silent mode |

| Factory default setting | | | |
|-------------------------|-------------------------------|-------|------------------------------------|
| CnT-2 | Output 1 RUN output | CnT-5 | Output 4 Inspection (error) output |
| CnT-3 | Output 2 Heating output | CnT-6 | Input 1 RUN/STOP |
| CnT-4 | Output 3 Compressor ON output | CnTA | Input 2 RUN/STOP |

● For the setting method, refer to the technical data.

5 Operation and setting from remote control

A : Refer to the instruction manual for RC-EX series ○ : Nearly same function setting and operations are possible. *1: Remote controls before RC-EX1A don't have this function.
 B : Refer to the installation manual for RC-EX series △ : Similar function setting and operations are possible. *2: Remote controls before RC-EX3 don't have this function.
 C : Loading a utility software via Internet

| Setting & display item | Description | RC-EX3A | RC-E5 | |
|---|--|--|-------|---|
| 1.Remote Control network | | | | |
| 1 Control plural indoor units by a single remote control | A remote control can control plural indoor units up to 16 (in one group of remote control network). An address is set to each indoor unit. | | ○ | |
| 2 Main/sub setting of remote controls | A pair of remote controls (including option wireless remote control) can be connected within the remote control network. Set one to "Main" and the other to "Sub". | B | ○ | |
| 2.TOP screen, Switch manipulation | | | | |
| 1 Menu | "Control", "State", or "Details" can be selected. (3-8) | A | | |
| 2 Operation mode | "Cooling", "Heating", "Fan", "Dry" or "Auto" can be set. | A | ○ | |
| 3 Set temp. | "Set temperature" can be set by 0.5°C interval. | A | ○ | |
| 4 Air flow direction | "Air flow direction" (Individual flap control) can be set. Select Enable or Disable for the "3D AUTO" (in case of FDK). *1 | A | △ | |
| 5 Fan speed | "Fan speed" can be set. | A | ○ | |
| 6 Timer setting | "Timer operation" can be set. | A | ○ | |
| 7 ON/OFF | "On/Off operation of the system" can be done. | A | ○ | |
| 8 F1 SW | *1 The system operates and is controlled according to the function specified to the F1 switch. | A | | |
| 9 F2 SW | *1 The system operates and is controlled according to the function specified to the F2 switch. | A | | |
| 10 Select the language | *2 Select the language to display on the remote control. • Select from English, German, French, Spanish, Italian, Dutch, Turkish, Portuguese, Russian, Polish, Japanese and Chinese. | A | | |
| 3.Useful functions | | | | |
| 1 Individual flap control | The moving range (the positions of upper limit and lower limit) of the flap for individual flap can be set. Set also the left and right limit positions for FDK. *1 | A | △ | |
| 2 Anti draft setting When the panel with the anti-draft function is assembled. | *1 • DetailsYou can set Enable or Disable for anti draft motion performed at each blow outlet in each operation mode. • ON/OFF settingYou can set ON/OFF (operation/stop) of anti draft function for the enabled blow outlet set in Details. *2 | A | | |
| 3 Timer settings | Set On timer by hour | The period of time to start operation after stopping can be set. • The period of set time can be set within range of 1hour-12hours (1hr interval). • The operation mode, set temp-and fan speed at starting operation can be set. | A | △ |
| | Set Off timer by hour | The period of time to stop operation after starting can be set. • The period of set time can be set within range of 1hour-12hours (1hr interval). | A | △ |
| | Set On timer by clock | The clock time to start operation can be set. • The set clock time can be set by 5-minutes intervals. • [Once (one time only)] or [Everyday] operation can be switched. • The operation mode, set temp. and fan speed at starting operation can be set. | A | △ |
| | Set Off timer by clock | The clock time to stop operation can be set. • The set clock time can be set by 5-minute intervals. • [Once (one time only)] or [Everyday] operation can be switched. | A | △ |
| | Confirmation of timer settings | Status of timer settings can be seen. | A | |
| 4 Favorite setting [Administrator password] | *1 Set the operation mode, setting temperature, air flow capacity and air flow direction for the choice setting operations. Set them for the Favorite set 1 and the Favorite set 2 respectively. | A | | |
| 5 Weekly timer | On timer and Off timer on weekly basis can be set. • 8-operation patterns per day can be set at a maximum. • The setting clock time can be set by 5-minute intervals. • Holiday setting is available. • The operation mode, set temp. and fan speed at starting operation can be set. | A | △ | |
| 6 Home leave mode [Administrator password] | When leaving home for a long period like a vacation leave, the unit can be operated to maintain the room temperature not to be hotter in summer or not to be colder in winter. • The judgment to switch the operation mode (Cooling ⇄ Heating) is done by the both factors of the set temp. and outdoor air temp. • The set temp. and fan speed can be set. | A | | |
| 7 External Ventilation When the ventilator is combined. | On/Off operation of the external ventilator can be done. It is necessary to set from [Menu] ⇒ [Service setting] ⇒ [R/C function settings] ⇒ [Ventilation setting]. • If the "Independent" is selected for the ventilation setting, the ventilator can be operated or stopped. | A | ○ | |
| 8 Select the language | Select the language to display on the remote control. • Select from English, German, French, Spanish, Italian, Dutch, Turkish, Portuguese, Russian, Polish, Japanese and Chinese. *1 | A | | |
| 9 Silent mode control | *2 The period of time to operate the unit by prioritizing the quietness can be set. • Start and end can be set for the silent mode | A | | |
| 4.Energy-saving setting | | | | |
| Administrator password | | | | |
| 1 Sleep timer | To prevent the timer from keeping ON, set hours to stop operation automatically with this timer. • The selectable range of setting time is from 30 to 240 minutes. (10-minute intervals) • When setting is "Enable", this timer will activate whenever the ON timer is set. | A | △ | |
| 2 Peak-cut timer | Power consumption can be reduced by restructuring the maximum capacity. Set the [Start time], the [End time] and the capacity limit % (Peak-cut %). • 4-operation patterns per day can be set at maximum. • The setting time can be changed by 5-minute intervals. • The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval) • Holiday setting is available. | A | | |
| 3 Automatic temp set back | After the elapse of the set time period, the current set temp. will be set back to the [Set back time.] • The setting can be done in cooling and heating mode respectively. • Selectable range of the set time is from 20 min. to 120 min. (10 min. interval). • Set the [Set back temp.] by 1°C interval. | A | △ | |
| 4 Motion sensor control When the panel with the motion sensor is assembled. | *1 When the motion sensor is used, it is necessary to set Enable or Disable for the "Power control" and the "Auto-off". | A | | |
| 5.Filter | | | | |
| 1 Filter sign reset | Filter sign reset | The filter sign can be reset. | A | |
| | Setting next cleaning date | The next cleaning date can be set. | A | |
| 6.User setting | | | | |
| 1 Internal settings | Clock setting | The current date and time can be set or revised. • If a power failure continues no longer than 80 hours, the clock continues to tick by the built-in power source. | A | △ |
| | Date and time display | [Display] or [Hide] the date and/or time can be set, and [12H] or [24H] display can be set. | A | |
| | Summer time | When select [Enable], the +1hour adjustment of current time can be set. When select [Disable], the [Summer time] adjustment can be reset. | A | |
| | Contrast | The contrast of LCD can be adjusted higher or lower. | A | |
| | Backlight | Switching on/off a light can be set and period of the lighting time can be set within the range of 5sec-90 sec (5sec interval). | A | |
| | Control sound | It can set with or without [Control sound (beep sound)] at touch panel. | A | |
| | Operation lamp luminance | *1 This is used to adjust the luminance of operation lamp. | A | |
| 2 Administrator settings [Administrator password] | Permission/Prohibition setting | • Permission/Prohibition setting of operation can be set. [On/Off] [Change set temp] [Change operation mode] [Change flap direction] [Change fan speed] [High power operation] [Energy-saving operation] [Timer] Request for administrator can be set. [Individual flap control] [Weekly timer] [Select the language] [Anti draft setting] *1 | A | △ |
| | Outdoor unit silent mode timer | The period of time to operate the outdoor unit by prioritizing the quietness can be set. • The [Start time] and the [End time] for operating outdoor unit in silent mode can be set. • The period of the operation time can be set once a day by 5-minute intervals. | A | △ |
| | Setting temp. range | The upper/lower limit of temp. setting range can be set. • The limitation of indoor temp. setting range can be set for each operation mode in cooling and heating. | A | △ |

⑤ Operation and setting from remote control (continued)

| Setting & display item | | Description | RC-EX3A | RC-E5 | |
|--|---|--|--|-------|---|
| 2 Administrator settings [Administrator password] | Temp increment setting | The temp increment setting can be changed by 0.5°C or 1.0°C. | A | | |
| | Set temp display | Ways of displaying setting temperatures can be selected. | A | | |
| | R/C display setting | Register [Room name] [Name of I/U] Display [Indoor temp display] or not. Display [Error code display] or not. Display [Heating stand-by display] [Defrost operation display] [Auto cooling/heating display] [Display temp of R/C, Room, Outdoor] or not. | A | △ | |
| | Change administrator password | The administrator password can be changed. (Default setting is "0000") The administrator password can be reset. | A B | | |
| | F1/F2 function setting *1 | Functions can be set for F1 and F2. Selectable functions: [Anti draft ON/OFF] *2 [High power operation], [Energy-saving operation], [Silent mode cont.], [Home leave mode], [Favorite set 1], [Favorite set 2] and [Filter sign reset]. | A | | |
| 7. Service setting | | | | | |
| 1 Installer settings [Service password] | Installation date | The [Installation date] can be registered. • When registering the [Installation date], the [Next service date] is displayed automatically. (For changing the [Next service date], please refer the item of [Service & Maintenance]) | B | | |
| | Company information | The [Company information] can be registered and can be displayed on the R/C. • The [Company] can be registered within 26 characters. • The [Phone No.] can be registered within 13 digits. | B | | |
| | Test run | On/Off operation of the test run can be done. | | | |
| | | Cooling test run | The [Cooling test run] can be done at 5°C of set temp. for 30 minutes. | B | ○ |
| | Drain pump test run | Only drain pump can be operated. | | | |
| | Static pressure adjustment | In case of combination with only the ducted indoor unit which has a function of static pressure adjustment, the static pressure is adjustable. • It can be set for each indoor unit individually. | B | | |
| | Change auto-address | The set address of each indoor unit decided by auto-address setting method can be changed to any other address. (For multiple KX units only) | B | △ | |
| | Address setting of main IU | Main indoor unit address can be set. • Only the Main indoor unit can change operation mode and the Sub indoor units dominated by the Main indoor shall follow. • The Main indoor unit can domain 10 indoor units at a maximum. | B | △ | |
| | IU back-up function | When a pair of indoor units (2 groups) is connected to one unit of remote control, it can be set Enable or Disable for the [IU rotation], [IU capacity back-up] and [IU fault back-up] | B | | |
| | Motion sensor setting *1 | Set Enable or Disable for the infrared sensor detectors of indoor units connected to the remote control. If Disable is selected, it cannot be control the motion sensor control for the energy-saving setting. | B | | |
| 2 R/C function setting [Service password] | Main/Sub R/C | The R/C setting of [Main/Sub] can be changed. | B | ○ | |
| | Return air temp | When two or more indoor units are connected to one unit of remote control, suction sensors, which are used for the judgement by thermostat, can be selected. • It can be selected from [Individual], [Master IU] and [Average temp]. | B | | |
| | R/C sensor | It can be set the mode to switch to the remote control sensor. It can be selected from cooling and heating. | B | △ | |
| | R/C sensor adjustment | The offset value of [R/C sensor] sensing temp. can be set respectively in heating and cooling. | B | △ | |
| | Operation mode | Enable or Disable can be set for each operation mode. | B | △ | |
| | °C / °F | Set the unit for setting temperatures. • °C or °F can be selected. | B | | |
| | Fan speed | Fan speeds can be selected. | B | ○ | |
| | External input | When two or more indoor units are connected to one unit of remote control, the range to apply CNT inputs can be set. | B | ○ | |
| | Upper/lower flap control | [Stop at fixed position] or [Stop at any position] can be selected for the upper and lower louvers. | B | ○ | |
| | Left/right flap control *1 | [Fixed position stop] or [Stop at any position] can be selected for the right and left louvers. | B | | |
| | Ventilation setting | Combination control for ventilator can be set. | B | ○ | |
| | Auto-restart | The operation control method after recovery of power failure happened during operation can be set. | B | ○ | |
| | Auto temp setting | [Enable] or [Disable] of [Auto temp setting] can be selected. | B | | |
| | Auto fan speed | [Enable] or [Disable] of [Auto fan speed] can be selected. | B | | |
| | 3 IU settings [Service password] | Fan speed setting | The fan speed for indoor units can be set. | B | ○ |
| Filter sign | | The setting of filter sign display timer can be done from following patterns. | B | ○ | |
| External input 1 | | The connect of control by external input 1 can be changed. | B | ○ | |
| External input 1 signal | | The type of external input 1 signal can be changed. | B | ○ | |
| External input 2 | | The connect of control by external input 2 can be changed. | B | | |
| External input 2 signal | | The type of external input 2 signal can be changed. | B | | |
| Heating thermo-OFF temp adjustment | | The judgement temp. of heating thermo-off can be adjusted within the range from 0 to +3°C (1°C interval) | B | △ | |
| Return temperature adjustment | | The sensing temp. of return air temp. sensor built in the indoor unit can be adjusted within the range of ±2°C. | B | △ | |
| Fan control in cooling thermo-OFF | | Fan control, when the cooling thermostat is turned OFF, can be changed. | B | ○ | |
| Fan control in heating thermo-OFF | | Fan control, when the heating thermostat is turned OFF, can be changed. | B | ○ | |
| Anti-frost temp | | Judgment temperature for the anti-frost control during cooling can be changed. | B | ○ | |
| Anti-frost control | | When the anti-frost control of indoor unit in cooling is activated, the fan speed can be changed. | B | ○ | |
| Drain pump operation | | In any operation mode in addition to cooling and dry mode, the setting of drain pump operation can be done. | B | | |
| Keep fan operating after cooling is stopped | | The time period residual fan operation after stopping or thermo-off in cooling mode can be set. | B | ○ | |
| Keep fan operating after heating is stopped | | The time period residual fan operation after stopping or thermo-off in heating mode can be set. | B | ○ | |
| Intermittent fan operation in heating | | The fan operation rule following the residual fan operation after stopping or thermo-off in heating mode can be set. | B | ○ | |
| Fan circulator operation | | In case that the fan is operated as the circulator, the fan control rule can be set. | B | | |
| Control pressure adjust | | When only the OA processing units are operated, control pressure value can be changed. | B | | |
| Auto operation mode | The [Auto rule selection] for switching the operation mode automatically can be selected from 3 patterns. | B | | | |
| Thermo. rule setting | When selecting [Outdoor air temp. control], the judgment temp can be offset by outdoor temp.. | B | | | |
| Auto fan speed control | Auto switching range for the auto fan speed control can be set. | B | | | |
| IU overload alarm | If the difference between the setting temperature and the suction temperature becomes larger than the temperature difference set for the overload alarm, at 30 minutes after the start of operation, the overload alarm signal is transmitted from the external output (CNT-5). | B | | | |
| External output setting *1 | Functions assigned to the external outputs 1 to 4 can be changed. | B | | | |
| 4 Service & Maintenance [Service password] | IU address | Max 16 indoor units can be connected to one remote control, and all address No. of the connected indoor units can be displayed. • The indoor unit conforming to the address No. can be identified by selecting the address No. and tapping [Check] to operate the indoor fan. | B | ○ | |
| | Next service date | The [Next service date] can be registered. • The [Next service date] and [Company information] is displayed on the message screen. | A B | ○ | |
| | Operation data | The [Operation data] for indoor unit and outdoor unit can be displayed. | B | ○ | |
| | Error display | Error history | The error history can be displayed. | | |
| | | Display anomaly data | The operation data just before the latest error stop can be displayed. | B | △ |
| | | Erase anomaly data | Anomaly operation data can be erased. | | |
| | | Reset periodical check | The timer for the periodical check can be reset. | | |
| Saving IU settings | The [IU settings] memorized in the indoor PCB connected to the remote control can be saved in the memory of the remote control. | B | | | |
| Special settings | [Erase IU address] [CPU reset] [Restore of default setting] [Touch panel calibration] | B | △ | | |
| Indoor unit capacity display *1 | Address No. and capacities of indoor units connected to the remote control are displayed. | B | | | |
| 8. Contact company | | | | | |
| 9. Inspection | | | | | |
| Confirmation of Inspection | | This is displayed when any error occurs. | A | △ | |
| 10. PC connection | | | | | |
| USB connection | | Weekly timer setting and etc., can be set from PC. | C | | |



◆ Listed items may not function depending on the specifications of indoor and outdoor units which are combined.

1.10.3 Installation of wired remote control (Option parts)

(1) Model RC-EX3A


1. Safety precautions

- Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

| | |
|--|---|
|  WARNING | Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc. |
|  CAUTION | Failure to follow these instructions properly may cause injury or property damage. |

It could have serious consequences depending on the circumstances.

- The following pictograms are used in the text.

| | | | |
|---|-----------|---|---------------------------------------|
|  | Never do. |  | Always follow the instructions given. |
|---|-----------|---|---------------------------------------|

- Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

WARNING



Consult your dealer or a professional contractor to install the unit.

Improper installation made on your own may cause electric shocks, fire or dropping of the unit.



Installation work should be performed properly according to this installation manual.

Improper installation work may result in electric shocks, fire or break-down.



Be sure to use accessories and specified parts for installation work.

Use of unspecified parts may result in drop, fire or electric shocks.



Install the unit properly to a place with sufficient strength to hold the weight.

If the place is not strong enough, the unit may drop and cause injury.



Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.

Power source with insufficient and improper work can cause electric shock and fire.



Shut OFF the main power source before starting electrical work.

Otherwise, it could result in electric shocks, break-down or malfunction.



Do not modify the unit.

It could cause electric shocks, fire, or break-down.



Be sure to turn OFF the power circuit breaker before repairing/ inspecting the unit.

Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.

 **WARNING**

Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.



If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.

Do not install the unit where water vapor is generated excessively or condensation occurs.



It could cause electric shocks, fire, or break-down.

Do not use the unit in a place where it gets wet, such as laundry room.



It could cause electric shocks, fire, or break-down.

Do not operate the unit with wet hands.



It could cause electric shocks.

Do not wash the unit with water.



It could cause electric shocks, fire, or break-down.

Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.



Improper connections or fixing could cause heat generation, fire, etc.

Seal the inlet hole for remote control cable with putty.



If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

If dew or water enters the unit, it may cause screen display anomalies.

When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.



It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

Do not leave the remote control with its upper case removed.



If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

 CAUTION

Do not install the remote control at following places.

- (1) It could cause break-down or deformation of remote control.
- Where it is exposed to direct sunlight
 - Where the ambient temperature becomes 0 °C or below, or 40 °C or above
 - Where the surface is not flat
 - Where the strength of installation area is insufficient
- (2) Moisture may be attached to internal parts of the remote control, resulting in a display failure.
- Place with high humidity where condensation occurs on the remote control
 - Where the remote control gets wet
- (3) Accurate room temperature may not be detected using the temperature sensor of the remote control.
- Where the average room temperature cannot be detected
 - Place near the equipment to generate heat
 - Place affected by outside air in opening/closing the door
 - Place exposed to direct sunlight or wind from air-conditioner
 - Where the difference between wall and room temperature is large



To connect to a personal computer via USB, use the dedicated software.**Do not connect other USB devices and the remote control at the same time.**

It could cause malfunction or break-down of the remote control/personal computer.

2 . Accessories & Prepare on site

Following parts are provided.

| | |
|-------------|--|
| Accessories | R/C main unit, wood screw (ø3.5 x 16) 2 pcs, Quick reference |
|-------------|--|

Following parts are arranged at site. Prepare them according to the respective installation procedures.

| Item name | Q'ty | Remark |
|---|-------------|--|
| Switch box For 1 piece or 2 pieces (JIS C 8340 or equivalent) | 1 | These are not required when installing directly on a wall. |
| Thin wall steel pipe for electric appliance directly on a wall. (JIS C 8305 or equivalent) | As required | |
| Lock nut, bushing (JIS C 8330 or equivalent) | As required | |
| Lacing (JIS C 8425 or equivalent) | As required | Necessary to run R/C cable on the wall. |
| Putty | Suitably | For sealing gaps |
| Molly anchor | As required | |
| R/C cable (0.3 mm ² x 2 pcs) | As required | See right table when longer than 100 m |

When the cable length is longer than 100 m, the max size for wires used in the R/C case is 0.5 mm². Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

| | |
|---------|--------------------------------|
| ≦ 200 m | 0.5 mm ² x 2 cores |
| ≦ 300m | 0.75 mm ² x 2 cores |
| ≦ 400m | 1.25 mm ² x 2 cores |
| ≦ 600m | 2.0 mm ² x 2 cores |

3 . Installation place

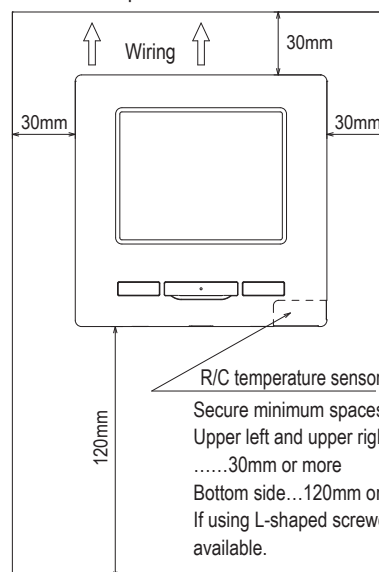
Secure the installation space shown in the figure.

For the installation method, "embedding wiring" or "exposing wiring" can be selected.

For the wiring direction, "Backward", "Upper center" or "Upper left" can be selected.

Determine the installation place in consideration of the installation method and wiring direction.

Installation space

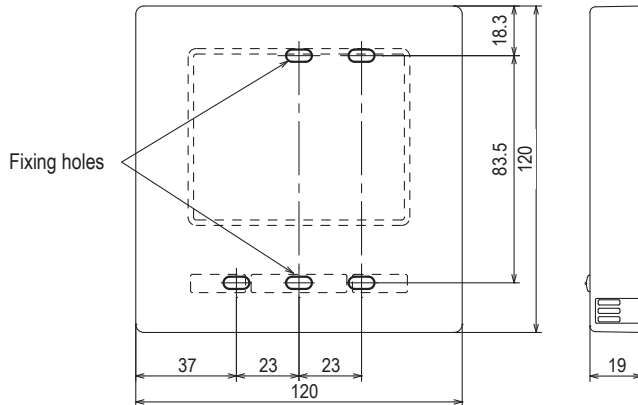


Secure minimum spaces for disassembling the case.
 Upper left and upper right sides
30mm or more
 Bottom side...120mm or more
 If using L-shaped screwdriver, 50mm or more is available.

4 . Installation procedure

Perform installation and wiring work for the remote control according to the following procedure.

Dimensions (Viewed from front)



To disassemble the R/C case into the upper and lower pieces after assembling them once

- Insert the tip of flat head screwdriver or the like in the recess at the lower part of R/C and twist it lightly to remove. It is recommended that the tip of the screwdriver be wrapped with tape to avoid damaging the case.

Take care to protect the removed upper case from moisture or dust.

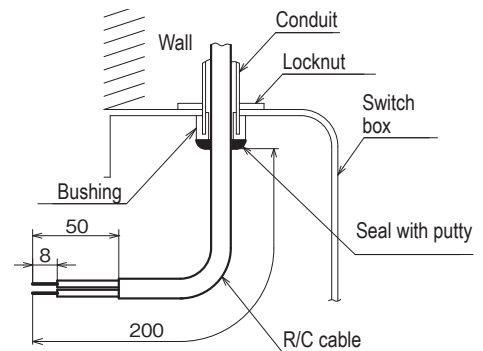
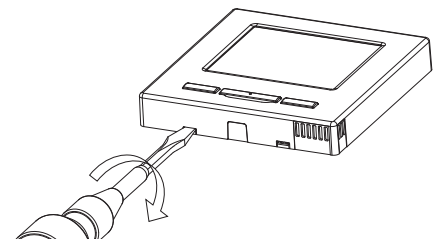
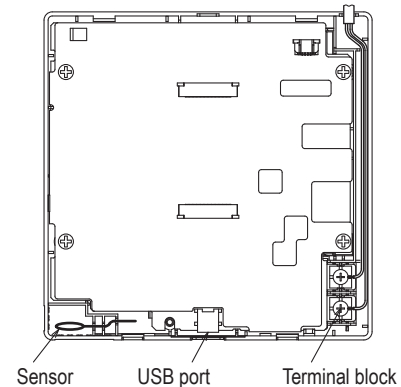
In case of embedding wiring

(When the wiring is retrieved "Backward")

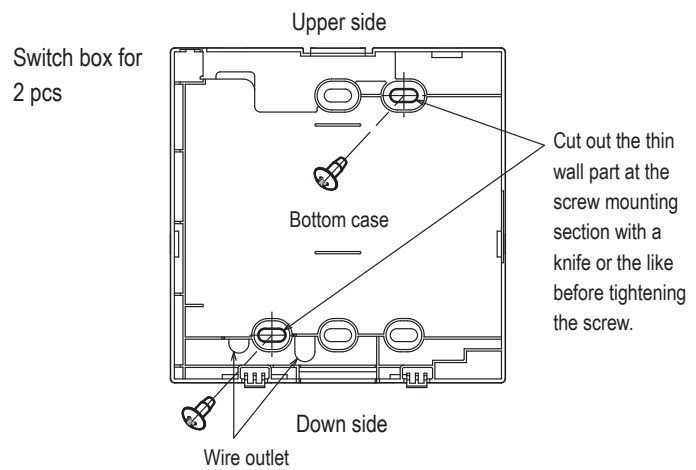
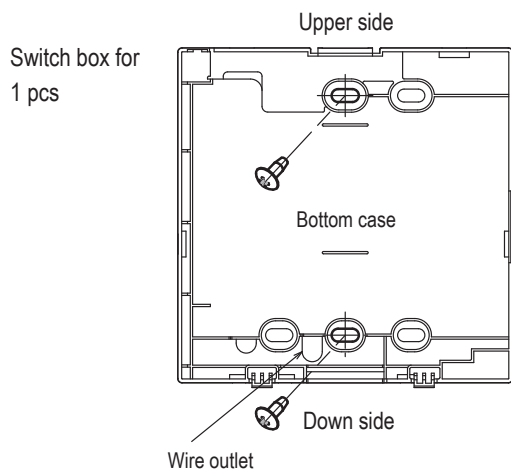
① Embed the switch box and the R/C wires beforehand.

Seal the inlet hole for the R/C wiring with putty.

PCB side (Viewed from rear)



② When wires are passed through the bottom case, fix the bottom case at 2 places on the switch box.



- ③ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.
- ④ Install the upper case with care not to pinch wires of R/C.

Cautions for wire connection

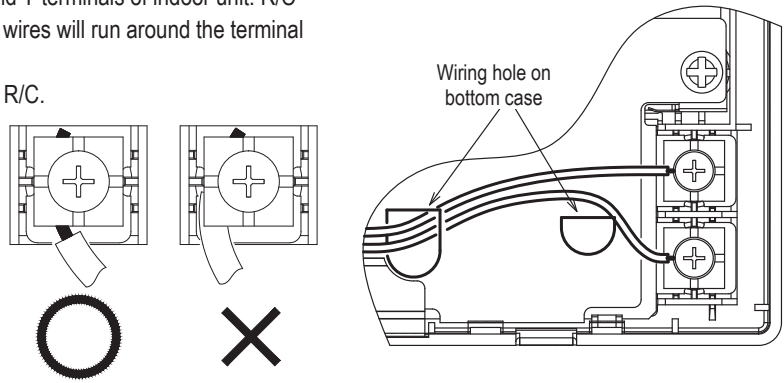
Use wires of no larger than 0.5 mm² for wiring running through the remote control case. Take care not to pinch the sheath.

Tighten by hand (0.7 N·m or less) the wire connection. If the wire is connected using an electric driver, it may cause failure or deformation.

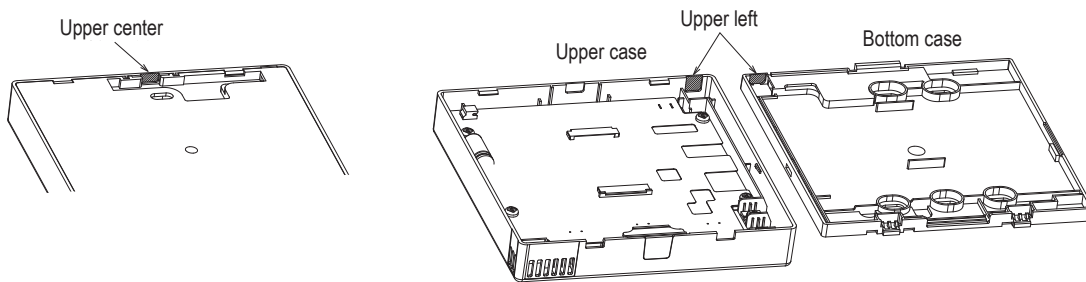
In case of exposing wiring

(When the wiring is taken out from the “upper center” or “upper left” of R/C)

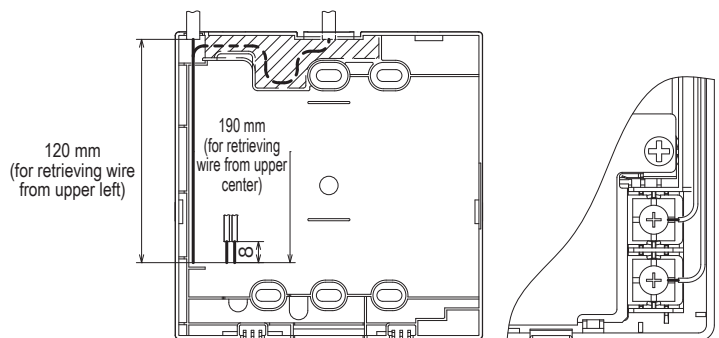
- ① Cut out the thin wall sections on the cases for the size of wire.



When taking the wiring out from the upper center, open a hole before separating the upper and bottom cases. This will reduce risk of damaging the PCB and facilitate subsequent work.
 When taking the wiring out from the upper left, take care not to damage the PCB and not to leave any chips of cut thin wall inside.



- ② Fix the bottom R/C case on a flat surface with two wood screws.
- ③ In case of the upper center, pass the wiring behind the bottom case. (Hatched section)
- ④ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.
- ⑤ Install the top case with care not to pinch wires of R/C.
- ⑥ Seal the area cut in ① with putty.

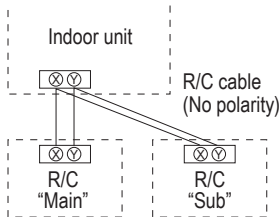


5 . Main/Sub setting when more than one remote control are used

Up to two units of R/C can be used at the maximum for 1 indoor unit or 1 group.

One is main R/C and the other is sub R/C.

Operating range is different depending on the main or sub R/C.



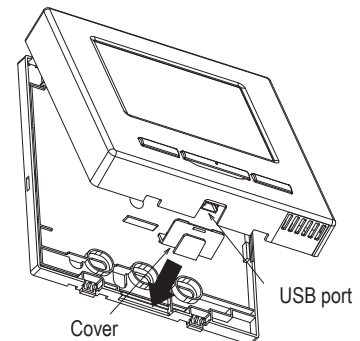
| R/C operations | | Main | Sub | |
|--|-------------------------------|--------------------------------|-----|---|
| Run/Stop, Change set temp., Change flap direction, Auto swing, Change fan speed operations | | ○ | ○ | |
| High power operation, Energy-saving operation | | ○ | ○ | |
| Silent mode control | | ○ | × | |
| Useful functions | Individual flap control | ○ | × | |
| | Anti draft setting | ○ | × | |
| | Timer | ○ | ○ | |
| | Favorite setting | ○ | ○ | |
| | Weekly timer | ○ | × | |
| | Home leave mode | ○ | × | |
| | External ventilation | ○ | ○ | |
| | Select the language | ○ | ○ | |
| | Silent mode control | ○ | × | |
| | Energy-saving setting | ○ | × | |
| Filter | Filter sign reset | ○ | ○ | |
| User setting | Initial settings | | ○ | ○ |
| | Administrator settings | Permission/Prohibition setting | ○ | × |
| | | Outdoor unit silent mode timer | ○ | × |
| | | Setting temp. range | ○ | × |
| | Temp increment setting | ○ | × | |
| | Set temp. display | ○ | ○ | |
| | R/C display setting | ○ | ○ | |
| | Change administrator password | ○ | ○ | |
| F1/F2 function setting | ○ | ○ | | |

○ : operable × : not operable

| R/C operations | | Main | Sub | | |
|-----------------|------------------------------|----------------------------|----------------------------|---|---|
| Service setting | Installation settings | Installation date | ○ | × | |
| | | Company information | ○ | ○ | |
| | | Test run | ○ | × | |
| | | Static pressure adjustment | ○ | × | |
| | | Change auto-address | ○ | × | |
| | | Address setting of main IU | ○ | × | |
| | | IU back-up function | ○ | × | |
| | | Motion sensor setting | ○ | × | |
| | | R/C function settings | Main/Sub of R/C | ○ | ○ |
| | | | Return air temp. | ○ | × |
| | | | R/C sensor | ○ | × |
| | R/C sensor adjustment | | ○ | × | |
| | Operation mode | | ○ | × | |
| | °C / °F | | ○ | × | |
| | Fan speed | | ○ | × | |
| | External input | | ○ | × | |
| | Upper/lower flap control | | ○ | × | |
| | Left/right flap control | | ○ | × | |
| | IU settings | Ventilation setting | ○ | × | |
| | | Auto-restart | ○ | × | |
| | | Auto temp. setting | ○ | × | |
| | | Auto fan speed | ○ | × | |
| | | Service & Maintenance | IU address | ○ | ○ |
| | | | Next service date | ○ | × |
| | | | Operation data | ○ | × |
| | Error display | | Error history | ○ | ○ |
| | | | Display/erase anomaly data | ○ | × |
| | | | Reset periodical check | ○ | ○ |
| | Saving IU settings | | ○ | × | |
| | Special settings | | Erase IU address | ○ | × |
| | | | CPU reset | ○ | ○ |
| | | | Restore of default setting | ○ | × |
| | | Touch panel calibration | ○ | ○ | |
| | Indoor unit capacity display | ○ | × | | |

Advice: Connection to personal computer

It can be set from a personal computer via the USB port (mini-B). Connect after removing the cover for USB port of upper case. Replace the cover after use. Special software is necessary for the connection. For details, view the web site.



Advice: Initializing of password

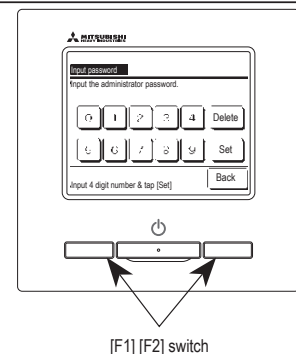
Administrator password (for daily setting items) and service password (for installation, test run and maintenance) are used.

○ The administrator password at factory default is "0000". This setting can be changed (Refer to User's Manual).

If the administrator password is forgotten, it can be initialized by holding down the [F1] and [F2] switches together for five seconds on the administrator password input screen.

○ Service password is "9999", which cannot be changed.

When the administrator password is input, the service password is also accepted.



Advice

When connecting two or more FDT/FDTC to one R/C, unify the panel type either to a panel with anti draft function or a standard panel.



(2) Model RC-E5

Read together with indoor unit's installation manual.

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connection or hold will cause abnormal heat generation or fire. !
- Make sure the power source is turned off when electric wiring work.
Otherwise, electric shock, malfunction and improper running may occur. !

⚠ CAUTION

- Do not install the remote control at the following places in order to avoid malfunction.

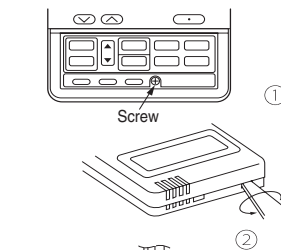
| | |
|---------------------------------------|---|
| (1) Places exposed to direct sunlight | (4) Hot surface or cold surface enough to generate condensation |
| (2) Places near heat devices | (5) Places exposed to oil mist or steam directly |
| (3) High humidity places | (6) Uneven surface |

⊘
- Do not leave the remote control without the upper case.
In case the upper case needs to be detached, protect the remote control with a packaging box or bag in order to keep it away from water and dust. ⊘

| | |
|-----------------|---|
| Accessories | Remote control, wood screw (ø3.5×16) 2 pieces |
| Prepare on site | Remote control cord (2 cores) the insulated thickness in 1mm or more. [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed) |

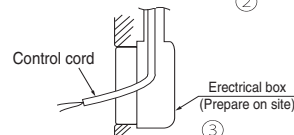
Installation procedure

- ① Open the cover of remote control, and remove the screw under the buttons without fail.
- ② Remove the upper case of remote control.
Insert a flat-blade screwdriver into the dented part of the upper part of the remote control, and wrench slightly.

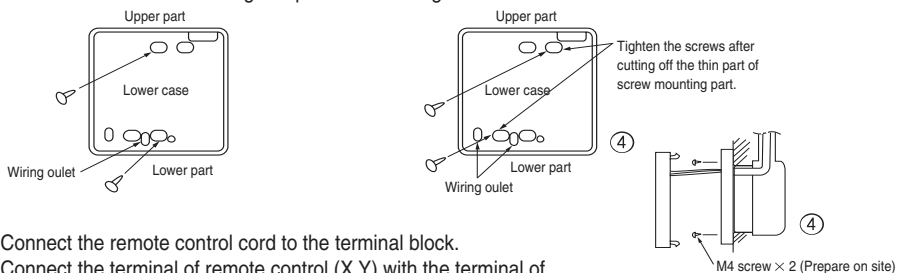


[In case of embedding cord]

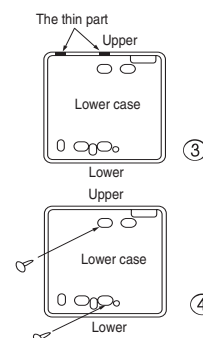
- ③ Embed the electrical box and remote control cord beforehand.



- ④ Prepare two M4 screws (recommended length is 12-16mm) on site, and install the lower case to electrical box. Choose either of the following two positions in fixing it with screws.



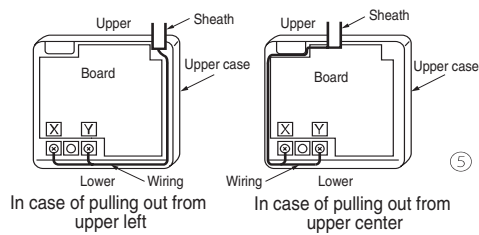
- ⑤ Connect the remote control cord to the terminal block.
Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)
- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.



[In case of exposing cord]

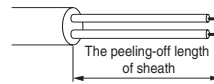
- ③ You can pull out the remote control cord from left upper part or center upper part.
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.
- ④ Install the lower case to the flat wall with attached two wooden screws.

- ⑤ Connect the remote control cord to the terminal block.
Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y).
(X and Y are no polarity)
Wiring route is as shown in the right diagram depending on the pulling out direction.



The wiring inside the remote control case should be within 0.3mm² (recommended) to 0.5mm².
The sheath should be peeled off inside the remote control case.
The peeling-off length of each wire is as below.

| Pulling out from upper left | Pulling out from upper center |
|-----------------------------|-------------------------------|
| X wiring : 215mm | X wiring : 170mm |
| Y wiring : 195mm | Y wiring : 190mm |



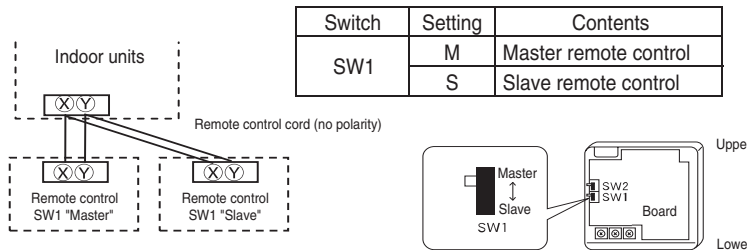
- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.
- ⑦ In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote control

- ① Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- ② Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
100 - 200m.....0.5mm² × 2 cores
Under 300m.....0.75mm² × 2 cores
Under 400m.....1.25mm² × 2 cores
Under 600m.....2.0mm² × 2 cores

Master/ slave setting when more than one remote controls are used

A maximum of two remote controls can be connected to one indoor unit (or one group of indoor units.)



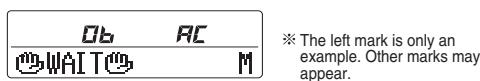
Set SW1 to "Slave" for the slave remote control. It was factory set to "Master" for shipment.
Note: The setting "Remote control sensor enabled" is only selectable with the master remote control in the position where you want to check room temperature.
The air-conditioner operation follows the last operation of the remote control regardless of the master/ slave setting of it.

The indication when power source is supplied

When power source is turned on, the following is displayed on the remote control until the communication between the remote control and indoor unit settled.

Master remote control : " WAIT M"
Slave remote control : " WAIT S"

At the same time, a mark or a number will be displayed for two seconds first.
This is the software's administration number of the remote control, not an error cord.



When remote control cannot communicate with the indoor unit for half an hour, the below indication will appear.
Check wiring of the indoor unit and the outdoor unit etc.



The range of temperature setting

When shipped, the range of set temperature differs depending on the operation mode as below.

Heating : 16-30°C (55-86°F)

Except heating (cooling, fan, dry, automatic) : 18-30°C (62-86°F)

● **Upper limit and lower limit of set temperature can be changed with remote control.**

Upper limit setting: valid during heating operation. Possible to set in the range of 20 to 30°C (68 to 86°F).

Lower limit setting: valid except heating (automatic, cooling, fan, dry) Possible to set in the range of 18 to 26°C (62 to 79°F).

When you set upper and lower limit by this function, control as below.

1. When ⑫ TEMP RANGE SET, remote control function of function setting mode is "INDN CHANGE" (factory setting),
 [If upper limit value is set]

During heating, you cannot set the value exceeding the upper limit.

- [If lower limit value is set]

During operation mode except heating, you cannot set the value below the lower limit.

2. When ⑫ TEMP RANGE SET, remote control function of function setting mode is "NO INDN CHANGE"
 [If upper limit value is set]

During heating, even if the value exceeding the upper limit is set, upper limit value will be sent to the indoor unit.
 But, the indication is the same as the temperature set.

- [If lower limit value is set]

During except heating, even if the value lower than the lower limit is set, lower limit value will be sent to the indoor unit.
 But, the indication is the same as the temperature set.

● **How to set upper and lower limit value**

1. Stop the air-conditioner, and press [○] (SET) and [↺] (MODE) button at the same time for over three seconds.

The indication changes to "FUNCTION SET ▼".

2. Press [▼] button once, and change to the "TEMP RANGE ▲" indication.
3. Press [○] (SET) button, and enter the temperature range setting mode.
4. Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using [▲] [▼] button.
5. Press [○] (SET) button to fix.

6. When "UPPER LIMIT ▼" is selected (valid during heating)

① Indication: "↵ ▼ ^ SET UP" → "UPPER 30°C ▼"

② Select the upper limit value with temperature setting button [▼] [▲]. Indication example: "UPPER 26°C ▼ ^" (blinking)

③ Press [○] (SET) button to fix. Indication example: "UPPER 26°C" (Displayed for two seconds)

After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".

7. When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)

① Indication: "↵ ▼ ^ SET UP" → "LOWER 18°C ^"

② Select the lower limit value with temperature setting button [▼] [▲]. Indication example: "LOWER 24°C ▼ ^" (blinking)

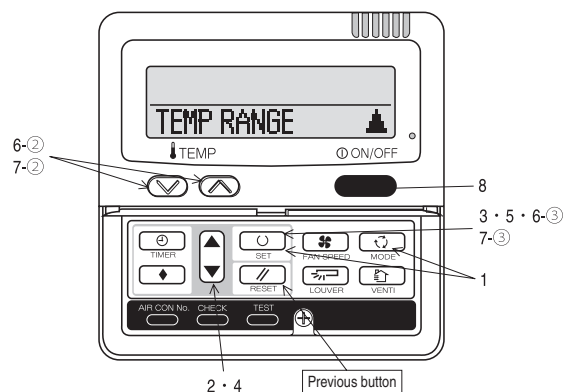
③ Press [○] (SET) button to fix. Indication for example: "LOWER 24°C" (Displayed for two seconds)

After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".

8. Press [ON/OFF] button to finish.

• It is possible to finish by pressing [ON/OFF] button on the way, but unfinished change of setting is unavailable.

• During setting, if you press [✎] (RESET) button, you return to the previous screen.



The functional setting

● The initial function setting for typical using is performed automatically by the indoor unit connected, when remote control and indoor unit are connected.
 As long as they are used in a typical manner, there will be no need to change the initial settings.
 If you would like to change the initial setting marked "○", set your desired setting as for the selected item.
 The procedure of functional setting is shown as the following diagram.

[Flow of function setting]

Start : Stop air-conditioner and press "○" (SET) and "○" (MODE) buttons at the same time for over three seconds.
 Finalize : Press "○" (SET) button.
 Reset : Press "▲" (PRESET) button.
 Select : Press "▲" (UP) button.
 End : Press "ON/OFF" button.
 It is possible to finish above setting on the way, and unfinished change of setting is unavailable.
 * ○ : Initial settings
 * ※ : Automatic criterion

Record and keep the setting

Consult the technical data etc. for each control details

Stop air-conditioner and press "○" (SET) + "○" (MODE) buttons at the same time for over three seconds.

Note 1: The initial setting marked "※" is decided by connected indoor and outdoor unit, and is automatically defined as following table.

| Function No. | Item | Default | Model |
|---------------------------|--------------|--------------|--|
| Remote control function02 | AUTO RUN SET | AUTO RUN ON | *Auto-RUN* mode selectable indoor unit. |
| | AUTO RUN OFF | AUTO RUN OFF | Indoor unit without *Auto-RUN* mode |
| Remote control function06 | FAN SPEED SW | 3 SPEED | Indoor unit with two or three step of air flow setting |
| | LOUVER SW | INVALID | Indoor unit with only one of air flow setting |
| Remote control function07 | LOUVER SW | VALID | Indoor unit with automatically swing louver |
| | LOUVER SW | INVALID | Indoor unit without automatically swing louver |
| Remote control function13 | I/U FAN | HI-MID-LO | Indoor unit with three step of air flow setting |
| | I/U FAN | HI-LO | Indoor unit with two step of air flow setting |
| | I/U FAN | HI-MID | Indoor unit with only one of air flow setting |
| Remote control function15 | MODEL TYPE | HEAT PUMP | Heat pump unit |
| | MODEL TYPE | COOLING ONLY | Exclusive cooling unit |

Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.
 But only master indoor unit is received the setting change of indoor unit function '05 EXTERNAL INPUT' and '06 PERMISSION / PROHIBITION'.

FUNCTION SET (Remote control function)

| Function | setting | |
|-----------------------------|---------------------------------------|--|
| 01 ESP SET | AUTO RUN VALID / AUTO RUN OFF INVALID | Validate setting of ESP-External Static Pressure / Invalidate setting of ESP |
| 02 AUTO RUN SET | AUTO RUN ON / AUTO RUN OFF | Automatic operation is impossible |
| 03 MODE SW | VALID / INVALID | Temperature setting button is not working |
| 04 ON/OFF SW | VALID / INVALID | Mode button is not working |
| 05 FAN SPEED SW | VALID / INVALID | Fan speed button is not working |
| 06 LOUVER SW | VALID / INVALID | Louver button is not working |
| 07 THER SW | VALID / INVALID | Timer button is not working |
| 08 THERMOSUR SET | THERMOSUR OFF | Remote thermostat is not working. |
| | THERMOSUR ON | Remote thermostat is working. |
| | THERMOSUR +3.0°C | Remote thermostat is working, and to be set for producing +3.0°C increase in temperature. |
| | THERMOSUR +2.0°C | Remote thermostat is working, and to be set for producing +2.0°C increase in temperature. |
| | THERMOSUR +1.0°C | Remote thermostat is working, and to be set for producing +1.0°C increase in temperature. |
| | THERMOSUR -1.0°C | Remote thermostat is working, and to be set for producing -1.0°C increase in temperature. |
| 10 AUTO RESTART | INVALID | Remote thermostat is working, and to be set for producing -2.0°C increase in temperature. |
| | VALID | Remote thermostat is working, and to be set for producing -3.0°C increase in temperature. |
| | NO VENT | In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit. |
| 12 TEMP RANGE SET | INDOOR CHANGE | In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), you can operate (stop) the ventilation device independently by (VENT) button. |
| | NO INDOOR CHANGE | If you change the range of set temperature, the indication of set temperature will vary following the control. |
| | NO INDOOR CHANGE | If you change the range of set temperature, the indication of set temperature will not vary following the control, and keep the set temperature. |
| 13 I/U FAN | HI-MID-LO | Air flow of fan becomes the three speed of Hi-Mid-Low . |
| | HI-LO | Air flow of fan becomes the two speed of Hi-Low . |
| | HI-MID | Air flow of fan becomes the two speed of Hi-Mid . |
| | I FAN SPEED | Air flow of fan is fixed at one speed. |
| 14 POSITION | POSITION STOP | If you change the remote control function '14 POSITION', you must change the indoor function '04 POSITION' accordingly. |
| | FREE STOP | You can select the louver stop position in the four. The louver can stop at any position. |
| 16 EXTERNAL CONTROL SET | INDIVIDUAL | If you input signal into CNT of the indoor printed circuit board from external, the indoor unit will be operated independently according to the input from external. |
| | FOR ALL UNITS | If you input into CNT of the indoor printed circuit board from external, all units which connect to the same remote control are operated according to the input from external. |
| 17 ROOM TEMP INDICATION SET | INDICATION OFF | In normal working indication, indoor unit temperature is indicated instead of air flow. (Only the master remote control can be indicated.) |
| | INDICATION ON | Heating preparation indication should not be indicated. |
| 18 TEMP INDICATION | INDICATION ON | Temperature indication is by degree C. |
| | INDICATION OFF | Temperature indication is by degree F. |
| 19 SET | °C | Temperature indication is by degree C. |
| | °F | Temperature indication is by degree F. |

Indoor unit No. are indicated only when plural indoor units are connected.

Note2: Fan setting of "HIGH SPEED"

| Fan tap | Indoor unit air flow setting | | | | | |
|----------------|------------------------------|-------------------|--------------|---------|---------|---------|
| | STANDARD | UH - Hi - Me - Lo | Hi - Me - Lo | Hi - Lo | Hi - Me | Hi - Hi |
| FAN SPEED SET | STANDARD | UH - Hi - Me - Lo | Hi - Me - Lo | Hi - Lo | Hi - Me | Hi - Hi |
| HIGH SPEED1, 2 | UH - UH - Hi - Me | UH - Hi - Me | UH - Me | UH - Hi | UH - UH | UH - UH |

Initial function setting of some indoor unit is "HIGH SPEED".

The filter sign is indicated after running for 180 hours.
 The filter sign is indicated after running for 600 hours.
 The filter sign is indicated after running for 1000 hours.
 The filter sign is indicated after running for 1000 hours, then the indoor unit will be stopped by completion after 24 hours.
 If you change the indoor function '04 POSITION', you must change the remote control function '14 POSITION' accordingly. You can select the louver stop position in the four. The louver can stop at any position.

Permission/prohibition control of operation will be valid.

With the VRF series, it is used to stop all indoor units connected with the same outdoor unit immediately. When stop signal is input from remote on-off terminal 'CNT-6', all indoor units are stopped immediately.

To be reset for producing +3.0°C increase in temperature during heating.
 To be reset for producing +2.0°C increase in temperature during heating.
 To be reset for producing +1.0°C increase in temperature during heating.

To be reset producing +2.0°C increase in return air temperature of indoor unit.
 To be reset producing +1.5°C increase in return air temperature of indoor unit.
 To be reset producing +1.0°C increase in return air temperature of indoor unit.

To be reset producing -1.0°C increase in return air temperature of indoor unit.
 To be reset producing -1.5°C increase in return air temperature of indoor unit.
 To be reset producing -2.0°C increase in return air temperature of indoor unit.

When heating thermostat is OFF, fan speed is low speed.
 When heating thermostat is OFF, fan speed is set speed.

When heating thermostat is OFF, fan speed is operated intermittently.
 When heating thermostat is OFF, the fan is stopped.
 When the remote thermostat is working, 'FAN OFF' is set automatically.
 Do not set 'FAN OFF' when the indoor unit's thermostat is working.

Change of indoor heat exchanger temperature to start frost prevention control.

Working only with the Single split series.
 To control frost prevention, the indoor fan tap is raised.

Drain pump is run during cooling and dry.
 Drain pump is run during cooling, dry and heating.
 Drain pump is run during cooling, dry, heating and fan.
 Drain pump is run during cooling, dry and fan.

After cooling is stopped is OFF, the fan does not perform extra operation.
 After cooling is stopped is OFF, the fan perform extra operation for half an hour.
 After cooling is stopped is OFF, the fan perform extra operation for an hour.
 After cooling is stopped is OFF, the fan perform extra operation for six hours.

After heating is stopped or heating thermostat is OFF, the fan does not perform extra operation.
 After heating is stopped or heating thermostat is OFF, the fan perform extra operation for half an hour.
 After heating is stopped or heating thermostat is OFF, the fan perform extra operation for two hours.
 After heating is stopped or heating thermostat is OFF, the fan perform extra operation for six hours.

During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after twenty minutes' OFF.
 During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after five minutes' OFF.

Connected "OA Processing" type indoor unit, and is automatically defined.

ON/OFF button (finished)

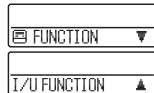
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How to set function

1. Stop air-conditioner and press (SET) (MODE) buttons at the same time for over three seconds, and the "FUNCTION SET ▼" will be displayed.



2. Press (SET) button.
3. Make sure which do you want to set, "FUNCTION ▼" (remote control function) or "I/U FUNCTION ▲" (indoor unit function).
4. Press or button.
Select "FUNCTION ▼" (remote control function) or "I/U FUNCTION ▲" (indoor unit function).



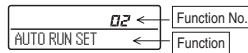
5. Press (SET) button.

6. 【On the occasion of remote control function selection】

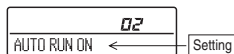
- ① "DATA LOADING" (Indication with blinking)

↓
Display is changed to "01 ESP SET".

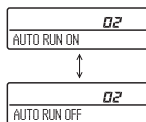
- ② Press or button.
"No. and function" are indicated by turns on the remote control function table, then you can select from them.
(For example)



- ③ Press (SET) button.
The current setting of selected function is indicated.
(for example) "AUTO RUN ON" ← If "02 AUTO RUN SET" is selected



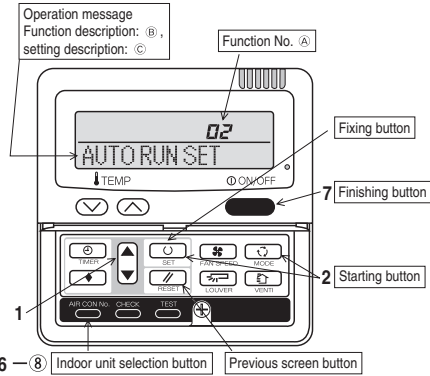
- ④ Press or button.
Select the setting.



- ⑤ Press (SET)
"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, Set as the same procedure if you want to set continuously, and if to finish, go to 7.



7. Press (ON/OFF) button.
Setting is finished.



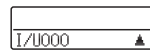
【On the occasion of indoor unit function selection】

- ① "DATA LOADING" (Blinking for 2 to 23 seconds to read the data)

↓
Indication is changed to "02 FAN SPEED SET".
Go to ②.

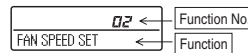
【Note】

- (1) If plural indoor units are connected to a remote control, the indication is "I/U 000" (blinking) ← The lowest number of the indoor unit connected is indicated.

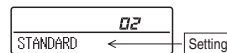


- (2) Press or button.
Select the number of the indoor unit you are to set
If you select "ALL UNIT ▼", you can set the same setting with all unites.
- (3) Press (SET) button.

- ② Press or button.
"No. and function" are indicated by turns on the indoor unit function table, then you can select from them.
(For example)



- ③ Press (SET) button.
The current setting of selected function is indicated.
(For example) "STANDARD" ← If "02 FAN SPEED SET" is selected.



- ④ Press or button.
Select the setting.

- ⑤ Press (SET) button.
"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, set as the same procedure if you want to set continuously, and if to finish, go to 7.



※ When plural indoor units are connected to a remote control, press the (AIR CON No.) button, which allows you to go back to the indoor unit selection screen. (example "I/U 000 ▲")

- It is possible to finish by pressing (ON/OFF) button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.
- Setting is memorized in the control and it is saved independently of power failure.

【How to check the current setting】

When you select from "No. and function" and press set button by the previous operation, the "Setting" displayed first is the current setting.
(But, if you select "ALL UNIT ▼", the setting of the lowest number indoor unit is displayed.)

1.10.4 Installation of outdoor unit

(1) Models SRC40-60ZSX-S

RWC012A060 

Model SRC20,25,35,40,50,60ZSX-S
SRC20,25,35ZSX-SA
R410A REFRIGERANT USED

• This installation manual deals with an outdoor unit installation only. For an indoor unit installation, refer to page 141.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
 - The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
 - WARNING** Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.
 - CAUTION** Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or property damage.
- Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.



WARNING

- **Be sure to use only for residential purpose.**
If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse, etc., it can malfunction.
- **Installation must be carried out by the qualified installer completely in accordance with the installation manual.**
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.
- **Be sure to wear protective goggles and gloves while performing installation work.**
Improper safety measures can result in personal injury.
- **Use the original accessories and the specified components for the installation.**
Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.
- **Do not install the unit near the location where leakage of flammable gases can occur.**
If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.
- **When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISO5149) in the event of leakage.**
If refrigerant density exceeds the limit, consult the dealer and install the ventilation system. Otherwise lack of oxygen can occur resulting in serious accident.
- **Install the unit in a location where unit will remain stable, horizontal and free of any vibration transmission.**
Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.
- **Do not run the unit with removed panels or protections.**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shock.
- **This unit is designed specifically for R410A.**
Using any other refrigerant can cause unit failure and personal injury.
- **Do not vent R410A into atmosphere.**
R410A is a fluorinated greenhouse gas with a Global Warming Potential(GWP)=2088.
- **Make sure that no air enters the refrigerant circuit when the unit is installed and removed.**
If air enters the refrigerant circuit, the pressure in the refrigerant circuit will become too high, which can cause burst and personal injury.
- **Be sure to use the prescribed pipes, flare nuts and tools for R410A.**
Using existing parts (for R22 or R407C) can cause refrigerant circuit burst resulting in unit failure and personal injury.
- **Be sure to connect both liquid and gas connecting pipes properly before operating the compressor.**
Do not open the liquid and gas service valves before completing piping work, and evacuation.
If the compressor is operated when connecting pipes are not connected and service valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **Be sure to tighten the flare nuts to specified torque using the torque wrench.**
Tightening flare nuts with excess torque can cause burst and refrigerant leakage after a long period.
- **During pump down work, be sure to stop the compressor before closing service valves and removing connecting pipes.**
If the connecting pipes are removed when the compressor is in operation and service valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **In the event of refrigerant leakage during installation, be sure to ventilate the working area properly.**
If the refrigerant comes into contact with naked flames, poisonous gases will be produced.
- **Electrical work must be carried out by the qualified electrician, strictly in accordance with national or regional electricity regulations.**
Incorrect installation can cause electric shock, fire or personal injury.
- **Make sure that earth leakage breaker and circuit breaker of appropriate capacities are installed.**
Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate breakers can cause electric shock, personal injury or property damage.
- **Be sure to switch off the power source in the event of installation, maintenance or service.**
If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.
- **Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- **Do not process, splice or modify the power cable, or share the socket with other power plugs.**
Improper power cable or power plug can cause fire or electric shock due to poor connection, insufficient insulation or over-current.
- **Do not perform any change in protective device or its setup condition yourself.**
Changing protective device specifications can cause electric shock, fire or burst.
- **Be sure to clamp the cables properly so that they do not touch any internal component of the unit.**
If cables touch any internal component, it can cause overheating and fire.
- **Be sure to install service cover properly.**
Improper installation can cause electric shock or fire due to intrusion of dust or water.
- **Be sure to use the prescribed power and connecting cables for electrical work.**
Using improper cables can cause electric leak, anomalous heat production or fire.
- **This appliance must be connected to main power source by means of a circuit breaker or switch with a contact separation of at least 3mm.**
Improper electrical work can cause unit failure or personal injury.
- **When plugging this unit, a plug conforming to the norm IEC60884-1 must be used.**
Using improper plug can cause electric shock or fire.
- **Be sure to connect the power source cable with power source properly.**
Improper connection can cause intrusion of dust or water resulting in electric shock or fire.

CAUTION

- **Take care when carrying the unit by hand.**
If the unit weight is more than 20kg, it must be carried by two or more persons.
Do not carry the unit by the plastic straps. Always use the carry handle.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electrical parts and cause damage resulting in fire or personal injury. Instruct the user to keep the surroundings clean.
- **If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.**
Insufficient space can result in personal injury due to falling from the height.
- **Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.**
It can affect surrounding environment and cause a claim.
- **Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.**
It can cause corrosion of heat exchanger and damage to plastic parts.
- **Do not install the unit close to the equipments that generate electromagnetic waves and/or high-harmonic waves.**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the unit in the locations where:**
 - There are heat sources nearby.
 - Unit is directly exposed to rain or sunlight.
 - There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
 - Unit is directly exposed to oil mist and steam such as kitchen.
 - Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate.
 - Drain water can not be discharged properly.
 - TV set or radio receiver is placed within 1m.
 - Height above sea level is more than 1000m.
 It can cause performance degradation, corrosion and damage of components, unit malfunction and fire.
- **Dispose of all packing materials properly.**
Packing materials contain nails and wood which can cause personal injury. Keep the polybag away from children to avoid the risk of suffocation.
- **Do not put anything on the outdoor unit.**
Object may fall causing property damage or personal injury.
- **Do not touch the aluminum fin of the outdoor unit.**
Aluminium fin temperature is high during heating operation. Touching fin can cause burn.
- **Do not touch any refrigerant pipe with your hands when the system is in operation.**
During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).
- **Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.**
The isolator should be locked in OFF state in accordance with EN60204-1.

1. ACCESSORIES AND TOOLS

| Standard accessories (Supplied with outdoor unit) | Q'ty | Locally procured parts | Tools for installation work | | |
|---|------|--|-----------------------------|--|---|
| (1) Drain grommet  | 4 | (a) Anchor bolt(M10-M12)×4 pcs | Plus headed driver | Spanner wrench | Vacuum pump* |
| (2) Drain elbow  | 1 | (b) Putty | Knife | Torque wrench [14.0-62.0N·m(1.4-6.2kg* <i>m</i>)] | Gauge manifold * |
| | | (c) Electrical tape | Saw | Wrench key (Hexagon) [4mm] | Charge hose * |
| | | (d) Connecting pipe | Tape measure | Flaring tool set * | Vacuum pump adapter* (Anti-reverse flow type) |
| | | (e) Connecting cable | Pipe cutter | Flare adjustment gauge | Gas leak detector * |
| | | (f) Power cable | | | |
| | | (g) Clamp and screw (for finishing work) | | | |

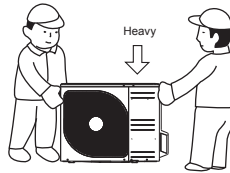
*Not included for SRC20, 25, or 35ZSX-SA.

*Designed specifically for R410A

2. OUTDOOR UNIT INSTALLATION

1. Haulage

- Always carry or move the unit with two or more persons.
 - The right hand side of the unit as viewed from the front (outlet side) is heavier.
- A person carrying the right hand side must take care of this fact. A person carrying the left hand side must hold the handle provided on the front panel of the unit with his right hand and the corner column section of the unit with his left hand.



CAUTION

When a unit is hauled, take care of its gravity center position which is shifted towards right hand side. If the unit is not hauled properly, it can go off balance and fall resulting in serious injury.

2. Selecting the installation location

Select the suitable installation location where:

- Unit will be stable, horizontal and free of any vibration transmission.
- There is no obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
- There is enough space for service and maintenance of unit.
- Neighbours are not bothered by noise or air generating from the unit.
- Outlet air of the unit does not blow directly to animals or plants.
- Drain water can be discharged properly.
- There is no risk of flammable gas leakage.
- There are no other heat sources nearby.
- Unit is not directly exposed to rain or sunlight.
- Unit is not directly exposed to oil mist and steam.
- Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will not generate or accumulate.
- Unit is not directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.
- No TV set or radio receiver is placed within 1m.
- Unit is not affected by electromagnetic waves and/or high-harmonic waves generated by other equipments.
- Strong wind does not blow against the unit outlet.
- Heavy snowfalls do not occur (If installed, provide proper protection to avoid snow accumulation).

NOTE

If the unit is installed in the area where there is a possibility of strong wind or snow accumulation, the following measures are required.

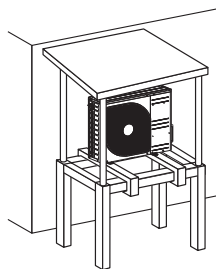
(1) Location of strong wind

- Place the unit with its outlet side facing the wall.
- Place the unit such that the direction of air from the outlet gets perpendicular to the wind direction.



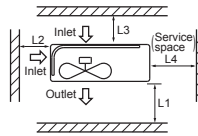
(2) Location of snow accumulation

- Install the unit on the base so that the bottom is higher than snow cover surface.
- Install the unit under eaves or provide the roof on site.



3. Installation space

- There must be 1 meter or larger space between the unit and the wall in at least 1 of the 4 sides. Walls surrounding the unit from 4 sides is not acceptable. The wall height on the outlet side should be 1200 mm or less. Refer to the following figure and table for details.



| | | (mm) | | | |
|----------------------|----|------|------|------|------|
| Example installation | | I | II | III | IV |
| Size | L1 | Open | 280 | 280 | 180 |
| | L2 | 100 | 75 | Open | Open |
| | L3 | 100 | 80 | 80 | 80 |
| | L4 | 250 | Open | 250 | Open |

NOTE

When more than one unit are installed side by side, provide a 250mm or wider interval between them as a service space.

CAUTION

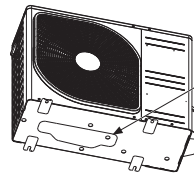
When more than one unit are installed in parallel directions, provide sufficient inlet space so that short-circuiting may not occur.

4. Drain piping work (If necessary)

Carry out drain piping work by using a drain elbow and a drain grommet supplied separately as accessories if condensed water needs to be drained out.

- Install drain elbow and drain grommet.
- Seal around the drain elbow and drain grommet with putty or adequate caulking material.

<SRC20/25/35/40/50/60ZSX-S>

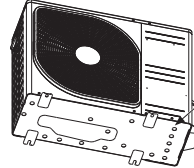


Do not put a grommet on this hole. This is a supplementary drain hole to discharge drain water, when a large amount of it is gathered.

CAUTION

Do not use drain elbow and drain grommet if there is a possibility to have several consecutive days of sub zero temperature. (There is a risk of drain water freezing inside and blocking the drain.)

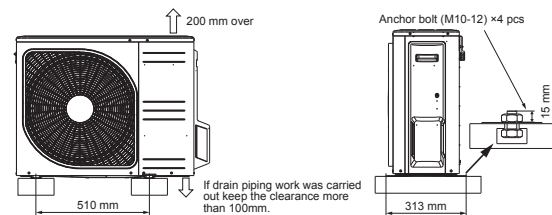
<SRC20/25/35ZSX-SA>



Do not block the drain holes when installing the outdoor unit.

5. Installation

- Install the unit on a flat level base.
- While installing the unit, keep space and fix the unit's legs with 4 anchor bolts as shown in the figure below. The protrusion of an anchor bolt from the foundation surface must be kept within 15mm.



If drain piping work was carried out keep the clearance more than 100mm.

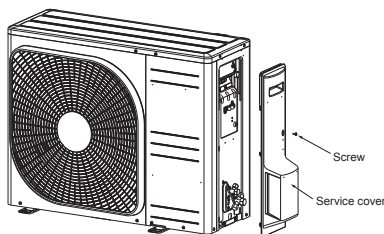
CAUTION

- Install the unit properly so that it does not fall over during earthquake, strong wind, etc.
- Make sure that unit is installed on a flat level base. Installing unit on uneven base may result in unit malfunction.

3. PREPARATION FOR WORK

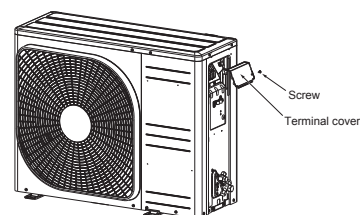
1. Removing service cover

Remove the screw. Slide service cover downwards and remove it.



2. Removing terminal cover

Remove the screw and take out terminal cover.

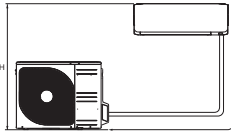


4. CONNECTING PIPING WORK

1. Restrictions on unit installation

Abide by the following restrictions on unit installation. Improper installation can cause compressor failure or performance degradation.

| | Dimensional restrictions | |
|---|--------------------------|-------------------|
| | Model SRC20/25/35 | Model SRC40/50/60 |
| Connecting pipe length(L) | 25m or less | 30m or less |
| Elevation difference between indoor and outdoor units(H)* | 15m or less | 20m or less |



* Outdoor unit installation position can be higher as well as lower than the indoor unit installation position.

2. Preparation of connecting pipe

2.1. Selecting connecting pipe

Select connecting pipe according to the following table.

| | Model SRC20/25/35 | Model SRC40/50/60 |
|-------------|-------------------|-------------------|
| Gas pipe | ø9.52 | ø12.7 |
| Liquid pipe | ø6.35 | ø6.35 |

- Pipe wall thickness must be greater than or equal to 0.8 mm.
- Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30).

NOTE

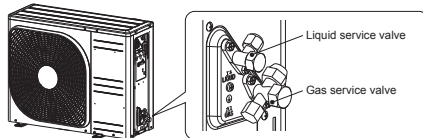
If it is required to reuse the existing connecting pipe system, refer to 5. UTILIZATION OF EXISTING PIPE.

2.2. Cutting connecting pipe

- (1) Cut the connecting pipe to the required length with pipe cutter.
- (2) Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
- (3) Cover the connecting pipe ends with the tape.

3. Piping work

Check that both liquid and gas service valves are fully closed. Carry out the piping work with service valves fully closed.



3.1. Flaring pipe

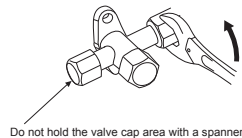
- (1) Take out flare nuts from the service valves of outdoor unit and engage them onto connecting pipes.
- (2) Flare the pipes according to table and figure shown below. Flare dimensions for R410A are different from those for conventional refrigerant. Although it is recommended to use the flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a flare adjustment gauge.

| Copper pipe outer diameter | A _{0-0.4} | Rigid (clutch) type | |
|----------------------------|--------------------|---------------------|--------------|
| | | R410A | Conventional |
| ø6.35 | 9.1 | | |
| ø9.52 | 13.2 | 0-0.5 | 1.0-1.5 |
| ø12.7 | 16.6 | | |

3.2. Connecting pipes

- (1) Connect pipes on both liquid and gas sides.
- (2) Tighten nuts to specified torque shown in the table below.

| Service valve size (mm) | Tightening torque (N·m) |
|-------------------------|-------------------------|
| ø6.35 (1/4") | 14-18 |
| ø9.52 (3/8") | 34-42 |
| ø12.7 (1/2") | 49-61 |



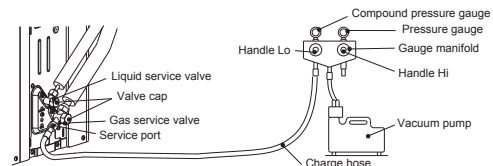
CAUTION

- Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage.
- Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant leakage.

4. Evacuation

- (1) Connect vacuum pump to gauge manifold. Connect charge hose of gauge manifold to service port of outdoor unit.
- (2) Run the vacuum pump for at least one hour after the vacuum gauge shows -0.1MPa (-76cm Hg).
- (3) Confirm that the vacuum gauge indicator does not rise even if the system is left for 15 minutes or more. Vacuum gauge indicator will rise if the system has moisture left inside or has a leakage point. Check the system for the leakage point. If leakage point is found, repair it and return to (1) again.
- (4) Close the Handle Lo and stop the vacuum pump. Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.
- (5) Remove valve caps from liquid service valve and gas service valve.
- (6) Turn the liquid service valve's rod 90 degree counterclockwise with a hexagonal wrench key to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods. Wipe off all the water after completing the check.
- (7) Disconnect charging hose from gas service valve's service port and fully open liquid and gas service valves. (Do not attempt to turn valve rod beyond its stop.)
- (8) Tighten service valve caps and service port cap to the specified torque shown in the table below.

| Service valve size (mm) | Service valve cap tightening torque (N·m) | Service port cap tightening torque (N·m) |
|-------------------------|---|--|
| ø6.35 (1/4") | 20-30 | 10-12 |
| ø9.52 (3/8") | | |
| ø12.7 (1/2") | 25-35 | |



CAUTION

- To prevent the entering of different oil into the refrigeration system, do not use tools designed for any other refrigerant type (R22, R407C, etc.).
- To prevent vacuum pump oil from entering into the refrigerant system, use a counterflow prevention adapter.

5. Additional refrigerant charge

Additional refrigerant charge is required only when connecting pipe length exceeds 15 m.

5.1 Calculating additional refrigerant charge

Additional refrigerant charge can be calculated using the formula given below. Additional refrigerant charge (g) = { Connecting pipe length (m) - Factory charged length 15 (m) } x 20 (g/m)

NOTE

- If additional refrigerant charge calculation result is negative, there is no need to remove the refrigerant.
- If refrigerant recharge is required for the unit with connecting pipe length 15m or shorter, charge the factory charged volume as shown in the table below.

| | Model SRC 20/25/35 | Model SRC40/50/60 |
|----------------------------|--------------------|-------------------|
| Factory charged volume(kg) | 1.45 | 1.50 |

5.2 Charging refrigerant

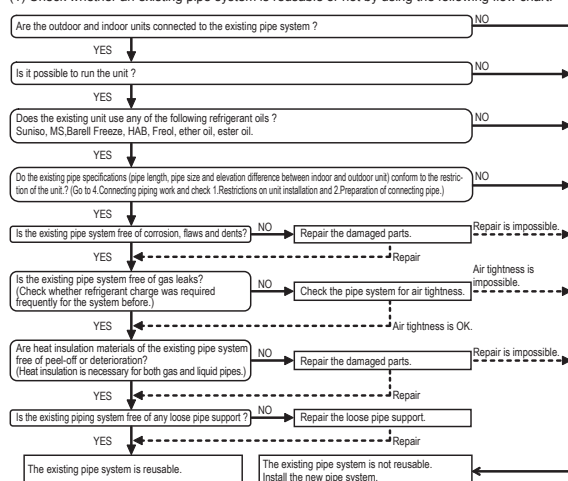
- (1) Charge the R410A refrigerant in liquid phase from service port with both liquid and gas service valves shut. Since R410A refrigerant must be charged in the liquid phase, make sure that refrigerant is discharged from the cylinder in the liquid phase all the time.
- (2) When it is difficult to charge a required refrigerant volume, fully open both liquid and gas service valves and charge refrigerant, while running the unit in the cooling mode. When refrigerant is charged with the unit being run, complete the charge operation within 30 minutes.
- (3) Write the additional refrigerant charge calculated from the connecting pipe length on the label attached on the service cover.

CAUTION

Running the unit with an insufficient quantity of refrigerant for a long time can cause unit malfunction.

5. UTILIZATION OF EXISTING PIPE

- (1) Check whether an existing pipe system is reusable or not by using the following flow chart.



NOTE

- Consult with our distributor in the area, if you need to recover refrigerant and charge it again.
- (2) Clean the existing pipe system according to the procedure given below.
 - (a) Carry out forced cooling operation of existing unit for 30 minutes. For "Forced cooling operation" refer to the indoor unit installation manual.
 - (b) Stop the indoor fan and carry out forced cooling operation for 3 minutes (Liquid return).
 - (c) Close the liquid service valve of the outdoor unit and carry out pump down operation (Refer to 6. PUMP DOWN).
 - (d) Blow with nitrogen gas. If discolored refrigeration oil or any foreign matter is discharged by the blow, wash the pipe system or install a new pipe system.
- (3) Remove the flare nuts from the existing pipe system. Go back to 4. Connecting Piping work and proceed to step 2.2 Cutting connecting pipe.

CAUTION

Do not use the old flare nuts (of existing unit). Make sure that the flare nuts supplied with the (new) outdoor unit are used.

* If the existing piping is specified as liquid pipe ø9.52 or gas pipe ø12.7, refer to the following. (SRC40.50 and 60 only)

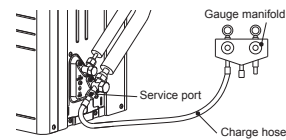
<Table of pipe size restrictions>

| Additional charge volume per meter of pipe | | 0.06kg/m |
|--|-------------|----------|
| Pipe size | Liquid pipe | ø9.52 |
| | Gas pipe | ø12.7 |
| Maximum one-way pipe length | | 10 |
| Length covered without additional charge | | 5 |

Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) X Additional charge volume per meter of pipe shown in the table (kg/m)

6. PUMP DOWN

- Connect charge hose of gauge manifold to service port of outdoor unit.
- Close the liquid service valve with hexagonal wrench key.
- Fully open the gas service valve with hexagonal wrench key.
- Carry out forced cooling operation (For forced cooling operation procedure, refer to indoor unit installation manual).
- When the low pressure gauge becomes 0.01MPa, close the gas service valve and stop forced cooling operation.



7. ELECTRICAL WIRING WORK

⚠ WARNING

- Make sure that all the electrical work is carried out in accordance with the national or regional electrical standards.
- Make sure that the earth leakage breaker and circuit breaker of appropriate capacities are installed (Refer to the table given below).
- Do not turn on the power until the electrical work is completed.
- Do not use a condensive capacitor for power factor improvement under any circumstances. (It does not improve power factor. Moreover, it can cause an abnormal overheat accident).

Breaker specifications

| Model | Phase | Earth leakage breaker | Circuit breaker |
|-------------|--------------|--|-------------------|
| SRC20/25/35 | Single phase | Leakage current: 30mA, 0.1sec or less | Over current: 16A |
| SRC40/50/60 | | | Over current: 20A |

Main fuse specification

| Model | Specification | Parts No. | Code on LABEL,WIRING |
|-------------|---------------|-------------|----------------------|
| SRC20/25/35 | 250V 15A | SSA564A136 | F7 |
| SRC40/50/60 | 250V 20A | SSA564A136A | F4 |

1.Preparing cable

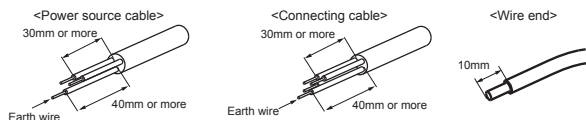
- Selecting cable
Select the power source cable and connecting cable in accordance with the specifications mentioned below.

- Power source cable
3-core* 2.0mm² or more, conformed with 60245 IEC57(CENELEC H05RN-F)
When selecting the power source cable length, make sure that voltage drop is less than 2%.
If the wire length gets longer, increase the wire diameter.

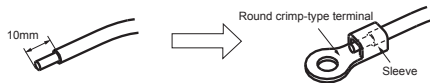
- Connecting cable
4-core* 1.5mm², conformed with 60245 IEC57(CENELEC H05RN-F)
* 1 Earth wire is included (Yellow/Green)

- Arrange each wire length as shown below.

Make sure that each wire is stripped 10mm from the end.



- Attach round crimp-type terminal to each wire as shown in the below.
Select the size of round crimp-type terminal after considering the specifications of terminal block and wire diameter.



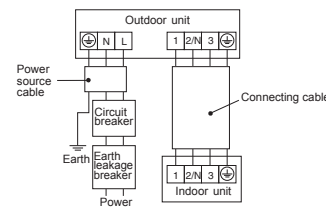
⚠ CAUTION

Power source cable and connecting cable must conform to the specifications mentioned in the manual. Using cables with wrong specifications may result in unit malfunction.

2.Connecting cable

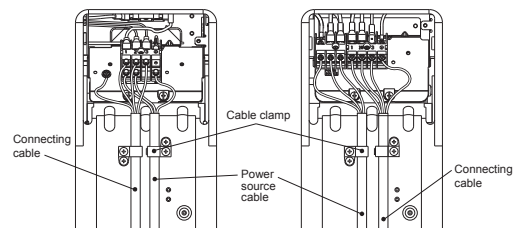
- Remove the service cover.
- Connect the cables according to the instructions and figures given below.
 - Connect the earth wire of power source cable.
An earth wire must be connected before connecting the other wires of power source cable. Keep the earth wire longer than the remaining two wires of power source cable.
 - Connect the remaining two wires (N and L) of power source cable.
 - Connect the wires of connecting cable. Make sure that for each wire, outdoor and indoor side terminal numbers match.
- Fasten the cables properly with cable clamps so that no external force may work on terminal connections.
Moreover, make sure that cables do not touch the piping, etc. When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection.

<Circuit diagram>



<SRC20/25/35>

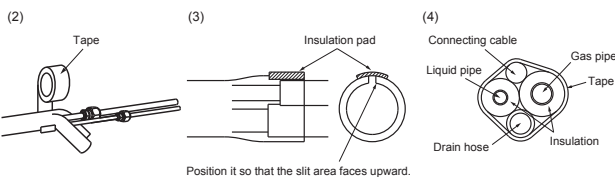
<SRC40/50/60>



8. FINISHING WORK

1. Heating and condensation prevention

- Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation.
Use the heat insulating material which can withstand 120°C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.
- Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.
- Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).
- Wrap the connecting pipes, connecting cable and drain hose with the tape.



NOTE

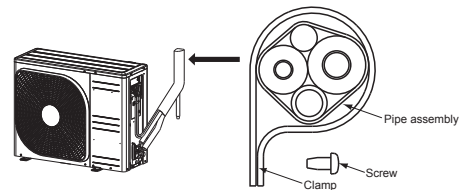
Locations where relative humidity exceeds 70%, both liquid and gas pipes need to be dressed with 20mm or thicker heat insulation materials.

⚠ CAUTION

- Improper insulation can cause condensate(water) formation during cooling operation. Condensate can leak or drip causing damage to household property.
- Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

2.Finishing work

- Make sure that the exterior portion of connecting pipes, connecting cable and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route.
- Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5m or less to isolate the vibration.
- Install the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



⚠ CAUTION

Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

9. INSTALLATION TEST CHECK POINTS

After finishing the installation work, check the following points again before turning on the power. Conduct test run (Refer to indoor unit installation manual) and ensure that the unit operates properly.

| | |
|--|--|
| Power source voltage complies with the rated voltage of air-conditioner. | |
| Earth leakage breaker and circuit breaker are installed. | |
| Power cable and connecting cable are securely fixed to the terminal block. | |
| Both liquid and gas service valves are fully open. | |

| | |
|--|--|
| No gas leaks from the joints of the service valves. | |
| Indoor and outdoor side pipe joints have been insulated. | |
| Drain hose (if installed) is fixed properly. | |
| Screw of the service cover is tightened properly. | |

(2) Model FDC71VNX

| |
|---|
| PSC012D062F |
| Inverter driven single split PAC 71V |
| Designed for R410A refrigerant |

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

- This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 141.
- When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces

SAFETY PRECAUTIONS

- We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.
- The precautions described below are divided into **⚠ WARNING** and **⚠ CAUTION**. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the **⚠ WARNING** and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in **⚠ CAUTION**. **These are very important precautions for safety. Be sure to observe all of them without fail.** The meaning of "Marks" used here are as shown below.
- ⊘ Never do it under any circumstance. Always do it according to the instruction
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user

| WARNING |
|---|
| <ul style="list-style-type: none"> ● Installation must be carried out by the qualified installer. If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. ● Install the system in full accordance with the instruction manual. Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire. ● Use the original accessories and the specified components for installation. If parts other than those prescribed by us are used, it may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury. ● When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with the instruction manual. Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents. ● Ventilate the working area well in the event of refrigerant leakage during installation. If the refrigerant comes into contact with naked flames, poisonous gas is produced. ● After completed installation, check that no refrigerant leaks from the system. If refrigerant leaks into the room and comes into contact with an open or other hot surface, poisonous gas is produced. ● Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support. An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit. ● Install the unit in a location with good support. Unstable installation locations can cause the unit to fall and cause material damage and personal injury. ● Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds. Unstable installation locations can cause the unit to fall and cause material damage and personal injury. ● The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit. Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire. ● Be sure to shut off the power before starting electrical work. Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment. ● Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work. Unconformable cables can cause electric leak, anomalous heat production or fire. ● Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks. Loose connections or cable mountings can cause anomalous heat production or fire. ● Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly. Incorrect installation may result in overheating and fire. |
| <ul style="list-style-type: none"> ● Do not perform brazing work in the airtight room It can cause lack of oxygen. ● Use the prescribed pipes, flare nuts and tools for R410A. Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit. ● Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to loosen the flare nut too much. Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen. ● Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation. If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt, refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant. ● Only use prescribed optional parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. ● Do not perform any change of protective device itself or its setup condition The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst. ● Be sure to switch off the power source in the event of installation, inspection or servicing. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan. ● Consult the dealer or an expert regarding removal of the unit. Incorrect installation can cause water leaks, electric shocks or fire. ● Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation. If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury or pressure an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit. ● Ensure that no air enters in the refrigerant circuit when the unit is installed and removed. If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury. ● Do not run the unit with removed panels or protections Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks. ● Be sure to fix up the service panels. Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water. ● Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair. If you repair or modify the unit, it can cause water leaks, electric shocks or fire. |

CAUTION



- **Carry out the electrical work for ground lead with care**
Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because a gas leak could cause explosion or ignition.
- **Use the circuit breaker for all pipe with correct capacity**
Using the correct circuit breaker. If can cause the unit malfunction and fire.
- **Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.**
The isolator should be located in accordance with EN60204-1.
- **Take care when carrying the unit by hand.**
If the unit is carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminium fins.
- **Dispose of any packing materials correctly.**
Do not use any packing materials for personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrap away from children and to dispose after heat it up.
- **Pay attention not to damage the drain pan by wear spatter when welding work is done near the indoor unit.**
If heat spatter entered the indoor unit during welding work, it can cause pinholes in drain pan and result in water leakage. To prevent such damage, keep the indoor unit in its packing or cover it.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **Perform installation work properly according to this installation manual.**
Improper installation can cause abnormal vibrations or increased noise generation.
- **Earth leakage breaker must be installed**
If the earth leakage breaker is not installed, it can cause fire or electric shocks.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
If leaked gases accumulate around the unit, it can cause fire.
- **Do not install the unit where corrosive gas (such as sulfuric acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **When the outdoor unit is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fences and handrails around the outdoor unit.**
If safety facilities are not provided, it can cause personal injury due to falling from the installation place.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the outdoor unit in a location where insects and small animals can enter.**
Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.



- **Do not use the base frame for outdoor unit which is corroded or damaged due to long periods of operation.**
Using an old and damaged base frame can cause the unit falling down and cause personal injury.
- **Do not install the unit in the locations listed below**
 - Locations where there are carbon fibers, metal powder or any powder is floating.
 - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
 - Vehicles and ships.
 - Locations where cosmetic or special sprays are often used.
 - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
 - Locations where any machines which generate high frequency harmonics are used.
 - Locations with salty atmospheres such as coastlines.
 - Locations with heavy snow (if installed, be sure to provide base frame and snow hood mentioned in the manual)
 - Locations where the unit is exposed to chimney smoke
 - Locations at high altitude (more than 1000m high)
 - Locations with ammonia, atmospheres.
 - Locations where heat radiation from other heat source can affect the unit
 - Locations with any obstacles which can prevent inlet and outlet air of the unit
 - Locations where short circuit of air can occur (in case of multiple units installation)
 - Locations where strong air blow against the air outlet of outdoor unit
 It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire.
- **Do not install the outdoor unit in the locations listed below.**
 - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood
 - Locations where outlet air of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc.
 - Locations where vibration and operation sound generated by the outdoor unit can affect seriously. (on the wall or at the place near bed room)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely.
 It can affect surrounding environment and cause a claim
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
It can cause the damage of the items.
- **Do not touch any buttons with wet hands**
It can cause electric shocks
- **Do not touch any refrigerant pipes with your hands when the system is in operation**
During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not clean up the unit with water**
It can cause electric shocks
- **Do not operate the outdoor unit with any article placed on it.**
You may incur property damage or personal injury from a fall of the article.
- **Do not step onto the outdoor unit.**
You may incur injury from a drop or fall.

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit service valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

| Dedicated R410A tools | |
|-----------------------|---|
| a) | Gauge manifold |
| b) | Charge hose |
| c) | Electronic scale for refrigerant charging |
| d) | Torque wrench |
| e) | Flare tool |
| f) | Protusion control copper pipe gauge |
| g) | Vacuum pump adapter |
| h) | Gas leak detector |

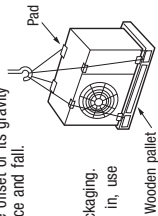
1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)



When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

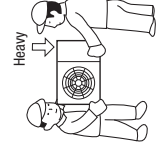
1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the unpacking of the unit before it is carried in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.



2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.



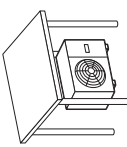
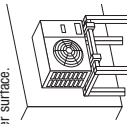
3) Selection of installation location for the outdoor unit

- Be sure to select a suitable installation place in consideration of following conditions.
- A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
 - A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit
 - A place where the unit is not exposed to oil splashes.
 - A place where it can be free from danger of flammable gas leakage.
 - A place where drain water can be disposed without any trouble.
 - A place where the unit will not be affected by heat radiation from other heat source.
 - A place where snow will not accumulate.
 - A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
 - A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
 - A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
 - A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
 - A place where strong wind will not blow against the outlet air blow of the unit.

4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required.

1. Install the unit on the base so that the bottom is higher than snow cover surface.
2. Provide a snow hood to the outdoor unit on site.
Regarding outline of a snow hood, refer to our technical manual.
3. Install the unit under eaves or provide the roof on site.



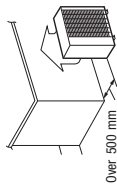
Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grammets (option parts). (Refer to Setting SW3-2.)
- Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). (Refer to Setting SW3-2.)

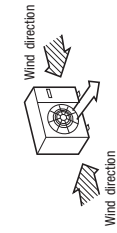
(2) If the unit can be affected by strong wind, following measures are required.

Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.

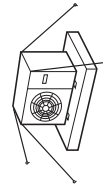
1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.



2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.

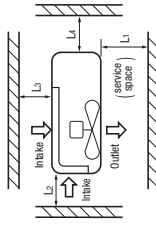


3. The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires.



5) Installation space

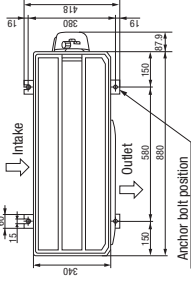
- Walls surrounding the unit on the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- When more than one unit are installed side by side, provide a 250mm or wider interval between them as a service space. In order to facilitate servicing of controllers, please provide a sufficient space between units so that their top plates can be removed easily.
- Where a danger of short-circuiting exists, install guide louvers.
- When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.



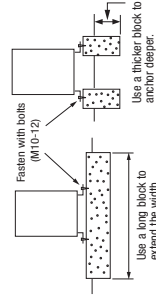
| Size | 71V (mm) | | |
|----------------------|----------|------|------|
| | I | II | III |
| Example installation | Open | Open | Open |
| L1 | 300 | 250 | Open |
| L2 | 100 | 150 | 100 |
| L3 | 250 | 250 | 250 |
| L4 | | | |

6) Installation

① Anchor bolt fixed position



② Notabilia for installation



- In installing the unit, fix the unit's legs with bolts specified on the above.
- The protrusion or an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the above illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 0.5 mm or less.)
- Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

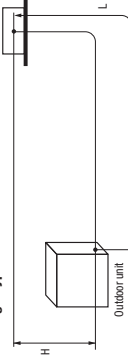
- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Restrictions | Marks appearing in the drawing on the right | |
|---|---|-----------|
| | Single type | Twin type |
| Dimensional restrictions | L | L1+L1+L2 |
| One-way pipe length of refrigerant piping | 50m or less | L |
| Main pipe length | 20m or less | L1, L2 |
| | 10m or less | L1-L2 |
| Difference of pipe length after the first branching point | 30m or less | H |
| Difference of pipe length after the first branching point | When the outdoor unit is positioned higher, 15m or less | H |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned lower, 0.5m or less | h |
| Elevation difference between indoor units | | h |

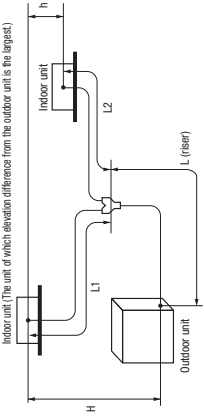
● The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, please see "6. UTILIZATION OF EXISTING PIPING."

⚠ CAUTION

< Single type >



< Twin type >



2) Determination of pipe size

- Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

| | Model 7TV | |
|------------------------------------|---|----------------|
| | Gas pipe | Liquid pipe |
| Outdoor unit connected | φ15.88 Flare | φ9.52 Flare |
| | φ15.88 | φ9.52 |
| Refrigerant piping (branch pipe/L) | | |
| In the case of a single type | Indoor unit connected | φ15.88 |
| | Capacity of indoor unit | φ9.52 |
| In the case of a twin type | Branching pipe set | DIS-WA1 |
| | Refrigerant piping (branch pipe L1, L2) | φ12.7 |
| Capacity of indoor unit | Indoor unit connected | φ12.7 |
| | Capacity of indoor unit | φ6.35 |
| | Model 40V×2 | |

CAUTION

- When the 40V model is connected as an indoor unit, always use a φ9.52 liquid pipe for the branch (branching pipe – indoor unit) and a different diameter joint supplied with the branching pipe set for connection with the indoor unit (φ6.35 on the liquid pipe side).
- If a φ6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall short of the rated capacity.
- A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
- A branching part must be dressed with a heat-insulation material supplied as an accessory.
- For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set.

3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.

| Pipe diameter [mm] | 6.35 | 9.52 | 12.7 | 15.88 |
|----------------------------------|-------------|-------------|-------------|-------------|
| Minimum pipe wall thickness [mm] | 0.8 | 0.8 | 0.8 | 1.0 |
| Pipe material* | O-type pipe | O-type pipe | O-type pipe | O-type pipe |

NOTE ● Select pipes having a wall thickness larger than the specified minimum pipe thickness.
*Phosphorus deoxidized seamless copper pipe C1220T, JIS H 3300

4) On-site piping work

- Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

IMPORTANT

How to remove the side cover

Please remove the screw of a side cover and remove to the front.

- Carry out the on-site piping work with the service valve fully closed.
- Give sufficient protection to a pipe end (compressed and brazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical (R100-R150). Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.3m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.

Do not apply force beyond proper fastening torque in tightening the flare nut.

Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

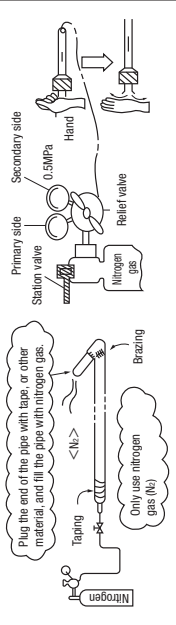
| Service valve size (mm) | Tightening torque (N·m) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|-------------------------|-------------------------|----------------------|--|
| φ6.35 (1/4") | 14-18 | 45-60 | 150 |
| φ9.52 (3/8") | 34-42 | 30-45 | 200 |
| φ12.7 (1/2") | 49-61 | 30-45 | 250 |
| φ15.88(5/8") | 68-82 | 15-20 | 300 |

CAUTION

About brazing

Brazing must be performed under a nitrogen gas flow.

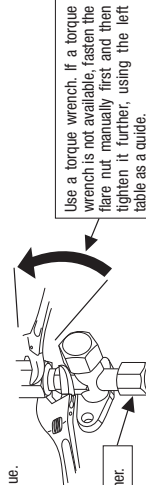
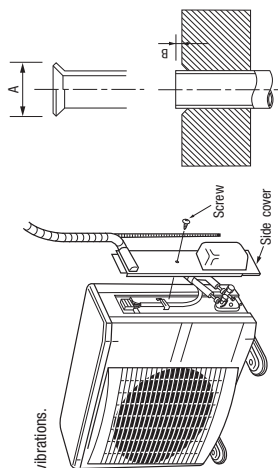
Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



| Flared pipe end: A (mm) | Copper pipe outer diameter | Copper pipe protrusion for flaring: B (mm) |
|-------------------------|----------------------------|--|
| 0 | φ6.35 | 0-0.4 |
| A | φ9.52 | 0-0.5 |
| | φ12.7 | 0.7-1.3 |
| | φ15.88 | 19.7 |

In the case of a rigid (dutch) type

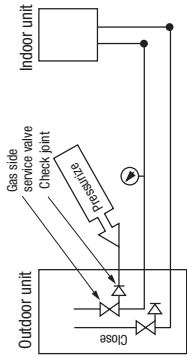
| Copper pipe outer diameter | With an R410A tool | With a conventional tool |
|----------------------------|--------------------|--------------------------|
| φ6.35 | 0-0.5 | 0.7-1.3 |
| φ9.52 | | |
| φ12.7 | | |
| φ15.88 | | |



Do not hold the valve cap area with a spanner.

5) Air tightness test

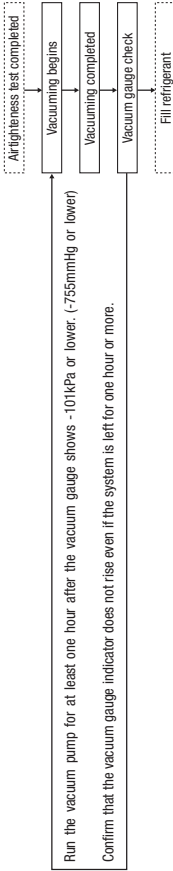
- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut all the time.
 - a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
 - d) If no pressure drop is observed with an installation pressurized to the specified level, and left for about one day, it is acceptable. When the ambient Temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
 - e) If a pressure drop is observed in checking e) and a) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- ② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



6) Evacuation

<Work flow>

When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.



Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

| Model | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe, φ6.35) | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|-----------|---|--|--|---|--|
| Model 7TV | 2.35 | 20 | 0.06 | 2.95 | 30 |

- This unit contains factory charged refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping. When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
- When refrigerant piping is shorter than 3m, reduce refrigerant by 1kg from the factory charge volume and adjust to 1.95kg.

Formula to calculate the volume of additional refrigerant required

$$\text{Additional charge volume (kg)} = \{ \text{Main pipe length (m)} - \text{Length covered without additional charge (30 m)} \} \times 0.06 \text{ (kg/m)} + \text{Total length of branch pipes (m)} \times 0.06 \text{ (kg/m)}$$

- For an installation measuring 3m or longer, but not more than 20m, in pipe length, please charge the standard refrigerant charge volume, when you recharge refrigerant after servicing etc.
- When refrigerant piping is shorter than 3m, recharge 1.95kg of refrigerant.

Ex.) For a 10m installation, charge 2.35 kg of refrigerant.

For a 25m installation, charge "2.35 + (25-20) x 0.06 = 2.65 kg."

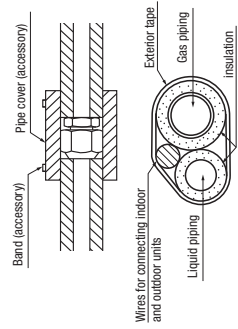
(2) Charging refrigerant

- Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube. Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
- In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
- When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

8) Heating and condensation prevention

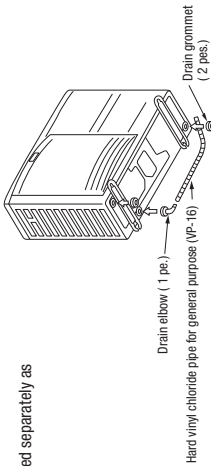
- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
 - Although it is verified in a test that this air-conditioning unit shows satisfactory performance under JIS condensation test conditions, **both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.**



*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as optional parts, where water drained from the outdoor unit is a problem.



- There are 3 drain holes provided on the bottom plate of an outdoor unit to discharge condensed water.
- When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an optional part) or concrete blocks.
- Connect a drain elbow as shown in the illustration and close the other two drain holes with grommets.

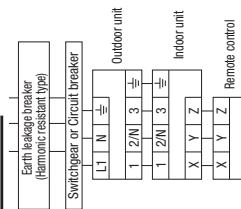
4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual.

- Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country.
- Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.
- Do not use any supply cord lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51),
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin tinned cord (code designation 60227 IEC 41).
 - Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC57) for supply cords of parts of appliances for outdoor use.
 - Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
 - If improper grounded, an electric shock or malfunction may result.
 - A grounding wire must be connected before connecting the power cable.
 - The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.
 - Do not turn on the power until the electrical work is completed.
 - Do not use a condensive capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheat accident)
 - For power source cables, use conduits.
 - Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
 - Fasten cables so that they may not touch the piping, etc.
 - When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
 - Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.

Power cable, indoor-outdoor connecting wires

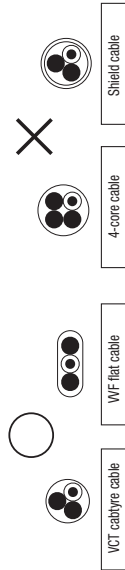
- Always perform grounding system installation work with the power cord unplugged.

CAUTION Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

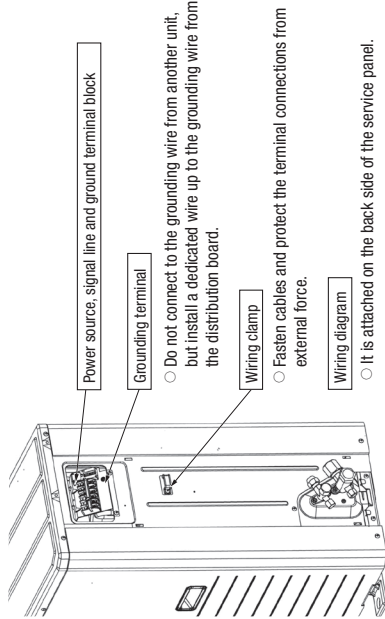


| Model | Power source | Power cable thickness (mm ²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness | Indoor-outdoor wire thickness X number |
|-------|---|--|-----------------------|------------------|--------------------------|--|
| 71V | Single phase 3 wire 220-240V 50Hz | 3.5 | 17 | 21 | φ1.6mm | φ1.6mm x 3 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.



- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.



- Do not connect to the grounding wire from another unit, but install a dedicated wire up to the grounding wire from the distribution board.
- Fasten cables and protect the terminal connections from external force.
- It is attached on the back side of the service panel.

5. TEST RUN

⚠ WARNING

● Before conduct a test run, do not fail to make sure that the service valves are closed.
 ● Turn on power 6 hours prior to a test run to energize the crank case heater.
 ● In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
 ● Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
 ● Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous. Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

⚠ CAUTION

● When you operate switches for on-site setting, be careful not to touch a live part.
 ● You cannot check discharge pressure from the liquid service valve charge port.
 ● The crank case heater (CCH) energizes during a test run.
 ● When power is cut off, reset the unit after 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "E-5" (communication error) may occur.

About insulation resistance

● An insulation resistance value may drop to several M ohms immediately after installation or when the unit is left for a long time without power, because refrigerant is gathered in the compressor. When the earth-leakage breaker is actuated due to low insulation resistance, please check the following:
 (1) Check whether a normal insulation resistance value is restored about 6 hours after power is turned. Turning on power will energize the compressor and heat it to evaporate refrigerant gathered in it.
 (2) Check whether the earth-leakage breaker is a harmonic resistant type.
 This unit is equipped with an inverter and therefore, the use of a harmonic resistant type earth-leakage breaker is necessary to prevent a false actuation.

1) Test run method

Please remove a side cover.

- (1) A test run can be initiated from an outdoor unit by using SW5-4 and SW5-3 for on-site setting.
- (2) Switching SW5-3 to ON will start the compressor.
- (3) The unit will start a cooling operation, when SW5-4 is OFF, or a heating operation, when SW5-4 is ON.
- (4) Do not fail to switch SW5-3 to OFF when a test run is completed.

※ In case of the first operation after turning on the power source, when the unit runs in the cooling mode at outside temperature 5°C or lower, it automatically changes into the cooling mode after it runs in the heating mode for 10 minutes.

2) Checking the state of the unit in operation

Please remove a service panel.

Use check joints provided on the piping before and after the four-way valve installed on the side of the outdoor unit for checking discharge pressure and suction pressure.
 As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

| | | | |
|-------------------|------------------------------------|------------------------------------|--------------------------------------|
| Cooling operation | Discharge pressure (high pressure) | Suction pressure (low pressure) | Charge part of the gas service valve |
| Heating operation | Suction pressure (low pressure) | Discharge pressure (high pressure) | |

3) Setting SW3-1, SW3-2.

Please remove a service panel.

- (1) Defrost control switching (SW3-1)
 -When this switch is turned ON, the unit will run in the defrost mode more frequently.
 -Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.
- (2) Snow guard fan control (SW3-2)
 -When this switch is turned on, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running.
 -When the unit is used in a very snowy country, set this switch to ON.

4) Failure diagnosis in a test run

| Error indicated on the remote control unit | Panel control board (LED) The speed of frequency | Failure event | Action |
|--|--|---|--|
| Red LED | Green LED | Open phase | Check power cables for loose contact or disconnection |
| E34 | Blinking once | 63Hz activation or operation with service valves shut (occurs mainly during a heating operation) | 1. Check whether the service valves are open. 2. If an error has been cancelled when 3 minutes have elapsed since compressor stops, you can restart the unit by affecting Check Reset on the remote control unit. |
| E40 | Blinking continuously | Low pressure error or operation with service valves shut (occurs mainly during a cooling operation) | Reset on the remote control unit. |
| E49 | Blinking once | Blinking continuously | |

● If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

| Value for a cooling operation | When power is turned on | When the unit comes to a normal stop | When the unit comes to an abnormal stop |
|-------------------------------|----------------------------|--------------------------------------|---|
| Complete shut position | During a cooling operation | During a heating operation | During a cooling operation |
| Full open position | Complete shut position | Full open position | Full open position |
| Full open position | Full open position | Complete shut position | Full open position |

6) The following on the first operation after turning on the circuit breaker.

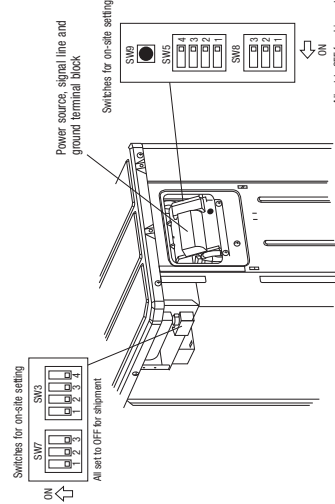
This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

Items to check before a test run ● When you leave the outdoor unit with power supplied to it, be sure to close the panel.

| Item focused in the installation manual | Item | Check item | Check |
|---|--------------------|---|-------|
| 2 | Refrigerant piping | Is the unit free of liquid under a charge pin check? Have all refrigerant materials been removed from the system? Are field insulation materials installed on both liquid and gas pipes? Are service valves safely opened for both liquid and gas systems? Have you avoided the additional refrigerant charge volume unit dependent pipe length on the panel's back? Is the unit free of calling errors such as unaccomplished connections, an absent or reversed phase? Are property rated test equipments used for circuit breakers and cables? Are the piping and equipment used for the system in accordance with the applicable standards? Are the piping and equipment used for the system in accordance with the applicable standards? Do indoor and outdoor connection cables connect between the same terminal numbers? Are the correct cables used for indoor-outdoor connection cables? Does grounding safety (the D type grounding type II) grounding requirements? Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire? Are cables free of loose screws at their connection points? Are cables tied down with cable straps so that no external force works onto terminal connectors? | |
| 4 | Electric wiring | Is the indoor unit installation work completed? Where a new cover is provided for outdoor unit indoor unit, is the fan cover attached to the indoor unit? | |

Test run procedure ● Always carry out a test run and check the following in order as listed.

| Turn | The contents of operation | Check |
|------|--|-------|
| ① | Open the gas side service valve fully. | |
| ② | Open the liquid side service valve fully. | |
| ③ | Close the panel. | |
| ④ | When a remote control unit is used for unit start in the installation, always turn on its alarm in the installation site with a remote control unit. | |
| ⑤ | SW5-3 (SW5-4 OFF) for the unit will start a cooling operation. | |
| ⑥ | When the unit starts operation, check the remote control unit to check its operation. | |
| ⑦ | Place your hand before the indoor unit's LED to check whether cold (warm) winds come out in a cooling (heating) operation. | |
| ⑧ | Make sure that a red LED is not lighting. | |
| ⑨ | When you complete the test run, please turn on SW5-3 for 1 second and be sure to enter a test run. | |
| ⑩ | When warnings are issued, check their operation according to the respective instruction manuals. | |

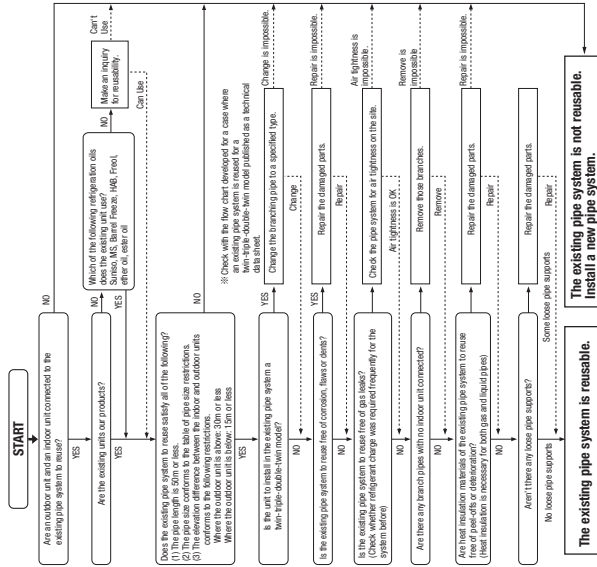


SW7
SW8
All set to OFF for shipment
ON
All set to OFF for shipment

※1 Do not operate SW5-3, SW5-1, SW5-2, SW8.
 ※2 Refer to TECHNICAL MANUAL about SW9. (Pump down SW)

6. UTILIZATION OF EXISTING PIPING.

Check whether an existing pipe system is reusable or not by using the following flow chart.



WARNING

Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4))

- (1) Run the unit for 30 minutes for a cooling operation.
 - (2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
 - (3) Close the liquid side service valve of the outdoor unit and pump down (refrigerant recovery)
 - (4) Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
- For the flare nut, do not use the old one, but use the one supplied with the outdoor unit.
Process it flare to the dimensions specified for R410A.
● Turn on-site setting switch SWB-1 to the ON position. (Where the gas pipe size is φ19.05)

<Table of pipe size restrictions>

● Standard pipe size ○ Usable △ Restricted to shorter pipe length limits Cool ↓ : Cooling capacity drop

| Additional charge volume per meter of pipe | 0.08kg/m | 0.09kg/m | 0.08kg/m |
|--|--|----------|----------|
| Pipe size | φ9.52 | φ9.52 | φ12.7 |
| Gas pipe | φ12.7 | φ15.88 | φ15.88 |
| Usability | Cool ↓ | ○ | △ |
| 7TV | Maximum one-way pipe length | 35 | 50 |
| | Length covered without additional charge | 30 | 30 |
| | | | 15 |

● The pipe length should be at least 3m. If the pipe length is shorter than 3m, the quantity of refrigerant needs to be reduced. Please consult with our distributor in the area, if you need to recover refrigerant and charge it again.

● Any combinations of pipe sizes not listed in the table are not usable.

<Pipe system after the branching pipe>

● Standard pipe size ○ Usable

| Additional charging amount of refrigerant per 1m | 0.08kg/m | φ9.52 |
|--|------------------|-------------------------|
| Pipe size | Gas pipe | φ12.7 |
| Model | Combination type | Combination of capacity |
| FDC71 | Twin | 40+40 |

● Any combinations of pipe sizes not listed in the table are not usable.

<The model types of existing units of which branching pipes are reusable.>

The branching pipes used with models other than those listed above are not reusable. Use our genuine branching pipes for R410A.

Formula to calculate additional charge volume

$$\text{Additional charge volume (kg)} = (\text{Main pipe length (m)} - \text{Length covered without additional charge shown in the table (m)}) \times (\text{Additional charge volume per meter of branch pipes (m)} \times \text{Additional charge volume per meter of pipe shown in the table (kg/m)} + \text{Total length of branch pipes (m)})$$

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.
Example) When an 7TV (single installation) is installed in a 30m long existing pipe system (liquid φ12.7, gas φ15.88), the quantity of refrigerant to charge additionally should be (30m-15m) × 0.08kg/m = 1.2 kg.

Example) When an 7TV (twin installation) is installed in a 30m long existing pipe system (main pipe length 20m, liquid φ12.7, gas φ15.88; pipe length after branching pipe 5m x 2, liquid φ9.52, gas φ12.7), the quantity of refrigerant to charge additionally should be (20m-15m) × 0.08kg/m + 5m x 2 x 0.06kg/m = 1.0 kg.

<Where the existing unit cannot be run for a cooling operation.>


Wash the pipe system or install a new pipe system.

● If you choose to wash the pipe system, contact our distributor in the area.

(3) Models FDC100-140VNX, 100-140VSX

| |
|----------------------------------|
| PSC01 2D066H |
| Inverter driven split PAC |
| 100VN ~ 140VN, 100VS ~ 140VS |
| 100VNX ~ 140VNX, 100VSX ~ 140VSX |
| Designed for R410A refrigerant |

Check before installation work

| | | |
|---------------|---|---------------------------|
| [Accessory] | 1 piece | knock-out hole protection |
| Edging |  | |

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

- This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 141.
- When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces

SAFETY PRECAUTIONS

- We recommend you to read this "SAFETY PRECAUTIONS", carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.
- The precautions described below are divided into [**WARNING**] and [**CAUTION**]. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the [**WARNING**] and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in [**CAUTION**]. **These are very important precautions for safety. Be sure to observe all of them without fail.**
- The meaning of "Marks" used here are as shown below.
 - ⊘ Never do it under any circumstance.
 - ⊙ Always do it according to the instruction
- For 3 phase power source outdoor unit, ENG1000-3-2 is not applicable if consent by the utility company or notification to the utility company is given before usage.
- 3 phase power source unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a house-hold appliance, it could cause electromagnetic interference.
- 5 and 6 HP units of single phase power source are equipment complying with IEC 61000-3-12.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user

WARNING

| | |
|----------|---|
| ! | <ul style="list-style-type: none"> ● Installation must be carried out by the qualified installer. If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. ● Install the system in full accordance with the instruction manual. Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire. ● Use the original accessories and the specified components for installation. If parts other than those prescribed by us are used, it may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury. ● When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage according with ISO5148. Once the expert safety prevention measures, if the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents. ● Ventilate the working area well in the event of refrigerant leakage during installation. If the refrigerant comes into contact with naked flames, poisonous gas is produced. ● After completed installation, check that no refrigerant leaks from the system. If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced. ● Hang up the unit at the specified points with ropes which can support the weight in wiring for portage. Avoid to avoid pulling out of alignment, be sure to hang up the unit at 4-point support. An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit ● Install the unit in a location with good support. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury. ● Ensure the unit is stable when installed so that it can withstand earthquakes and strong winds. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury. ● The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit. Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire. ● Be sure to shut off the power before starting electrical work. Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment. ● Be sure to use the cables conforming to safety standard and cable assembly for power distribution work. Unconformable cables can cause electric leak, anomalous heat production or fire. ● Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent loose connections or cable routings can cause anomalous heat production or fire. ● Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly. Incorrect installation may result in overheating and fire. |
| ! | <ul style="list-style-type: none"> ● Do not perform brazing work in the airtight room It can cause lack of oxygen. ● Use the prescribed pipes, flare nuts and tools for R410A. Using existing parts (for R22 or R407D) can cause the unit failure and serious accidents due to burst of the refrigerant circuit. ● Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much. Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen. ● Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation. If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or personal injury. Moreover, the refrigerant and oil can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant. ● Only use prescribed optional parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. ● Do not perform any change of protective device itself or its setup condition The forced operation by short-circuiting protective device or pressure switch and temperature controller or the use of non specified component can cause fire or burst. ● Be sure to switch off the power source in the event of installation, inspection or servicing. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan. ● Consult the dealer or an expert regarding removal of the unit. Incorrect installation can cause water leaks, electric shocks or fire. ● Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation. If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit ● Ensure that no air enters in the refrigerant circuit when the unit is installed and removed. If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury. ● Do not run the unit with removed panels or protections Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks. ● Be sure to fix up the service panels. Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water. ● Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair. If you repair or modify the unit, it can cause water leaks, electric shocks or fire. |
| ⊘ | |

CAUTION



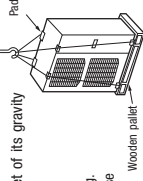
| | |
|---|--|
| ⚡ | <ul style="list-style-type: none"> ● Carry out the electrical work for ground lead with care Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks, it could cause explosion or ignition. ● Use the circuit breaker for all pipe with correct capacity. Using the incorrect circuit breaker, it can cause the unit malfunction and fire. |
| ⚠ | <ul style="list-style-type: none"> ● Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be located in accordance with EN60224-1. ● Take care when carrying the unit by hand. The unit is heavy and should be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins. ● Dispose of any packing materials carefully. Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after use. ● Pay attention not to damage the drain pan by weld spatter when welding work is done near the indoor unit. If weld spatter is released into the indoor unit during welding work, it can cause pin-hole in drain pan and result in water leakage. To prevent such damage, keep the indoor unit in its packing or cover it. ● Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables. ● Be sure to perform an airtightness test by pressurizing with nitrogen gas after completed refrigerant piping work. If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. ● Perform installation work properly according to this installation manual. Improper installation can cause abnormal vibrations or increased noise generation. ● Earth leakage breaker must be installed If the earth leakage breaker is not installed, it can cause fire or electric shocks. ● Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used. Connecting the circuit with copper wire or other metal thread can cause unit failure and fire. ● Do not install the unit near the location where leakage of combustible gases can occur. If leaked gases accumulate around the unit, it can cause fire. ● Do not install the unit where corrosive gas (such as sulfuric acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled. Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire. ● Secure a space for installation, inspection and maintenance specified in the manual. Insufficient space can result in accident such as personal injury due to falling from the installation place. ● When the outdoor units is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fences and handrails around the outdoor unit. If safety facilities are not provided, it can cause personal injury due to falling from the installation place. ● Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics Equipment such as inverters, sanitary generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming. ● Do not install the outdoor unit in a location where insects and small animals can invade. Insects and small animals can enter the electric parts and cause damage of fire. Instruct the user to keep the surroundings clean. |
| ⊘ | <ul style="list-style-type: none"> ● Do not use the base frame for outdoor unit which is corroded or damaged due to long periods of operation. Using an old and damaged base frame can cause the unit falling down and cause personal injury. ● Do not install the unit in the locations listed below <ul style="list-style-type: none"> • Locations where carbon fiber, metal powder or any powder is floating. • Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur. • Vehicles and ships. • Locations where cosmetic or special sprays are often used. • Locations where direct exposure of oil mist and steam such as kitchen and machine plant. • Locations where any machines which generate high frequency harmonics are used. • Locations with heavy snow (if installed, be sure to provide base frame and snow hood mentioned in the manual) • Locations where the unit is exposed to chimney smoke. • Locations at high altitude (more than 1000m high) • Locations with ammonia, atmospheres (e.g. organic fertilizer). • Locations where the unit is exposed to strong ultraviolet rays. • Locations where heat radiation from other heat source can affect the unit. • Locations without good air circulation. • Locations with any obstacles which can prevent inlet and outlet air of the unit. • Locations where short circuit of air can occur (in case of multiple units installation) • Locations where strong air flows against the air outlet of outdoor unit. • Locations where the unit is exposed to strong vibration. • In case of multiple units installation, it can cause performance, lifespan and damage of components, malfunction and fire. |
| ⊘ | <ul style="list-style-type: none"> ● Do not install the outdoor unit in the locations listed below. <ul style="list-style-type: none"> • Locations where the unit can be affected by vibration. • Locations where outdoor air of the outdoor unit blows directly to animal or plants. The outdoor air can affect adversely to the plant etc. • Locations where vibration can be amplified and transmitted due to insufficient strength of structure. • Locations where vibration and operation sound generated by the outdoor unit can affect seriously, (on the wall or at the place near bed room) • Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m) • Locations where drainage cannot run off safely. • It can affect surrounding environment and cause a claim |
| ⚡ | <ul style="list-style-type: none"> ● Do not use the unit for special purposes such as storing tools, cooling precision instruments and preservation of animals, plants or art. It can cause the damage of the items. ● Do not touch any buttons with wet hands It can cause electric shocks ● Do not touch any refrigerant pipes with your hands when the system is in operation. During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury. ● Do not clean up the unit with water It can cause electric shocks ● Do not operate the outdoor unit with any article placed on it. You may incur property damage or personal injury from a fall of the article. ● Do not step onto the outdoor unit. You may incur injury from a drop or fall. |

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top
- A unit designed for R410A has adopted a different size indoor unit service valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

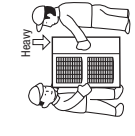
| Dedicated R410A tools | |
|-----------------------|---|
| a) | Gauge manifold |
| b) | Charge hose |
| c) | Electronic scale for refrigerant charging |
| d) | Torque wrench |
| e) | Flare tool |
| f) | Profusion control copper pipe gauge |
| g) | Vacuum pump adapter |
| h) | Gas leak detector |

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)



1) Delivery

- When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position.
- If not properly balanced, the unit can be thrown off-balance and fall.
- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the unpacking of the unit before it is carried in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.



2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.

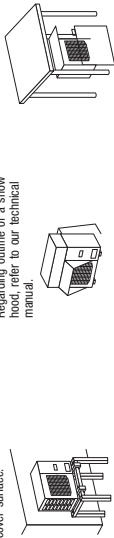
3) Selection of installation location for the outdoor unit

- Be sure to select a suitable installation place in consideration of following conditions.
- A place where it is horizontal, stable and can reduce the unit weight and will not allow vibration transmission of the unit.
 - A place where it can be free from possibility of both rain neighbors due to noise or exhaust air from the unit.
 - A place where the unit is not exposed to oil splashes.
 - A place where drain water can be disposed without any trouble.
 - A place where snow will not accumulate.
 - A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
 - A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
 - A place where chemical substances like sulfuric gas, chlorine gas, acid and alkali (including ammonia), which can harm the unit, are not present.
 - A place where strong wind will not blow against the outlet air blow of the unit.
 - Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required.

1. Install the unit on the base so that the bottom is higher than snow cover surface.
2. Provide a snow hood to the outdoor unit on site. Regarding outline of a snow hood, refer to our technical manual.
3. Install the unit under eaves or provide the roof on site.

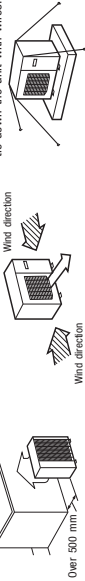


Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grommets (option parts). [Refer to Drain piping work.]
- Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). [Refer to Setting SW3-1, SW3-2.]
- Attach heater on a base plate on site, if there is possibility to freeze drain water. In case that the product has a corrective drainage system, the drainage paths should have suitable measure against freezing but be sure not to meet the material of drainage paths with heat.

(2) If the unit can be affected by strong wind, following measures are required.

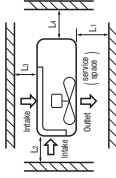
- Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.
- 1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.
- 2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.
- 3. The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires.



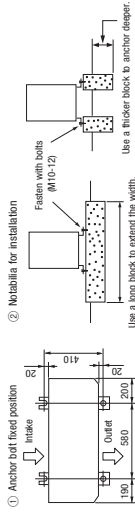
5) Installation space

- Walls surrounding the unit in the four sides are not acceptable.
- The clearance between the unit and the wall must be 150 mm or more.
- Where a space of short-circuiting exists, install guide lowers.
- Where more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.
- A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.

| Size | Example installation | | | | |
|------|----------------------|------|------|------|------|
| | I | II | III | IV | V |
| L1 | Open | Open | Open | Open | Open |
| L2 | 300 | 300 | 300 | 300 | 300 |
| L3 | 150 | 150 | 300 | 150 | 150 |
| L4 | 5 | 5 | 5 | 5 | 5 |



6) Installation



- In installing the unit, fix the unit's legs with bolts specified on the left.
 - The protrusion of an anchor bolt on the front side must be kept within 15 mm.
 - Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
 - Refer to the left illustrations for information regarding concrete foundations.
 - Install the unit in a level area. (With a gradient of 5 mm or less.)
- Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

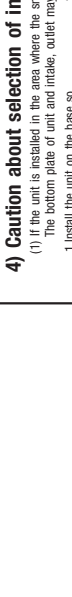
- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site.
- So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Descriptions | Max. separation in the piping | |
|--|---|--------------------------------|
| | Single type | Twin type |
| One-way pipe length of refrigerant piping | Model for outdoor units | Type Type A |
| | 100W, 125W, 140W, 125S | --- |
| | 140W, 140S | L-1+L1+L2+L3 |
| | 100W, 125W, 140W, 100S, 125S, 140S | L-1+L1+L1+L2+L3 |
| | 140W, 140S, 140SX | L-1+L1+L2+L3 |
| Main pipe length | 100W, 140S | L |
| | 100W, 125W, 140W, 100S, 125S | L |
| | 100W, 125W, 140W, 100S, 125S, 140S, 140SX | L |
| | 140W, 140S | L |
| | 140W, 140S | L |
| One-way pipe length between the first branching point from the first branching point to the second branching point | Type Type | L |
| | All Models | L |
| One-way pipe length after the first branching point | Type Type | L1, L2 |
| | All Models | L1, L2, L3 |
| One-way pipe length after the first branching point and second branching point | Type Type | --- |
| | All Models | --- |
| One-way pipe length difference from the indoor unit to the second branching point | Type Type | L1+L2 |
| | All Models | L1+L2+L3 L1+L2+L3+L4 |
| One-way pipe length difference from the indoor unit to the second branching point | Type Type | --- |
| | All Models | L1+L2 L1+L2+L3 L1+L2+L3+L4 |
| One-way pipe length difference from the second branching point to the indoor unit | Type Type | --- |
| | All Models | L1+L2+L3 L1+L2+L3+L4 |
| Elevation difference between indoor and outdoor units | When the outdoor unit is installed higher | H |
| | When the outdoor unit is installed lower | H |
| Elevation difference between indoor units | h1, h2, h3 | h |
| | h1, h2, h3 | h |



CAUTION

- The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, see "6 UTILIZATION OF EXISTING PIPING."
- With the triple pipe connection, the way of use is different when the difference of one-way pipe length after the first branching point is 3m to 10m. For details, refer to the above table and right figure.
- Note (1) install the indoor units so that L₁ + L₂ or (L₁ + L₃) becomes the longest one-way pipe. Keep the pipe length difference between L₁ and (L₁ + L₂) or (L₁ + L₃) within 10m.

2) Determination of pipe size

- Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

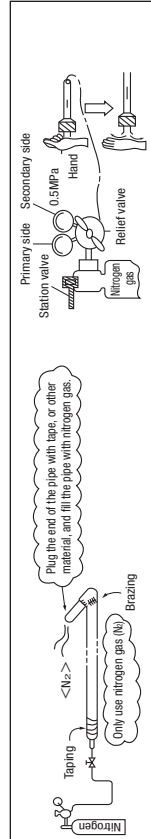
| | Model 100V | | Model 125V | | Model 140V | |
|----------------------------------|------------|-------------|------------|-------------|------------|-------------|
| | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe |
| Outdoor unit connected | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| Refrigerant piping (Main pipe L) | Flare | Flare | Flare | Flare | Flare | Flare |
| | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| In the case of a single type | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| Capacity of indoor unit | | | | | | |
| In the case of a 1/2N type | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Branching pipe size | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Indoor unit connected | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Capacity of indoor unit | | | | | | |
| In the case of a triple type A | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Branching pipe size | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Indoor unit connected | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Capacity of indoor unit | | | | | | |
| In the case of a triple type B | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Branching pipe size | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Indoor unit connected | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Capacity of indoor unit | | | | | | |

CAUTION

- When the 50V or 60V model is connected as an indoor unit, always use a φ9.52 liquid pipe for the branch (branching pipe - indoor unit) and a different diameter pipe for the main pipe. If φ6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fail short of the rated capacity.
- A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible. A branching part must be dressed with a heat-insulation material supplied as an accessory.
- For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set.

About brazing

Brazing must be performed under a nitrogen gas flow.
Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.
- This unit uses R410A. Always use 1/2H pipes having a 1.0mm or thicker wall for φ19.05 or larger pipes, because O-type pipes do not meet the pressure resistance requirement.

| Pipe diameter (mm) | 6.35 | 9.52 | 12.7 | 15.88 | 22.22 | 25.4 | 28.58 |
|----------------------------------|--|------|------|-------|-------|------|-------|
| Minimum pipe wall thickness (mm) | 0.8 | 0.8 | 0.8 | 1.0 | 1.0 | 1.0 | 1.0 |
| Pipe material* | O-type pipe / L-type pipe / O-type pipe / O-type pipe / 1/2H-type pipe / 1/2H-type pipe / 1/2H-type pipe | | | | | | |

*Phosphorous deoxidized seamless copper pipe C1220T-JIS H 3300

4) On-site piping work

- Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

How to remove the service panel

- First remove the five screws (X mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.
- The pipe can be laid in any of the following directions: side right, front, rear, and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- Carry out the on-site piping work with the service valve fully closed.
- Give sufficient protection to a pipe end (compressed and blazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical (R100-R150). Do not bend a pipe repeatedly to correct its form.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- The pipe should be anchored every 1.5m or less to isolate the vibration.

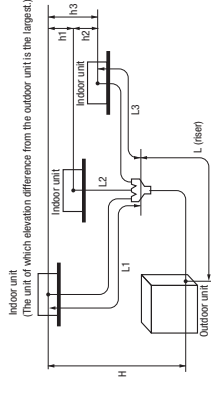
Do not apply force beyond proper fastening torque in tightening the flare nut.

- Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

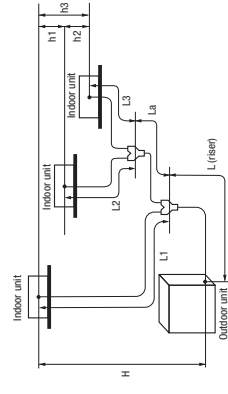
CAUTION

Do not hold the valve cap area with a spanner. Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.

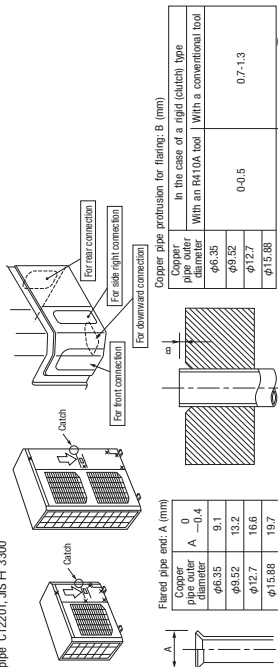
< Triple type A >



< Triple type B >



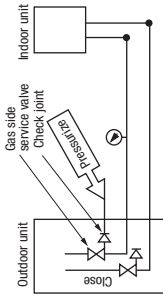
- Select pipes having a wall thickness larger than the specified minimum pipe thickness.



Do not hold the valve cap area with a spanner. Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.

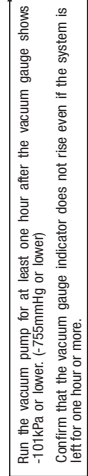
5) Air tightness test

- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut all the time.
 - a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
 - d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
 - e) If a pressure drop is observed in checking e) and a) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- ② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



6) Evacuation

- <Work flow> When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.



Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.)
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

| Item | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe) | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|-----------|---|--|---|---|--|
| Capacity | | | | | |
| 100W~140W | 2.0 | 0 | 0.06 | 3.8 | 30 |
| 100S~140S | 2.7 | | | 4.5 | |

<Single type>

- A standard refrigerant charge volume means a refrigerant charge volume for an installation with 0m long refrigerant piping.
- This unit contains factory charged refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping.
- When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
- When refrigerant piping is shorter than 3m, reduce refrigerant by 1kg from the factory charge volume and adjust to 2.8kg or 3.5kg.
- If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

$$\text{Additional charge volume (kg)} = (\text{Main pipe length (m)} - \text{Length covered without additional charge 30 (m)}) \times 0.06 \text{ (kg/m)} + \text{Total length of branch pipes (m)} \times 0.06 \text{ (kg/m)}$$

*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

- To charge refrigerant again, recover refrigerant from the system first and then charge the volume calculated from the above table (Standard refrigerant charge volume + additional charge volume for total pipe length).

(2) Charging refrigerant

- Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
- Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gassy upon entering the unit.
- In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
- When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

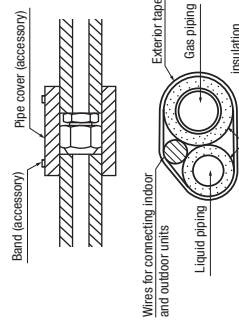
NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

8) Heating and condensation prevention

(1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.

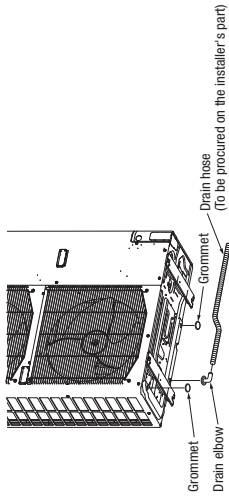
(2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.

- Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
- Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
- Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
- Although it is verified in a test that this air-conditioning unit shows satisfactory performance under JIS condensation test conditions, both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.

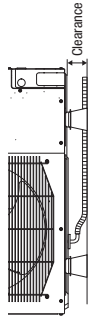


3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as option parts, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of service valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)
- Do not use drain elbow and grommet made of plastic for drain piping when base heater for outdoor unit is used. Plastic grommet and elbow will be damaged and burnt in worst case.
- Prepare another drain tray made of metallic material for collecting drain when base heater is used.



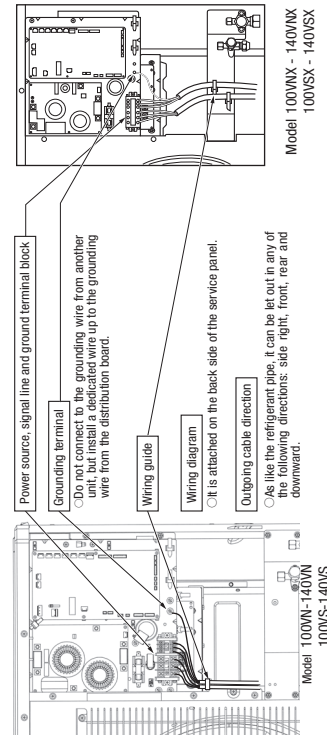
- When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an option part) or concrete blocks. Then, please secure space for the drain elbow and the drain hose.



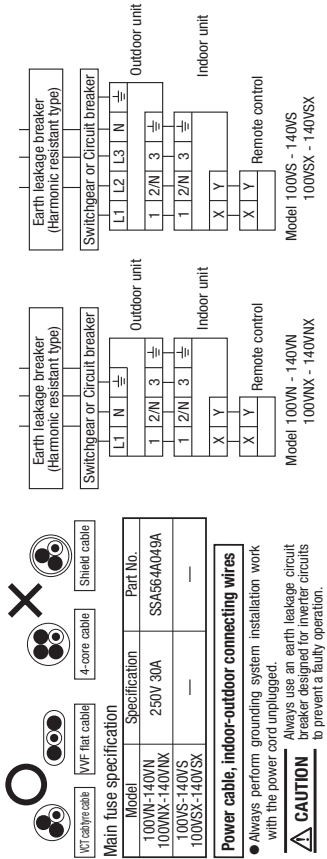
4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual.

Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country. Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

- Do not use any supply cord lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51).
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin tinsel cord (code designation 60227 IEC 41); Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC 57) for supply cords of parts of appliances for outdoor use.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
- If improper grounding, an electric shock or malfunction may result.
- A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
- The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.



- Do not turn on the power until the electrical work is completed.
- Do not use a condensable capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheating accident)
- For power source cables, use conduits.
- Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
- Fasten cables so that they may not touch the piping, etc.
- When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
- Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.



Power cable, indoor-outdoor connecting wires

- Always perform grounding system installation work with the power cord unplugged.
- Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

CAUTION

※ At the connection with the duct type indoor unit.

| Model | Power source | Power cable thickness(mm ²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness | Indoor-outdoor wire thickness X number |
|---------------|--------------------------------------|---|-----------------------|------------------|--------------------------|--|
| 100WH-140W | Single phase 3 wire 220-240V 50Hz | 5.5 | 24 | 25 | φ1.6mm | φ1.6mm x 3 |
| 100WX | | | | 23 | | |
| 1250WX-1400WX | 3 phase 4 wire 380-415V 50Hz | 3.5 | 15 | 26 | φ1.6mm | φ1.6mm x 3 |
| 100WS-140WS | | | | 27 | | |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

| Model | Power source | Power cable thickness(mm ²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness | Indoor-outdoor wire thickness X number |
|---------------|--------------------------------------|---|-----------------------|------------------|--------------------------|--|
| 100WN-100WN | Single phase 3 wire 220-240V 50Hz | 5.5 | 25 | 24 | φ1.6mm | φ1.6mm x 3 |
| 123W | | | | 22 | | |
| 140W | 3 phase 4 wire 220V 60Hz | 8 | 27 | 28 | φ1.6mm | φ1.6mm x 3 |
| 1250WX | | | | 31 | | |
| 140WX | 3 phase 4 wire 380-415V 50Hz | 3.5 | 19 | 30 | φ1.6mm | φ1.6mm x 3 |
| 100WS-100WS | | | | 26 | | |
| 1250SX-1250SX | 380V 60Hz | 3.5 | 18 | 23 | φ1.6mm | φ1.6mm x 3 |
| 140SX-140SX | | | | 21 | | |

5. TEST RUN

⚠ WARNING

- Before conduct a test run, make sure that the service valves are closed.
- Turn on power 6 hours prior to a test run to energize the crank case heater.
- In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
- Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
- Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous. Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

⚠ CAUTION

- When you operate switches (SW3, SW5) for on-site setting, be careful not to touch a live part.
- You cannot check discharge pressure from the liquid service valve charge port.
- The 4-way valve (2DS) is energized during a heating operation.
- When power source is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "Communication error between outdoor and indoor unit" may occur.

1) Test run method

- (1) A test run can be initiated from an outdoor unit by using SW3-3 and SW3-4 for on-site setting.
- (2) Switching SW3-3 to ON will start the compressor.
- (3) The unit will start a cooling operation, when SW3-4 is OFF, or a heating operation, when SW3-4 is ON.
- (4) Do not fail to switch SW3-3 to OFF when a test run is completed.

2) Checking the state of the unit in operation

Use check joints provided on the piping before and after the four-way valve installed inside the outdoor unit for checking discharge pressure and suction pressure.
As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

| Operation | Check joint of the pipe | Change part of the |
|-------------------|------------------------------------|------------------------------------|
| Cooling operation | Discharge pressure (High pressure) | gas service valve |
| Heating operation | Suction pressure (Low pressure) | Suction pressure (Low pressure) |
| | Suction pressure (Low pressure) | Discharge pressure (High pressure) |

3) Setting SW3-1, SW3-2, on-site

- (1) Defrost control switching (SW3-1)
 - When this switch is turned ON, the unit will run in the defrost mode more frequently.
 - Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.
- (2) Snow guard fan control (SW3-2)
 - When this switch is turned on, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running.
 - When the unit is used in a very snowy country, set this switch to ON.

4) Failure diagnosis in a test run

| Error indicated on the remote control unit | Red LED | Green LED | Failure event | Action |
|--|---------------|-----------------------|---|--|
| E34 | Blinking once | Blinking continuously | Open phase | Check power cables for loose contact or disconnection |
| E40 | Blinking once | Blinking continuously | 63H1 actuation or operation with service valves shut (occurs mainly during a heating operation) | 1. Check whether the service valves are open. 2. If an error has been canceled when 5 minutes have elapsed, check whether the service valves are fully open and the unit is effecting Check Reset from the remote control unit. |
| E49 | Blinking once | Blinking continuously | Low pressure error or operation with service valves shut (occurs mainly during a cooling operation) | |

● If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

| When power is turned on | When the unit comes to a normal stop | When the unit comes to an abnormal stop |
|-------------------------------|--------------------------------------|---|
| Valve for a cooling operation | Complete shut position | During a cooling operation |
| Valve for a heating operation | Full open position | Complete shut position |
| | Complete shut position | Full open position |
| | Full open position | Complete shut position |
| | Full open position | Full open position |

6) Heed the following on the first operation after turning on the circuit breaker.

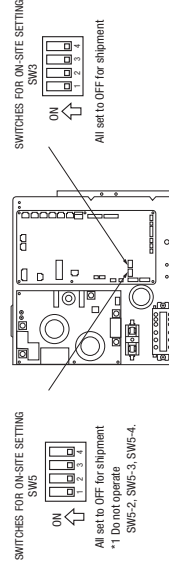
This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

A failure to observe these instructions can result in a compressor breakdown.

| Items to check before a test run | Item | Check item | Check |
|----------------------------------|----------------------|--|-------|
| 2 | Refrigerant plumbing | If brazed, was it brazed under a nitrogen gas flow? | |
| | | Were air-tightness test and vacuum extraction surely performed? | |
| | | Are heat insulation materials installed on both liquid and gas pipes? | |
| | | Are service valves surely opened for both liquid and gas systems? | |
| 4 | Electric wiring | Have you recorded the additional refrigerant charge volume and refrigerant pipe length on the panel's label? | |
| | | Is the unit free of cabling errors such as uncompleted connection, an absent or reversed phase? | |
| | | Are properly rated electrical equipments used for circuit breakers and cables? | |
| | | Doesn't cabling cross-connect between units, where more than one unit are installed? | |
| | | Are indoor-outdoor signal wires connected to remote control wires? | |
| | | Do indoor-outdoor connecting cables connect between the same terminal numbers? | |
| | | Are either VCT cabletype cables or VFF flat cables used for indoor-outdoor connecting cables? | |
| | | Does grounding satisfy the D type grounding (type III grounding) requirements? | |
| - | Indoor unit | Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire? | |
| | | Are cables held down with cable clamps so that no external force works onto terminal connections? | |
| | | Is indoor unit installation work completed? | |
| | | Where a face cover should be attached onto an indoor unit, is the face cover attached to the indoor unit? | |

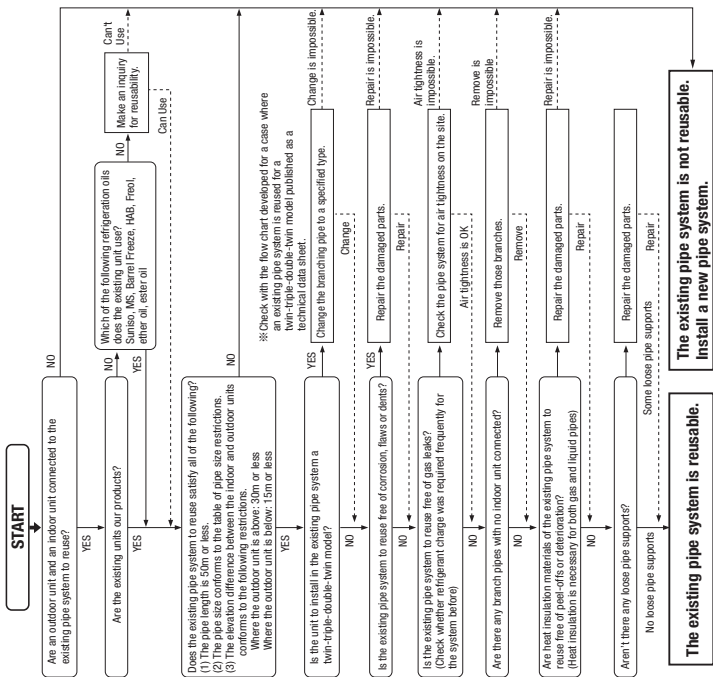
● Always carry out a test run and check the following in order as listed.

| Turn | The contents of operation | Check |
|------|--|-------|
| ① | Open the gas side service valve fully. | |
| ② | Open the liquid side service valve fully. | |
| ③ | Close the panel. | |
| ④ | Where a remote control unit is used for unit setup on the installation site, follow instructions for unit setup on the installation site with a remote control unit. | |
| ⑤ | SW3-3 ON / SW3-4 OFF: the unit will start a cooling operation. SW3-3 ON / SW3-4 ON: the unit will start a heating operation. | |
| ⑥ | When the unit starts operation, press the wind direction button provided on the remote control unit to check its operation. | |
| ⑦ | Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation. | |
| ⑧ | Make sure that a red LED is not blinking. | |
| ⑨ | When you complete the test run, do not forget to turn SW3-3 to the OFF position. | |
| ⑩ | Where options are used, check their operation according to the respective instruction manuals. | |



6. UTILIZATION OF EXISTING PIPING.

Check whether an existing pipe system is reusable or not by using the following flow chart.



WARNING <Where the existing unit can be run for a cooling operation.>
 Carry out the following steps with the existing unit in the order of (1), (2), (3) and (4)

- (1) Run the unit for 30 minutes for a cooling operation.
- (2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
- (3) Close the liquid side service valve of the outdoor unit and pump down (refrigerant recovery)
- (4) Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
 - For the flare nut, do not use the old one, but use the one supplied with the outdoor unit.
 - **Turn on-site setting switch SW5-1** to the ON position. (Where the gas pipe size is φ 19.05)

<Where the existing unit cannot be run for a cooling operation.>
 Wash the pipe system or install a new pipe system.

- If you choose to wash the pipe system, contact our distributor in the area.

<Table of pipe size restrictions>

○: Standard pipe size ○: Usable
 △: Restricted to shorter pipe length limits ×: Not usable

| Pipe size | Additional charging amount of refrigerant per 1m | | 0.08kg/m | | 0.09kg/m | | 0.08kg/m | |
|--|--|--------|----------|--------|----------|--------|----------|--------|
| | φ9.52 | φ9.52 | φ12.7 | φ12.7 | φ9.52 | φ9.52 | φ12.7 | φ12.7 |
| Liquid pipe | φ9.52 | φ9.52 | φ12.7 | φ12.7 | φ9.52 | φ9.52 | φ12.7 | φ12.7 |
| Gas pipe | φ15.88 | φ19.05 | φ15.88 | φ19.05 | φ15.88 | φ15.88 | φ19.05 | φ19.05 |
| Usability | ○ | ○※1 | △ | △※1 | ○ | ○※1 | △ | △※1 |
| Maximum one-way pipe length | 50 | 50 | 25 | 25 | 20 | 100 | 100 | 50 |
| Length covered without additional charge | 30 | 30 | 15 | 15 | 10 | 30 | 30 | 15 |
| Usability | ○ | ○※1 | △ | △※1 | ○ | ○※1 | △ | △※1 |
| Maximum one-way pipe length | 50 | 50 | 25 | 25 | 20 | 100 | 100 | 50 |
| Length covered without additional charge | 30 | 30 | 15 | 15 | 10 | 30 | 30 | 15 |
| Usability | ○ | ○※1 | △ | △※1 | ○ | ○※1 | △ | △※1 |
| Maximum one-way pipe length | 50 | 50 | 25 | 25 | 20 | 100 | 100 | 50 |
| Length covered without additional charge | 30 | 30 | 15 | 15 | 10 | 30 | 30 | 15 |

<Pipe system after the branching pipe>

| Pipe size | Additional charging amount of refrigerant per 1m | | 0.08kg/m | | 0.09kg/m | | 0.08kg/m | |
|--|---|--|---|--|---|--------------------------------------|-----------------------|--------|
| | φ9.52 | φ9.52 | φ12.7 | φ12.7 | φ9.52 | φ9.52 | φ12.7 | φ12.7 |
| Liquid pipe | φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 <td>φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 </td></td></td></td></td></td></td> | φ9.52 <td>φ12.7 <td>φ12.7 <td>φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 </td></td></td></td></td></td> | φ12.7 <td>φ12.7 <td>φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 </td></td></td></td></td> | φ12.7 <td>φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 </td></td></td></td> | φ9.52 <td>φ9.52 <td>φ12.7 <td>φ12.7 </td></td></td> | φ9.52 <td>φ12.7 <td>φ12.7 </td></td> | φ12.7 <td>φ12.7 </td> | φ12.7 |
| Gas pipe | φ15.88 | φ19.05 | φ15.88 | φ19.05 | φ15.88 | φ15.88 | φ19.05 | φ19.05 |
| Usability | ○ | ○※1 | △ | △※1 | ○ | ○※1 | △ | △※1 |
| Maximum one-way pipe length | 50 | 50 | 25 | 25 | 20 | 100 | 100 | 50 |
| Length covered without additional charge | 30 | 30 | 15 | 15 | 10 | 30 | 30 | 15 |
| Usability | ○ | ○※1 | △ | △※1 | ○ | ○※1 | △ | △※1 |
| Maximum one-way pipe length | 50 | 50 | 25 | 25 | 20 | 100 | 100 | 50 |
| Length covered without additional charge | 30 | 30 | 15 | 15 | 10 | 30 | 30 | 15 |

※1 Because of its insufficient pressure resistance, **turn the dip switch SW5-1** provided on the outdoor unit board to the ON position for φ 19.05 × 11.0. (In the case of a twin-triple-double-twin model, this also applies to the case where φ 19.05 × 11.0 is used in a pipe system after the first branching point). However, you need not turn the dip switch SW5-1 to the ON position, if 1/2H pipes or pipes having 1.2 or thicker walls are used.

※2 When the main pipe length exceeds 40m, a significant capacity drop may be experienced due to pressure loss in the liquid pipe system. Use φ 12.7 for the liquid main.

※3 Keep the total pipe length, not one-way pipe length, below the specified maximum pipe length.

※4 Piping size after branch should be equal or smaller than main pipe size.

※5 Piping size from first branch to indoor unit should be φ 9.52 (Liquid) / φ 12.7 (Gas).

- When refrigerant piping is shorter than 3m, reduce refrigerant by 1kg from factory charged volume.
- Any combinations of pipe sizes not listed in the table or marked with × in the table are not usable.

<The model types of existing units of which branching pipes are reusable.>

- Models later than Type 8.
- FDC * * * 8 □ □ □ □
- FDCP * * * 8 □ □ □ □

The branching pipes used with models other than those listed above are not reusable because of their insufficient pressure resistance. Please use our genuine branching pipes for R410A.

● * * * are numbers representing horsepower. □ □ □ is an alphanumeric letter.

Formula to calculate additional charge volume

Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) × Additional charge volume per meter of pipe shown in the table (kg/m) + (Branch pipe length (m) - Length covered without additional charge shown in the table (kg/m)) × Additional charge volume per meter of pipe shown in the table (kg/m)

※: If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.
Example When an 140V (single installation) is installed in a 20m long existing pipe system (liquid φ 12.7, gas φ 19.05), the quantity of refrigerant to charge additionally should be (20m-15m) x 0.08kg/m = 0.4 kg.

1.10.5 Instructions for branching pipe set (DIS-WA1, WB1, TA1, TB1)

For R410A

PSB012D865 

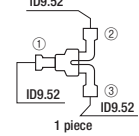
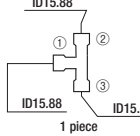


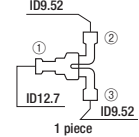
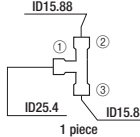


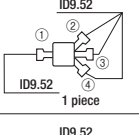
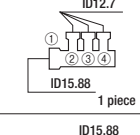


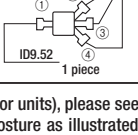
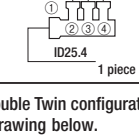




WARNING / CAUTION

- This set is for R410A refrigerant.
- Select a branching pipe set correctly rated for the combined total capacity of connected indoor units and install it according to this manual. An improperly installed branching pipe set can cause degraded performance or an abnormal unit stop.
- Provide good heat insulation to the pipes by following instructions contained in this manual. Improper heat insulation can result in degraded performance or a water leak accident from condensation.
- Please make sure that only parts supplied as accessories or the manufacturer's approved parts are used in installing the unit, because a leak of refrigerant can result in a lack-of-oxygen accident, if it reaches a concentration beyond the tolerable limit.

This manual explains how to use a branching pipe set that is indispensable in connecting pipes for a twin/triple/double-twin configuration installation (system). For the details of piping work, unit installation work and electrical installation work, please refer to the installation manuals and installation guides supplied with your outdoor and indoor units.

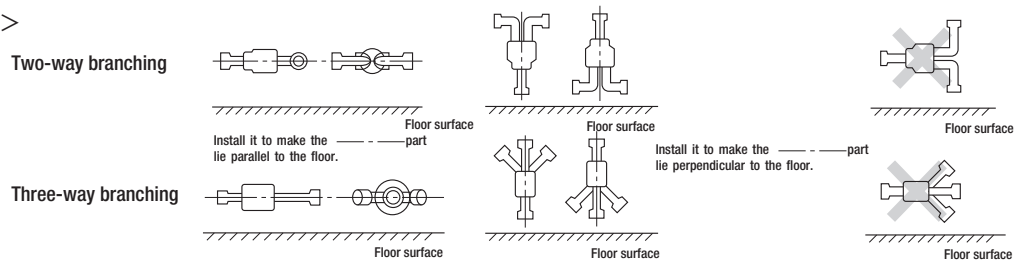
1. Branching pipe set specifications

- (1) Please make sure that you have chosen the right branching pipe set and the specifications of the parts contained in it by checking with the table below.
- (2) Connect pipes as illustrated in the table below. The pipe from an outdoor unit must be brazed to the pipe connection port "①" and the pipes from indoor units to "②," "③" and "④."

| Branching pipe set type | Supported outdoor/indoor unit combinations | | Part lists | | | |
|--------------------------------------|--|----------------------------|---|--|--|---|
| | Outdoor unit model | Indoor unit model | Branching pipe set for a liquid pipe | Branching pipe set for a gas pipe | Different diameter pipe joint | Heat insulation material |
| DIS-WA1 (Two-way branching set) | 3HP | 1.5HP + 1.5HP |  |  | Joint A ID9.52  2 pieces Flare joint (for indoor unit side connection) |  |
| | 4HP | 2HP + 2HP 1.5HP + 2.5HP | | | | |
| | 5HP | 2.5HP + 2.5HP 2HP + 3HP | | | | |
| | 6HP | 3HP + 3HP 2HP + 4HP | | | | |
| DIS-WB1 (Two-way branching set) | 8HP | 4HP + 4HP |  |  | Joint C OD12.7  1 piece ID9.52 |  |
| | | 3HP + 5HP | | | | |
| | 10HP | 5HP + 5HP | | | | |
| DIS-TA1 (Three-way branching set) | 6HP | 2HP + 2HP + 2HP |  |  | Joint A ID9.52  3 pieces Flare joint (for indoor unit side connection) |  |
| DIS-TB1 (Three-way branching set) | 8HP | 3HP + 3HP + 3HP |  |  | Joint A ID9.52  2 pieces Flare joint (for indoor unit side connection) Joint B OD15.88  1 piece ID12.7 Joint D ID12.7  1 piece OD9.52 |  |

- (3) To connect pipes Double Twin installation (involving 4 indoor units), please see 2-7. "Double Twin configuration."
- (4) A branching pipe set must always be installed into the posture as illustrated in the drawing below.

< Posture to install into >



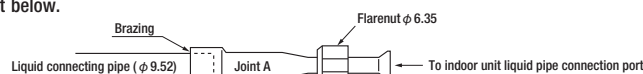
2. Pipe connecting procedure

Braze the different diameter pipe joint found in the set matching the connected outdoor and indoor unit capacities according to the instructions set out below.



CAUTION

In connecting an indoor unit of which capacity is 1.5HP, 2HP or 2.5HP, always use a $\phi 9.52$ liquid pipe to connect to the branching pipe (branching pipe – indoor unit).
 In connecting to an indoor unit (liquid pipe side: $\phi 6.35$), use the different diameter pipe joint A supplied with the set and follow the procedure set out below.



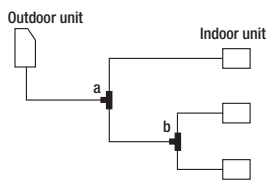
2-1 DIS-WA1

| Supported combinations | | Liquid branching pipe | Gas branching pipe |
|------------------------|-------------------|-----------------------|--------------------|
| Outdoor unit model | Indoor unit model | | |
| 3HP | 1.5HP + 1.5HP | | |
| 4HP | 2HP + 2HP | | |
| | 1.5HP + 2.5HP | | |
| 5HP | 2.5HP + 2.5HP | | |
| | 2HP + 3HP | | |
| 6HP | 3HP + 3HP | | |
| | 2HP + 4HP | | |

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like *A

2-5. Triple type for same model/same capacity or different model/same capacity

When the difference in length of pipes after the branch is longer than 3 m and shorter than 10 m



| Outdoor unit model | Indoor unit model | Branching pipe | Branching pipe set type | Liquid branching pipe | Gas branching pipe |
|--------------------|-------------------|----------------|-------------------------|-----------------------|--------------------|
| 6HP | 2HP + 2HP + 2HP | a | DIS-WA1 | | |
| | | | | | |
| 8HP | 3HP + 3HP + 3HP | a | DIS-WB1 | | |
| | | | | DIS-WA1 | |

2-2 DIS-WB1

| Supported combinations | | Liquid branching pipe | Gas branching pipe |
|------------------------|-------------------|-----------------------|--------------------|
| Outdoor unit model | Indoor unit model | | |
| 8HP | 3HP + 5HP | | |
| | 4HP + 4HP | | |
| 10HP | 5HP + 5HP | | |

2-3 DIS-TA1

Applicable to the difference in length of pipes after the branch being less than 3 m
* Connection is not allowed when the difference in length of pipes is larger than 3 m.

| Supported combinations | | Liquid branching pipe | Gas branching pipe |
|------------------------|-------------------|-----------------------|--------------------|
| Outdoor unit model | Indoor unit model | | |
| 6HP | 2HP + 2HP + 2HP | | |

2-4 DIS-TB1

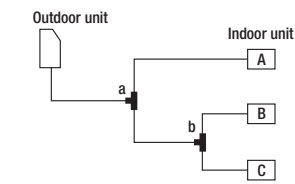
Applicable to the difference in length of pipes after the branch being less than 3 m
* Connection is not allowed when the difference in length of pipes is larger than 3 m.

| Supported combinations | | Liquid branching pipe | Gas branching pipe |
|------------------------|-------------------|-----------------------|--------------------|
| Outdoor unit model | Indoor unit model | | |
| 8HP | 3HP + 3HP + 3HP | | |

2-6. Triple type for same model/different capacity or different model/different capacity

Applicable to the difference in length of pipes after the branch being less than 3 m

* Connection is not allowed when the difference in length of pipes is larger than 3 m.



Connecting position

| Outdoor unit model | Indoor unit model | A | B | C |
|--------------------|-------------------|-----|-------|-------|
| 10HP | 2.5HP+2.5HP+5HP | 5HP | 2.5HP | 2.5HP |
| | 3HP+3HP+4HP | 4HP | 3HP | 3HP |

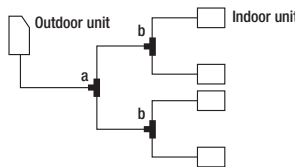
| Outdoor unit model | Indoor unit model | Branching pipe | Branching pipe set type | Liquid branching pipe | Gas branching pipe |
|--------------------|-------------------|----------------|-------------------------|-----------------------|--------------------|
| 10HP | 2.5HP+2.5HP+5HP | a | DIS-WB1 | | |
| | | b | DIS-WA1 | | |
| 10HP | 3HP+3HP+4HP | a | DIS-WB1 | | |
| | | b | DIS-WA1 | | |

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like ※ A.

2-7. Double Twin type

Pipes should be connected as follows for a Double Twin installation (4 connected indoor units. The capacity of an outdoor unit available for this configuration is either 8HP or 10HP):

| Outdoor unit capacity | Indoor unit capacity |
|-----------------------|----------------------|
| 8HP | 2HP × 4 units |
| 10HP | 2.5HP × 4 units |

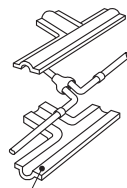


| Branching pipe | Branching pipe set type | Outdoor unit model | Liquid branching pipe | Gas branching pipe |
|----------------|-------------------------|--------------------|-----------------------|--------------------|
| a | DIS-WB1 | 8HP | | |
| | | 10HP | | |
| b | DIS-WA1 | 8HP | | |
| | | 10HP | | |

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like ※ A.

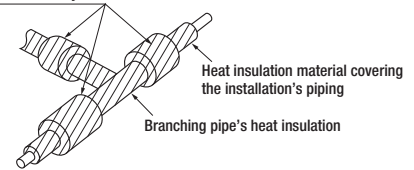
3. Heat insulation work

- (1) Condensation can also occur on liquid pipes with this model. Please provide good heat insulation to both liquid and gas pipes.
- (2) For the heat insulation of a branching pipe, always use the heat insulation material supplied with the set and provide heat insulation according to the instructions set out below.



1. It has an adhesive layer on the entire inner face. Remove a separator and wrap it around the branching pipe.

Heat insulation material (for pipe insulation, etc.) to be procured locally



2. Apply a heat insulation material (to be procured locally) to the joint between the branching pipe's heat insulation and the heat insulation material covering the installation's piping as described above and wrap a tape over the gap shown as a hatched (///) area to complete dressing of the piping.

1.11 TECHNICAL INFORMATION

(1) Ceiling cassette-4 way compact type (FDTC)

FDTC40ZSXVH

| | | | |
|---|---|--|---------------------------------------|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDTC40VH | | |
| Outdoor unit model name | SRC40ZSX-S | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 4.0 | kW |
| heating / Average | Pdesignh | 4.0 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 4.0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 4.00 | kW |
| Tj=30°C | Pdc | 2.95 | kW |
| Tj=25°C | Pdc | 1.90 | kW |
| Tj=20°C | Pdc | 1.42 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 3.53 | kW |
| Tj=2°C | Pdh | 2.15 | kW |
| Tj=7°C | Pdh | 1.38 | kW |
| Tj=12°C | Pdh | 0.90 | kW |
| Tj=bivalent temperature | Pdh | 2.90 | kW |
| Tj=operating limit | Pdh | 4.00 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto | 10 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | Sound power level(indoor) | Lwa 59 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 63 dB(A) |
| variable | No | Global warming potential | GWP 2088 kgCO ₂ eq. |
| | Yes | Rated air flow(indoor) | - 780 m ³ /h |
| | | Rated air flow(outdoor) | - 2160 m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

FDTC50ZSXVH

| | | | | | | | |
|---|--|---|--|--|--|--------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC50VH | | Average (mandatory) | | Yes | |
| Outdoor unit model name | | SRC50ZSX-S | | Warmer (if designated) | | No | |
| Function (indicate if present) | | | | Colder (if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | | | | Item | | | |
| | | symbol value unit | | | | symbol value class | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 5.0 kW | | cooling | | SEER 6.49 A++ | |
| heating / Average | | Pdesignh 4.3 kW | | heating / Average | | SCOP/A 4.30 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 4.3 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 5.00 kW | | Tj=35°C | | EERd 3.50 - | |
| Tj=30°C | | Pdc 3.69 kW | | Tj=30°C | | EERd 5.02 - | |
| Tj=25°C | | Pdc 2.37 kW | | Tj=25°C | | EERd 7.52 - | |
| Tj=20°C | | Pdc 1.42 kW | | Tj=20°C | | EERd 13.52 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 3.81 kW | | Tj=-7°C | | COPd 2.82 - | |
| Tj=2°C | | Pdh 2.31 kW | | Tj=2°C | | COPd 4.28 - | |
| Tj=7°C | | Pdh 1.49 kW | | Tj=7°C | | COPd 5.52 - | |
| Tj=12°C | | Pdh 0.90 kW | | Tj=12°C | | COPd 5.63 - | |
| Tj=bivalent temperature | | Pdh 3.20 kW | | Tj=bivalent temperature | | COPd 2.19 - | |
| Tj=operating limit | | Pdh 4.30 kW | | Tj=operating limit | | COPd 2.44 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -15 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcycc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcyhc - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 10 W | | cooling | | Qce 270 kWh/a | |
| standby mode | | Psb 8 W | | heating / Average | | Qhe 1402 kWh/a | |
| thermostat-off mode | | Pto 10 W | | heating / Warmer | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 0 W | | heating / colder | | Qhe - kWh/a | |
| Capacity control (indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level (indoor) | | Lwa 59 dB(A) | |
| staged | | No | | Sound power level (outdoor) | | Lwa 63 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 2088 kgCO ₂ eq. | |
| | | | | Rated air flow (indoor) | | - 780 m ³ /h | |
| | | | | Rated air flow (outdoor) | | - 2400 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDTC60ZSXVH

| | | | | | | | |
|---|--|---|--|--|--|--------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC60VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | SRC60ZSX-S | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | | | | Item | | | |
| | | symbol value unit | | | | symbol value class | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 5.6 kW | | cooling | | SEER 6.39 A++ | |
| heating / Average | | Pdesignh 5.4 kW | | heating / Average | | SCOP/A 4.09 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 5.4 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 5.60 kW | | Tj=35°C | | EERd 3.18 - | |
| Tj=30°C | | Pdc 4.13 kW | | Tj=30°C | | EERd 4.98 - | |
| Tj=25°C | | Pdc 2.65 kW | | Tj=25°C | | EERd 7.36 - | |
| Tj=20°C | | Pdc 1.45 kW | | Tj=20°C | | EERd 13.18 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 4.78 kW | | Tj=-7°C | | COPd 2.58 - | |
| Tj=2°C | | Pdh 2.91 kW | | Tj=2°C | | COPd 3.99 - | |
| Tj=7°C | | Pdh 1.87 kW | | Tj=7°C | | COPd 5.50 - | |
| Tj=12°C | | Pdh 0.94 kW | | Tj=12°C | | COPd 5.70 - | |
| Tj=bivalent temperature | | Pdh 3.90 kW | | Tj=bivalent temperature | | COPd 2.00 - | |
| Tj=operating limit | | Pdh 5.40 kW | | Tj=operating limit | | COPd 2.25 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -15 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcycc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcyhc - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 8 W | | cooling | | Qce 307 kWh/a | |
| standby mode | | Psb 8 W | | heating / Average | | Qhe 1848 kWh/a | |
| thermostat-off mode | | Pto 10 W | | heating / Warmer | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 0 W | | heating / colder | | Qhe - kWh/a | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 60 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 65 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 2088 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 840 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 2490 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDTC71VNXPVH

| | | | | | | | |
|---|--|---|--|--|--|---------------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC40VH (x2 units) | | | | | |
| Outdoor unit model name | | FDC71VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | | | | Item | | | |
| | | symbol value unit | | | | symbol value class | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 7.1 kW | | cooling | | SEER 5.50 A | |
| heating / Average | | Pdesignh 6.0 kW | | heating / Average | | SCOP/A 4.05 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 6.0 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 7.10 kW | | Tj=35°C | | EERd 3.50 - | |
| Tj=30°C | | Pdc 5.23 kW | | Tj=30°C | | EERd 5.62 - | |
| Tj=25°C | | Pdc 3.37 kW | | Tj=25°C | | EERd 8.64 - | |
| Tj=20°C | | Pdc 3.20 kW | | Tj=20°C | | EERd 11.23 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 5.31 kW | | Tj=-7°C | | COPd 2.89 - | |
| Tj=2°C | | Pdh 3.23 kW | | Tj=2°C | | COPd 3.89 - | |
| Tj=7°C | | Pdh 2.08 kW | | Tj=7°C | | COPd 5.14 - | |
| Tj=12°C | | Pdh 2.46 kW | | Tj=12°C | | COPd 6.34 - | |
| Tj=bivalent temperature | | Pdh 4.37 kW | | Tj=bivalent temperature | | COPd 2.19 - | |
| Tj=operating limit | | Pdh 6.00 kW | | Tj=operating limit | | COPd 2.59 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcyccl - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcycch - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 20 W | | cooling | | Qce 453 kWh/a | |
| standby mode | | Psb 20 W | | heating / Average | | Qhe 2077 kWh/a | |
| thermostat-off mode | | Pto 20 W | | heating / Warmer | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 23 W | | heating / colder | | Qhe - kWh/a | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 59 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 66 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 2088 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 780 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 3600 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDTC100VNXPVH

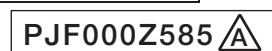
| | | | | | | | |
|---|--|---|--|--|--|---------------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC50VH (x2 units) | | | | | |
| Outdoor unit model name | | FDC100VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | Yes | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | | | | Item | | | |
| symbol | | value | | symbol | | value | |
| unit | | | | class | | | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 10.0 kW | | cooling | | SEER 5.56 A | |
| heating / Average | | Pdesignh 10.8 kW | | heating / Average | | SCOP/A 3.87 A | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 10.8 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 10.00 kW | | Tj=35°C | | EERd 3.57 - | |
| Tj=30°C | | Pdc 7.37 kW | | Tj=30°C | | EERd 5.34 - | |
| Tj=25°C | | Pdc 5.17 kW | | Tj=25°C | | EERd 7.83 - | |
| Tj=20°C | | Pdc 5.38 kW | | Tj=20°C | | EERd 10.25 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 9.56 kW | | Tj=-7°C | | COPd 2.66 - | |
| Tj=2°C | | Pdh 5.81 kW | | Tj=2°C | | COPd 3.63 - | |
| Tj=7°C | | Pdh 4.08 kW | | Tj=7°C | | COPd 5.30 - | |
| Tj=12°C | | Pdh 4.85 kW | | Tj=12°C | | COPd 6.14 - | |
| Tj=bivalent temperature | | Pdh 7.60 kW | | Tj=bivalent temperature | | COPd 2.11 - | |
| Tj=operating limit | | Pdh 10.80 kW | | Tj=operating limit | | COPd 2.32 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcyc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcyc - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 20 W | | cooling | | Qce 630 kWh/a | |
| standby mode | | Psb 20 W | | heating / Average | | Qhe 3910 kWh/a | |
| thermostat-off mode | | Pto 20 W | | heating / Warmer | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 23 W | | heating / colder | | Qhe - kWh/a | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 59 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 70 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 2088 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 780 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 6000 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDTC100VSPVH

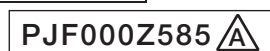
| | | | | | | | |
|---|--|---|-----------------|--|--|------------|-----------------------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC50VH (x2 units) | | Average (mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VSX | | Warmer (if designated) | | No | |
| Function (indicate if present) | | | | Colder (if designated) | | | |
| cooling | | Yes | | Colder (if designated) | | No | |
| heating | | Yes | | | | | |
| Item symbol value unit | | | | Item symbol value class | | | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc | 10.0 kW | cooling | | SEER | 5.56 A |
| heating / Average | | Pdesignh | 10.8 kW | heating / Average | | SCOP/A | 3.87 A |
| heating / Warmer | | Pdesignh | - kW | heating / Warmer | | SCOP/W | - - |
| heating / Colder | | Pdesignh | - kW | heating / Colder | | SCOP/C | - - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh | 10.8 kW | heating / Average (-10°C) | | elbu | 0 kW |
| heating / Warmer (2°C) | | Pdh | - kW | heating / Warmer (2°C) | | elbu | - kW |
| heating / Colder (-22°C) | | Pdh | - kW | heating / Colder (-22°C) | | elbu | - kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc | 10.00 kW | Tj=35°C | | EERd | 3.57 - |
| Tj=30°C | | Pdc | 7.37 kW | Tj=30°C | | EERd | 5.34 - |
| Tj=25°C | | Pdc | 5.17 kW | Tj=25°C | | EERd | 7.83 - |
| Tj=20°C | | Pdc | 5.38 kW | Tj=20°C | | EERd | 10.25 - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh | 9.56 kW | Tj=-7°C | | COPd | 2.66 - |
| Tj=2°C | | Pdh | 5.81 kW | Tj=2°C | | COPd | 3.63 - |
| Tj=7°C | | Pdh | 4.08 kW | Tj=7°C | | COPd | 5.30 - |
| Tj=12°C | | Pdh | 4.85 kW | Tj=12°C | | COPd | 6.14 - |
| Tj=bivalent temperature | | Pdh | 7.60 kW | Tj=bivalent temperature | | COPd | 2.11 - |
| Tj=operating limit | | Pdh | 10.80 kW | Tj=operating limit | | COPd | 2.32 - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh | - kW | Tj=2°C | | COPd | - - |
| Tj=7°C | | Pdh | - kW | Tj=7°C | | COPd | - - |
| Tj=12°C | | Pdh | - kW | Tj=12°C | | COPd | - - |
| Tj=bivalent temperature | | Pdh | - kW | Tj=bivalent temperature | | COPd | - - |
| Tj=operating limit | | Pdh | - kW | Tj=operating limit | | COPd | - - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh | - kW | Tj=-7°C | | COPd | - - |
| Tj=2°C | | Pdh | - kW | Tj=2°C | | COPd | - - |
| Tj=7°C | | Pdh | - kW | Tj=7°C | | COPd | - - |
| Tj=12°C | | Pdh | - kW | Tj=12°C | | COPd | - - |
| Tj=bivalent temperature | | Pdh | - kW | Tj=bivalent temperature | | COPd | - - |
| Tj=operating limit | | Pdh | - kW | Tj=operating limit | | COPd | - - |
| Tj=-15°C | | Pdh | - kW | Tj=-15°C | | COPd | - - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv | -10 °C | heating / Average | | Tol | -20 °C |
| heating / Warmer | | Tbiv | - °C | heating / Warmer | | Tol | - °C |
| heating / Colder | | Tbiv | - °C | heating / Colder | | Tol | - °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcyc | - kW | for cooling | | EERcyc | - - |
| for heating | | Pcyc | - kW | for heating | | COPcyc | - - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc | 0.25 - | heating | | Cdh | 0.25 - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff | 20 W | cooling | | Qce | 630 kWh/a |
| standby mode | | Psb | 20 W | heating / Average | | Qhe | 3910 kWh/a |
| thermostat-off mode | | Pto | 20 W | heating / Warmer | | Qhe | - kWh/a |
| crankcase heater mode | | Pck | 23 W | heating / colder | | Qhe | - kWh/a |
| Capacity control (indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level (indoor) | | Lwa | 59 dB(A) |
| staged | | No | | Sound power level (outdoor) | | Lwa | 70 dB(A) |
| variable | | Yes | | Global warming potential | | GWP | 2088 kgCO ₂ eq. |
| | | | | Rated air flow (indoor) | | - | 780 m ³ /h |
| | | | | Rated air flow (outdoor) | | - | 6000 m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDTC125VNXPVH

| Model(s) : FDC125VNX / FDTC60VH (x2 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 193 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 305 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 449 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 611 | % |
| Tj=+20°C | Pdc | 4.7 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 733 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.040 | kW | Crankcase heater mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0.25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

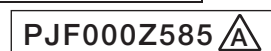


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDTC60VH (x2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 150 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 14.9 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 240 | % |
| Tj=+2°C | Pdh | 9.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 374 | % |
| Tj=+7°C | Pdh | 5.8 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 505 | % |
| Tj=+12°C | Pdh | 4.6 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 609 | % |
| Tbiv=bivalent temperature | Pdh | 16.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 227 | % |
| TOL=operation limit | Pdh | 13.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 218 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Toi temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

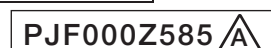


FDTC125VSPVH

| Model(s) : FDC125VSX / FDTC60VH (x2 units) | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 4.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 70.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 195 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 305 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 449 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 611 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 733 | % |
| Crankcase heater mode | | | |
| | | 0.035 | kW |
| Standby mode | | | |
| | | 0.035 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 6000 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

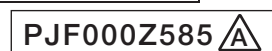


| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDTC60VH (x2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 150 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 14.9 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 240 | % |
| Tj=+2°C | Pdh | 9.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 374 | % |
| Tj=+7°C | Pdh | 5.8 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 505 | % |
| Tj=+12°C | Pdh | 4.6 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 609 | % |
| Tbiv=bivalent temperature | Pdh | 16.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 227 | % |
| TOL=operation limit | Pdh | 13.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 218 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Tol temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input Standby mode | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

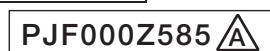


FDTC140VNXTVH

| Model(s) : FDC140VNX / FDTC50VH (x3 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 213 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 333 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 491 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 664 | % |
| Tj=+20°C | Pdc | 5.2 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 837 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.040 | kW | Crankcase heater mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0.25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

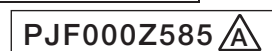


| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDTCS50VH (x3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 168 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 15.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 269 | % |
| Tj=+2°C | Pdh | 9.2 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 416 | % |
| Tj=+7°C | Pdh | 5.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 565 | % |
| Tj=+12°C | Pdh | 4.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 686 | % |
| T _{biv} =bivalent temperature | Pdh | 17.0 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 254 | % |
| T _{OL} =operation limit | Pdh | 14.8 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 269 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _{oi} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDTC140VSXTVH

| Model(s) : FDC140VSX / FDTC50VH (x3 units) | | | |
|---|---|---|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW |
| Seasonal space cooling energy efficiency $\eta_{s,c}$ | | | |
| | | 215 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | |
| Tj=+35°C | Pdc | 14.0 | kW |
| Tj=+30°C | Pdc | 10.3 | kW |
| Tj=+25°C | Pdc | 6.6 | kW |
| Tj=+20°C | Pdc | 5.2 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Tj=+35°C | | EERd or GUEc,bin / AEFc,bin | 333 % |
| Tj=+30°C | | EERd or GUEc,bin / AEFc,bin | 491 % |
| Tj=+25°C | | EERd or GUEc,bin / AEFc,bin | 664 % |
| Tj=+20°C | | EERd or GUEc,bin / AEFc,bin | 837 % |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Crankcase heater mode | | P _{CK} | 0.035 kW |
| Standby mode | | P _{SB} | 0.035 kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 6000 | m ³ /h |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0.25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDTCS50VH (x3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 168 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 15.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 269 | % |
| Tj=+2°C | Pdh | 9.2 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 416 | % |
| Tj=+7°C | Pdh | 5.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 565 | % |
| Tj=+12°C | Pdh | 4.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 686 | % |
| Tbiv=bivalent temperature | Pdh | 17.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 254 | % |
| TOL=operation limit | Pdh | 14.8 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 269 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Toi temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

Models FDTC40VH, 50VH,60VH

| Model(s) : FDTC40VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.4 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 59.0 | dB |
| Heating capacity | $P_{rated,h}$ | 4.5 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDTC50VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 59.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDTC60VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.9 | kW | Total electric power input | P_{elec} | 0.060 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.7 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

(2) Duct connected-High static pressure type (FDU)

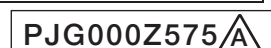
FDU71VNXVH

| | | | |
|---|---|--|--|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDU71VH | | |
| Outdoor unit model name | FDC71VNX | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 7.1 | kW |
| heating / Average | Pdesignh | 7.0 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 5.9 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 7.10 | kW |
| Tj=30°C | Pdc | 5.23 | kW |
| Tj=25°C | Pdc | 3.37 | kW |
| Tj=20°C | Pdc | 3.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 6.20 | kW |
| Tj=2°C | Pdh | 3.85 | kW |
| Tj=7°C | Pdh | 2.45 | kW |
| Tj=12°C | Pdh | 2.56 | kW |
| Tj=bivalent temperature | Pdh | 6.20 | kW |
| Tj=operating limit | Pdh | 5.00 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -7 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 15 | W |
| standby mode | Psb | 15 | W |
| thermostat-off mode | Pto(cooling) | 18 | W |
| | Pto(heating) | 35 | W |
| crankcase heater mode | Pck | 22 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 66 dB(A) |
| variable | No | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| | Yes | Rated air flow(indoor) | - 1,440 m ³ /h |
| | | Rated air flow(outdoor) | - 3,600 m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |



FDU100VNXVH

| | | | | | | | |
|---|--|-----------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDU100VH | | | | | |
| Outdoor unit model name | | FDC100VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.22 | A |
| heating / Average | Pdesignh | 13.0 | kW | heating / Average | SCOP/A | 4.10 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 10.9 | kW | heating / Average (-10°C) | elbu | 2.09 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.73 | - |
| Tj=30°C | Pdc | 7.42 | kW | Tj=30°C | EERd | 4.84 | - |
| Tj=25°C | Pdc | 5.58 | kW | Tj=25°C | EERd | 7.43 | - |
| Tj=20°C | Pdc | 5.87 | kW | Tj=20°C | EERd | 10.46 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 11.50 | kW | Tj=-7°C | COPd | 2.54 | - |
| Tj=2°C | Pdh | 6.89 | kW | Tj=2°C | COPd | 4.07 | - |
| Tj=7°C | Pdh | 4.50 | kW | Tj=7°C | COPd | 5.52 | - |
| Tj=12°C | Pdh | 5.20 | kW | Tj=12°C | COPd | 6.50 | - |
| Tj=bivalent temperature | Pdh | 11.50 | kW | Tj=bivalent temperature | COPd | 2.54 | - |
| Tj=operating limit | Pdh | 8.96 | kW | Tj=operating limit | COPd | 2.16 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 670 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 4441 | kWh/a |
| thermostat-off mode | Pto(cooling) | 45 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 65 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 2,160 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



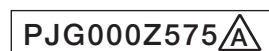
FDU100VSXVH

| | | | | | | | |
|---|--|-----------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDU100VH | | | | | |
| Outdoor unit model name | | FDC100VSX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.19 | A |
| heating / Average | Pdesignh | 13.0 | kW | heating / Average | SCOP/A | 4.10 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 10.9 | kW | heating / Average (-10°C) | elbu | 2.09 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.73 | - |
| Tj=30°C | Pdc | 7.42 | kW | Tj=30°C | EERd | 4.84 | - |
| Tj=25°C | Pdc | 5.58 | kW | Tj=25°C | EERd | 7.43 | - |
| Tj=20°C | Pdc | 5.87 | kW | Tj=20°C | EERd | 10.46 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 11.50 | kW | Tj=-7°C | COPd | 2.54 | - |
| Tj=2°C | Pdh | 6.89 | kW | Tj=2°C | COPd | 4.07 | - |
| Tj=7°C | Pdh | 4.50 | kW | Tj=7°C | COPd | 5.52 | - |
| Tj=12°C | Pdh | 5.20 | kW | Tj=12°C | COPd | 6.50 | - |
| Tj=bivalent temperature | Pdh | 11.50 | kW | Tj=bivalent temperature | COPd | 2.54 | - |
| Tj=operating limit | Pdh | 8.96 | kW | Tj=operating limit | COPd | 2.16 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 40 | W | cooling | Qce | 675 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 4443 | kWh/a |
| thermostat-off mode | Pto(cooling) | 65 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 75 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 2,160 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

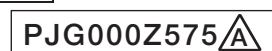


FDU125VNXVH

| Model(s) : FDC125VNX / FDU125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 210.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 358.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 456.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 700.0 | % |
| Tj=+20°C | Pdc | 5.8 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,017.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{SB} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.055 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| <p>** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25.</p> <p>*** from 26 September 2018</p> <p>Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.</p> | | | | | | | |

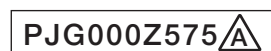


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDU125VH | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 152.0 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 10.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 302.0 | % |
| Tj=+2°C | Pdh | 6.1 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 353.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 512.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 625.0 | % |
| Tbiv=bivalent temperature | Pdh | 11.4 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 279.0 | % |
| TOL=operation limit | Pdh | 9.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 238.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

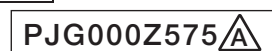


FDU125VSVH

| Model(s) : FDC125VSX / FDU125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 216.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 358.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 465.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 714.0 | % |
| Tj=+20°C | Pdc | 5.8 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,038.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.055 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



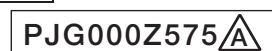
| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDU125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 153.2 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.4 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 284.0 | % |
| Tj=+2°C | Pdh | 7.5 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 364.0 | % |
| Tj=+7°C | Pdh | 4.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 512.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 638.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 263.0 | % |
| TOL=operation limit | Pdh | 10.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 238.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | Supplementary heater | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.095 | kW | back-up heating capacity | | | |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Other items | | | | Standby mode | | | |
| Capacity control | | variable | | For air-to-air heat pumps: air flow-rate,outdoor measured | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDU140VNXVH

| Model(s) : FDC140VNX / FDU140VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency $\eta_{s,c}$ | | 205.9 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 327.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 445.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 656.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,026.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{SB} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.060 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

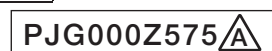
| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDU140VH | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 151.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 295.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 351.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 511.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 631.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 267.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 235.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.105 | kW | Type of energy input | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDU140VSVH

| Model(s) : FDC140VSX / FDU140VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency $\eta_{s,c}$ | | 211.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 327.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 454.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 669.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,047.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.060 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDU140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 152.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 279.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 363.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 508.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 644.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 237.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 212.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



Models FDU71VH, 100VH, 125VH, 140VH

| Model(s) : FDU71VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.8 | kW | Total electric power input | P_{elec} | 0.250 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.3 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 65.0 | dB |
| Heating capacity | $P_{rated,h}$ | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU100VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 7.7 | kW | Total electric power input | P_{elec} | 0.350 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.3 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 65.0 | dB |
| Heating capacity | $P_{rated,h}$ | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

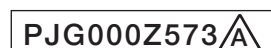
| Model(s) : FDU125VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 10.5 | kW | Total electric power input | P_{elec} | 0.400 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.0 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 67.0 | dB |
| Heating capacity | $P_{rated,h}$ | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU140VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 11.2 | kW | Total electric power input | P_{elec} | 0.550 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.8 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 70.0 | dB |
| Heating capacity | $P_{rated,h}$ | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

(3) Duct connected-Low/Middle static pressure type (FDUM)

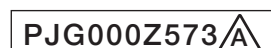
FDUM40ZSXVH

| | | | |
|--|---|--|-----------------------|
| Information to identify the model(s) to which the information relates to: Indoor unit model name FDUM40VH Outdoor unit model name SRC40ZSX-S | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Function(indicate if present) | | Average(mandatory) | Yes |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 4.0 | kW |
| heating / Average | Pdesignh | 3.5 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature | Tdesignh | | |
| heating / Average (-10 °C) | Pdh | 2.9 | kW |
| heating / Warmer (2 °C) | Pdh | - | kW |
| heating / Colder (-22 °C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35 °C | Pdc | 4.00 | kW |
| Tj=30 °C | Pdc | 2.95 | kW |
| Tj=25 °C | Pdc | 1.90 | kW |
| Tj=20 °C | Pdc | 1.51 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7 °C | Pdh | 3.05 | kW |
| Tj=2 °C | Pdh | 1.79 | kW |
| Tj=7 °C | Pdh | 1.21 | kW |
| Tj=12 °C | Pdh | 0.98 | kW |
| Tj=bivalent temperature | Pdh | 3.05 | kW |
| Tj=operating limit | Pdh | 2.35 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2 °C | Pdh | - | kW |
| Tj=7 °C | Pdh | - | kW |
| Tj=12 °C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7 °C | Pdh | - | kW |
| Tj=2 °C | Pdh | - | kW |
| Tj=7 °C | Pdh | - | kW |
| Tj=12 °C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15 °C | Pdh | - | kW |
| Bivalent temperature | | | |
| heating / Average | Tbiv | -7 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | | |
| for cooling | Pccyc | - | kW |
| for heating | Pchyc | - | kW |
| Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - |
| heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | |
| off mode | Poff | 12 | W |
| standby mode | Psb | 12 | W |
| thermostat-off mode | Pto(cooling) | 15 | W |
| | Pto(heating) | 25 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditionir 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |
| Seasonal efficiency and energy efficiency class | | | |
| cooling | SEER | 6.01 | A+ |
| heating / Average | SCOP/A | 4.15 | A+ |
| heating / Warmer | SCOP/W | - | - |
| heating / Colder | SCOP/C | - | - |
| Back up heating capacity at outdoor temperature | Tdesignh | | |
| heating / Average (-10 °C) | elbu | 0.61 | kW |
| heating / Warmer (2 °C) | elbu | - | kW |
| heating / Colder (-22 °C) | elbu | - | kW |
| Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35 °C | EERd | 4.17 | - |
| Tj=30 °C | EERd | 5.57 | - |
| Tj=25 °C | EERd | 7.45 | - |
| Tj=20 °C | EERd | 10.27 | - |
| Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7 °C | COPd | 2.88 | - |
| Tj=2 °C | COPd | 4.34 | - |
| Tj=7 °C | COPd | 4.90 | - |
| Tj=12 °C | COPd | 5.17 | - |
| Tj=bivalent temperature | COPd | 2.88 | - |
| Tj=operating limit | COPd | 2.37 | - |
| Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2 °C | COPd | - | - |
| Tj=7 °C | COPd | - | - |
| Tj=12 °C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7 °C | COPd | - | - |
| Tj=2 °C | COPd | - | - |
| Tj=7 °C | COPd | - | - |
| Tj=12 °C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Tj=-15 °C | COPd | - | - |
| Operating limit temperature | | | |
| heating / Average | Tol | -20 | °C |
| heating / Warmer | Tol | - | °C |
| heating / Colder | Tol | - | °C |
| Cycling interval efficiency | | | |
| for cooling | EERcyc | - | - |
| for heating | COPcyc | - | - |
| Annual electricity consumption | | | |
| cooling | Qce | 233 | kWh/a |
| heating / Average | Qhe | 1182 | kWh/a |
| heating / Warmer | Qhe | - | kWh/a |
| heating / colder | Qhe | - | kWh/a |
| Other items | | | |
| Sound power level(indoor) | Lwa | 60 | dB(A) |
| Sound power level(outdoor) | Lwa | 63 | dB(A) |
| Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| Rated air flow(indoor) | - | 780 | m ³ /h |
| Rated air flow(outdoor) | - | 2,160 | m ³ /h |



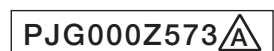
FDUM50ZSXVH

| | | | | | | | |
|---|---|------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM50VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | SRC50ZSX-S | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 5.0 | kW | cooling | SEER | 5.68 | A+ |
| heating / Average | Pdesignh | 4.3 | kW | heating / Average | SCOP/A | 4.36 | A+ |
| heating / Warmer (2°C) | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature | | | | Back up heating capacity at outdoor temperature | | | |
| heating / Average (-10°C) | Tdesignh | 3.6 | kW | heating / Average (-10°C) | elbu | 0.74 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 5.00 | kW | Tj=35°C | EERd | 3.62 | - |
| Tj=30°C | Pdc | 3.69 | kW | Tj=30°C | EERd | 4.86 | - |
| Tj=25°C | Pdc | 2.37 | kW | Tj=25°C | EERd | 6.93 | - |
| Tj=20°C | Pdc | 1.51 | kW | Tj=20°C | EERd | 9.50 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 3.78 | kW | Tj=-7°C | COPd | 2.86 | - |
| Tj=2°C | Pdh | 2.31 | kW | Tj=2°C | COPd | 4.34 | - |
| Tj=7°C | Pdh | 1.50 | kW | Tj=7°C | COPd | 5.51 | - |
| Tj=12°C | Pdh | 0.98 | kW | Tj=12°C | COPd | 6.76 | - |
| Tj=bivalent temperature | Pdh | 3.78 | kW | Tj=bivalent temperature | COPd | 2.86 | - |
| Tj=operating limit | Pdh | 2.82 | kW | Tj=operating limit | COPd | 2.47 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 12 | W | cooling | Qce | 309 | kWh/a |
| standby mode | Psb | 12 | W | heating / Average | Qhe | 1380 | kWh/a |
| thermostat-off mode | Pto(cooling) | 15 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 25 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 63 | dB(A) |
| variable | | Yes | | Global warming potential | GWPP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,400 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioner 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



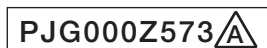
FDUM60ZSXVH

| | | | | | | | |
|---|---|------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM60VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | SRC60ZSX-S | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 5.6 | kW | cooling | SEER | 6.42 | A++ |
| heating / Average | Pdesignh | 5.4 | kW | heating / Average | SCOP/A | 4.37 | A+ |
| heating / Warmer (2°C) | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 4.6 | kW | heating / Average (-10°C) | elbu | 0.78 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 5.60 | kW | Tj=35°C | EERd | 3.64 | - |
| Tj=30°C | Pdc | 4.13 | kW | Tj=30°C | EERd | 5.23 | - |
| Tj=25°C | Pdc | 2.65 | kW | Tj=25°C | EERd | 7.68 | - |
| Tj=20°C | Pdc | 1.48 | kW | Tj=20°C | EERd | 13.10 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 4.80 | kW | Tj=-7°C | COPd | 2.91 | - |
| Tj=2°C | Pdh | 2.85 | kW | Tj=2°C | COPd | 4.35 | - |
| Tj=7°C | Pdh | 1.77 | kW | Tj=7°C | COPd | 5.62 | - |
| Tj=12°C | Pdh | 0.97 | kW | Tj=12°C | COPd | 5.77 | - |
| Tj=bivalent temperature | Pdh | 4.80 | kW | Tj=bivalent temperature | COPd | 2.91 | - |
| Tj=operating limit | Pdh | 4.00 | kW | Tj=operating limit | COPd | 2.50 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pccyc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pchyc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 12 | W | cooling | Qce | 306 | kWh/a |
| standby mode | Psb | 12 | W | heating / Average | Qhe | 1731 | kWh/a |
| thermostat-off mode | Pto(cooling) | 25 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 65 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,200 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,490 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioner 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



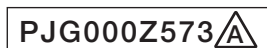
FDUM71VNXXVH

| | | | | | | | |
|---|---|------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM40VHx2 | | | | | |
| Outdoor unit model name | | FDC71VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 5.61 | A+ |
| heating / Average | Pdesignh | 7.0 | kW | heating / Average | SCOP/A | 4.05 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 5.9 | kW | heating / Average (-10°C) | elbu | 1.08 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 3.53 | - |
| Tj=30°C | Pdc | 5.23 | kW | Tj=30°C | EERd | 5.13 | - |
| Tj=25°C | Pdc | 3.37 | kW | Tj=25°C | EERd | 8.64 | - |
| Tj=20°C | Pdc | 3.20 | kW | Tj=20°C | EERd | 11.85 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 6.20 | kW | Tj=-7°C | COPd | 2.62 | - |
| Tj=2°C | Pdh | 3.85 | kW | Tj=2°C | COPd | 3.99 | - |
| Tj=7°C | Pdh | 2.45 | kW | Tj=7°C | COPd | 5.33 | - |
| Tj=12°C | Pdh | 2.56 | kW | Tj=12°C | COPd | 6.56 | - |
| Tj=bivalent temperature | Pdh | 6.20 | kW | Tj=bivalent temperature | COPd | 2.62 | - |
| Tj=operating limit | Pdh | 5.00 | kW | Tj=operating limit | COPd | 2.09 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 15 | W | cooling | Qce | 444 | kWh/a |
| standby mode | Psb | 15 | W | heating / Average | Qhe | 2419 | kWh/a |
| thermostat-off mode | Pto(cooling) | 18 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 22 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 66 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,440 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 3,600 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



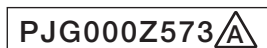
FDUM100VNXVH

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|---|---|------------------|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM100VH | | | | | |
| Outdoor unit model name | | FDC100VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.22 | A |
| heating / Average | Pdesignh | 13.0 | kW | heating / Average | SCOP/A | 4.10 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 10.9 | kW | heating / Average (-10°C) | elbu | 2.09 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.73 | - |
| Tj=30°C | Pdc | 7.42 | kW | Tj=30°C | EERd | 4.84 | - |
| Tj=25°C | Pdc | 5.58 | kW | Tj=25°C | EERd | 7.43 | - |
| Tj=20°C | Pdc | 5.87 | kW | Tj=20°C | EERd | 10.46 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 11.50 | kW | Tj=-7°C | COPd | 2.54 | - |
| Tj=2°C | Pdh | 6.89 | kW | Tj=2°C | COPd | 4.07 | - |
| Tj=7°C | Pdh | 4.50 | kW | Tj=7°C | COPd | 5.52 | - |
| Tj=12°C | Pdh | 5.20 | kW | Tj=12°C | COPd | 6.50 | - |
| Tj=bivalent temperature | Pdh | 11.50 | kW | Tj=bivalent temperature | COPd | 2.54 | - |
| Tj=operating limit | Pdh | 8.96 | kW | Tj=operating limit | COPd | 2.16 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 670 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 4441 | kWh/a |
| thermostat-off mode | Pto(cooling) | 45 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 65 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 2,160 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



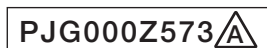
FDUM100VSXVH

| | | | | | | | |
|---|--|---|--|--|--|---------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM100VH | | | | | |
| Outdoor unit model name | | FDC100VSX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | | | | Item | | | |
| Design load | | symbol value unit | | Seasonal efficiency and energy efficiency class | | symbol value class | |
| cooling | | Pdesignc 10.0 kW | | cooling | | SEER 5.19 A | |
| heating / Average | | Pdesignh 13.0 kW | | heating / Average | | SCOP/A 4.10 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 10.9 kW | | heating / Average (-10°C) | | elbu 2.09 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 10.00 kW | | Tj=35°C | | EERd 3.73 - | |
| Tj=30°C | | Pdc 7.42 kW | | Tj=30°C | | EERd 4.84 - | |
| Tj=25°C | | Pdc 5.58 kW | | Tj=25°C | | EERd 7.43 - | |
| Tj=20°C | | Pdc 5.87 kW | | Tj=20°C | | EERd 10.46 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 11.50 kW | | Tj=-7°C | | COPd 2.54 - | |
| Tj=2°C | | Pdh 6.89 kW | | Tj=2°C | | COPd 4.07 - | |
| Tj=7°C | | Pdh 4.50 kW | | Tj=7°C | | COPd 5.52 - | |
| Tj=12°C | | Pdh 5.20 kW | | Tj=12°C | | COPd 6.50 - | |
| Tj=bivalent temperature | | Pdh 11.50 kW | | Tj=bivalent temperature | | COPd 2.54 - | |
| Tj=operating limit | | Pdh 8.96 kW | | Tj=operating limit | | COPd 2.16 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -7 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcycc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcych - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 20 W | | cooling | | Qce 675 kWh/a | |
| standby mode | | Psb 20 W | | heating / Average | | Qhe 4444 kWh/a | |
| thermostat-off mode | | Pto(cooling) 65 W | | heating / Warmer | | Qhe - kWh/a | |
| | | Pto(heating) 85 W | | heating / colder | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 25 W | | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 65 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 70 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 1,975 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 2,160 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 6,000 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |



FDUM100VNXPVH

| | | | | | | | |
|---|--------------|---|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM50VHx2 | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VNX | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.14 | A |
| heating / Average | Pdesignh | 10.0 | kW | heating / Average | SCOP/A | 3.88 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.2 | kW | heating / Average (-10°C) | elbu | 1.78 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.76 | - |
| Tj=30°C | Pdc | 7.40 | kW | Tj=30°C | EERd | 4.54 | - |
| Tj=25°C | Pdc | 4.80 | kW | Tj=25°C | EERd | 7.38 | - |
| Tj=20°C | Pdc | 5.10 | kW | Tj=20°C | EERd | 9.62 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 8.85 | kW | Tj=-7°C | COPd | 2.57 | - |
| Tj=2°C | Pdh | 5.38 | kW | Tj=2°C | COPd | 3.92 | - |
| Tj=7°C | Pdh | 3.75 | kW | Tj=7°C | COPd | 5.00 | - |
| Tj=12°C | Pdh | 4.35 | kW | Tj=12°C | COPd | 5.58 | - |
| Tj=bivalent temperature | Pdh | 8.85 | kW | Tj=bivalent temperature | COPd | 2.57 | - |
| Tj=operating limit | Pdh | 6.10 | kW | Tj=operating limit | COPd | 2.22 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 18 | W | cooling | Qce | 681 | kWh/a |
| standby mode | Psb | 18 | W | heating / Average | Qhe | 3606 | kWh/a |
| thermostat-off mode | Pto(cooling) | 64 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 85 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |



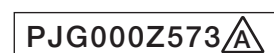
FDUM100VSPVH

| | | | | | | | |
|---|--------------|---|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM50VH x 2 | | | | | |
| Outdoor unit model name | | FDC100VSX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.11 | A |
| heating / Average | Pdesignh | 10.0 | kW | heating / Average | SCOP/A | 3.87 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.2 | kW | heating / Average (-10°C) | elbu | 1.78 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.76 | - |
| Tj=30°C | Pdc | 7.40 | kW | Tj=30°C | EERd | 4.54 | - |
| Tj=25°C | Pdc | 4.80 | kW | Tj=25°C | EERd | 7.38 | - |
| Tj=20°C | Pdc | 5.10 | kW | Tj=20°C | EERd | 9.62 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 8.85 | kW | Tj=-7°C | COPd | 2.57 | - |
| Tj=2°C | Pdh | 5.38 | kW | Tj=2°C | COPd | 3.90 | - |
| Tj=7°C | Pdh | 3.75 | kW | Tj=7°C | COPd | 5.00 | - |
| Tj=12°C | Pdh | 4.35 | kW | Tj=12°C | COPd | 5.58 | - |
| Tj=bivalent temperature | Pdh | 8.85 | kW | Tj=bivalent temperature | COPd | 2.57 | - |
| Tj=operating limit | Pdh | 6.10 | kW | Tj=operating limit | COPd | 2.22 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -7 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 18 | W | cooling | Qce | 685 | kWh/a |
| standby mode | Psb | 18 | W | heating / Average | Qhe | 3618 | kWh/a |
| thermostat-off mode | Pto(cooling) | 84 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 105 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

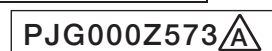


FDUM125VNXVH

| Model(s) : FDC125VNX / FDUM125VH | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 210.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 358.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 456.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 700.0 | % |
| Tj=+20°C | Pdc | 5.8 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,017.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{CK} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.055 | kW | | P _{SB} | 0.045 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

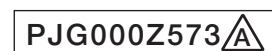


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDUM125VH | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 152.0 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 10.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 302.0 | % |
| Tj=+2°C | Pdh | 6.1 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 353.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 512.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 625.0 | % |
| Tbiv=bivalent temperature | Pdh | 11.4 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 279.0 | % |
| TOL=operation limit | Pdh | 9.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 238.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input Standby mode | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

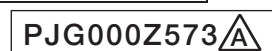


FDUM125VSXVH

| Model(s) : FDC125VSX / FDUM125VH | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 216.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 358.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 465.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 714.0 | % |
| Tj=+20°C | Pdc | 5.8 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,038.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.055 | kW | | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

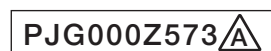


| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDUM125VH | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 153.2 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.4 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 284.0 | % |
| Tj=+2°C | Pdh | 7.5 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 364.0 | % |
| Tj=+7°C | Pdh | 4.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 512.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 638.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 263.0 | % |
| TOL=operation limit | Pdh | 10.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 238.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.095 | kW | Type of energy input Standby mode | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

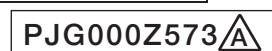


FDUM140VNXVH

| Model(s) : FDC140VNX / FDUM140VH | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 205.9 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 327.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 445.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 656.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,026.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{CK} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.060 | kW | | P _{SB} | 0.045 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



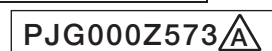
| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDUM140VH | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 151.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 295.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 351.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 511.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 631.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 267.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 235.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.105 | kW | Type of energy input Standby mode | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDUM140VSXVH

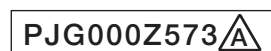
| Model(s) : FDC140VSX / FDUM140VH | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency $\eta_{s,c}$ | | 211.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 327.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 454.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 669.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,047.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.060 | kW | | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDUM140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 152.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 279.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 363.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 508.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 644.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 237.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 212.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input Standby mode | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

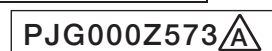


FDUM125VNXPVH

| Model(s) : FDC125VNX / FDUM60VH (2 units) | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 245.3 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 334.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 549.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 796.0 | % |
| Tj=+20°C | Pdc | 5.7 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,183.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

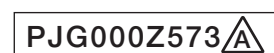


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDUM60VH (2 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 167.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 10.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 311.0 | % |
| Tj=+2°C | Pdh | 6.1 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 394.0 | % |
| Tj=+7°C | Pdh | 4.2 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 569.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 693.0 | % |
| Tbiv=bivalent temperature | Pdh | 11.4 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 278.0 | % |
| TOL=operation limit | Pdh | 9.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 238.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input Standby mode | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

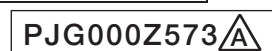


FDUM125VSPVH

| Model(s) : FDC125VSX / FDUM60VH (2 units) | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 253.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 341.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 560.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 812.0 | % |
| Tj=+20°C | Pdc | 5.7 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,207.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{CK} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.035 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

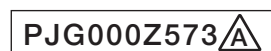


| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDUM60VH (2 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 164.0 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.4 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 288.0 | % |
| Tj=+2°C | Pdh | 7.5 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 395.0 | % |
| Tj=+7°C | Pdh | 4.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 548.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 709.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 235.0 | % |
| TOL=operation limit | Pdh | 10.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 211.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input Standby mode | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

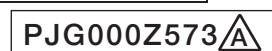


FDUM140VNXPVH

| Model(s) : FDC140VNX / FDUM71VH (2 units) | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 261.8 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 341.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 546.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 858.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,356.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



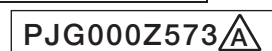
| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDUM71VH (2 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 172.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 307.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 403.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 599.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 765.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 271.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 240.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input Standby mode | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDUM140VSPVH

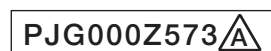
| Model(s) : FDC140VSX / FDUM71VH (2 units) | | | | | | | |
|---|------------------|---|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency $\eta_{s,c}$ | | 269.7 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 341.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 557.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 876.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,384.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{CK} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.035 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDUM71VH (2 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 170.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 287.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 408.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 579.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 784.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 243.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 218.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input Standby mode | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDUM140VNXTVH

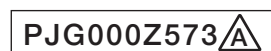
| Model(s) : FDC140VNX / FDUM50VH (3 units) | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 261.8 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 341.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 546.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 858.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,356.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{CK} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.040 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



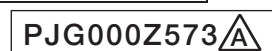
| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDUM50VH (3 units) | | | |
|---|---|----------|---------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 172.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature T_j | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures T_j | | | |
| $T_j = -7^\circ\text{C}$ | Pdh | 11.5 | kW | $T_j = -7^\circ\text{C}$ | COPd or GUEh,bin / AEFh,bin | 307.0 | % |
| $T_j = +2^\circ\text{C}$ | Pdh | 7.0 | kW | $T_j = +2^\circ\text{C}$ | COPd or GUEh,bin / AEFh,bin | 403.0 | % |
| $T_j = +7^\circ\text{C}$ | Pdh | 4.5 | kW | $T_j = +7^\circ\text{C}$ | COPd or GUEh,bin / AEFh,bin | 599.0 | % |
| $T_j = +12^\circ\text{C}$ | Pdh | 4.5 | kW | $T_j = +12^\circ\text{C}$ | COPd or GUEh,bin / AEFh,bin | 765.0 | % |
| T_{biv} =bivalent temperature | Pdh | 13.0 | kW | T_{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 271.0 | % |
| T_{OL} =operation limit | Pdh | 10.3 | kW | T_{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 240.0 | % |
| For air-to-water heat pumps : $T_j = -15^\circ\text{C}$ (if $T_{OL} < -20^\circ\text{C}$) | Pdh | — | kW | For air-to-water heat pumps: $T_j = -15^\circ\text{C}$ (if $T_{OL} < -20^\circ\text{C}$) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | T_{biv} | -10.0 | °C | For water-to-air heat pumps: Operation limit T_{ol} temperature | | — | °C |
| Degradation coefficient heat pumps** | C_{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P_{OFF} | 0.040 | kW | | elbu | — | kW |
| Thermostat-off mode | P_{TO} | 0.045 | kW | Type of energy input Standby mode | P_{SB} | 0.040 | kW |
| Crankcase heater mode | P_{CK} | 0.040 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L_{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If C_{dh} is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VSXTVH

| Model(s) : FDC140VSX / FDUM50VH (3 units) | | | | | | | |
|---|------------------|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 269.7 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 341.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 557.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 876.0 | % |
| Tj=+20°C | Pdc | 6.0 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,384.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{CK} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | P _{SB} | 0.035 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDUM50VH (3 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 170.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 287.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 408.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 579.0 | % |
| Tj=+12°C | Pdh | 4.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 784.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 243.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 218.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input Standby mode | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



Models FDUM40VH, 50VH, 60VH, 71VH, 100VH, 125VH, 140VH

| Model(s) : FDUM40VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 3.2 | kW | Total electric power input | Pelec | 0.100 | kW |
| Cooling capacity (latent) | Prated,c | 0.8 | kW | Sound power level (per speed setting,if applicable) | LWA | 60.0 | dB |
| Heating capacity | Prated,h | 4.5 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM50VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 3.7 | kW | Total electric power input | Pelec | 0.100 | kW |
| Cooling capacity (latent) | Prated,c | 1.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 60.0 | dB |
| Heating capacity | Prated,h | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

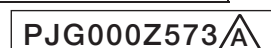
| Model(s) : FDUM60VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 3.9 | kW | Total electric power input | Pelec | 0.160 | kW |
| Cooling capacity (latent) | Prated,c | 1.7 | kW | Sound power level (per speed setting,if applicable) | LWA | 60.0 | dB |
| Heating capacity | Prated,h | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM71VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 5.8 | kW | Total electric power input | Pelec | 0.200 | kW |
| Cooling capacity (latent) | Prated,c | 1.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 65.0 | dB |
| Heating capacity | Prated,h | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM100VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 7.7 | kW | Total electric power input | Pelec | 0.290 | kW |
| Cooling capacity (latent) | Prated,c | 2.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 65.0 | dB |
| Heating capacity | Prated,h | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM125VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 10.5 | kW | Total electric power input | Pelec | 0.330 | kW |
| Cooling capacity (latent) | Prated,c | 2.0 | kW | Sound power level (per speed setting,if applicable) | LWA | 67.0 | dB |
| Heating capacity | Prated,h | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

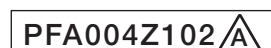
| Model(s) : FDUM140VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 11.2 | kW | Total electric power input | Pelec | 0.450 | kW |
| Cooling capacity (latent) | Prated,c | 2.8 | kW | Sound power level (per speed setting,if applicable) | LWA | 70.0 | dB |
| Heating capacity | Prated,h | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |



(4) Ceiling suspended type (FDE)

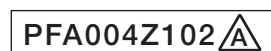
FDE40ZSXVH

| | | | | | | | | | | | | | |
|---|--|------------------------|--|---------|--|-------------------------|--|---|--|--|--|------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | Indoor unit model name | | FDE40VH | | Outdoor unit model name | | SRC40ZSX-S | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Function(indicate if present) | | cooling | | Yes | | heating | | Yes | | Average(mandatory) | | Yes | |
| | | | | | | | | | | Warmer(if designated) | | No | |
| | | | | | | | | | | Colder(if designated) | | No | |
| Item | | symbol | | value | | unit | | Item | | symbol | | value class | |
| Design load | | | | | | | | Seasonal efficiency and energy efficiency class | | | | | |
| cooling | | Pdesignc | | 4.0 | | kW | | cooling | | SEER | | 6.46 A++ | |
| heating / Average | | Pdesignh | | 3.0 | | kW | | heating / Average | | SCOP/A | | 3.93 A | |
| heating / Warmer | | Pdesignh | | - | | kW | | heating / Warmer | | SCOP/W | | - - | |
| heating / Colder | | Pdesignh | | - | | kW | | heating / Colder | | SCOP/C | | - - | |
| | | | | | | | | | | | | unit | |
| Declared capacity at outdoor temperature Tdesignh | | | | | | | | Back up heating capacity at outdoor temperature Tdesignh | | | | | |
| heating / Average (-10°C) | | Pdh | | 3.0 | | kW | | heating / Average (-10°C) | | elbu | | 0 kW | |
| heating / Warmer (2°C) | | Pdh | | - | | kW | | heating / Warmer (2°C) | | elbu | | - kW | |
| heating / Colder (-22°C) | | Pdh | | - | | kW | | heating / Colder (-22°C) | | elbu | | - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | | |
| Tj=35°C | | Pdc | | 4.00 | | kW | | Tj=35°C | | EERd | | 3.92 - | |
| Tj=30°C | | Pdc | | 2.95 | | kW | | Tj=30°C | | EERd | | 5.67 - | |
| Tj=25°C | | Pdc | | 1.90 | | kW | | Tj=25°C | | EERd | | 8.26 - | |
| Tj=20°C | | Pdc | | 1.38 | | kW | | Tj=20°C | | EERd | | 13.14 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | | |
| Tj=-7°C | | Pdh | | 2.66 | | kW | | Tj=-7°C | | COPd | | 3.11 - | |
| Tj=2°C | | Pdh | | 1.61 | | kW | | Tj=2°C | | COPd | | 4.20 - | |
| Tj=7°C | | Pdh | | 1.04 | | kW | | Tj=7°C | | COPd | | 3.92 - | |
| Tj=12°C | | Pdh | | 0.77 | | kW | | Tj=12°C | | COPd | | 5.13 - | |
| Tj=bivalent temperature | | Pdh | | 3.00 | | kW | | Tj=bivalent temperature | | COPd | | 2.73 - | |
| Tj=operating limit | | Pdh | | 2.47 | | kW | | Tj=operating limit | | COPd | | 2.47 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | | |
| Tj=2°C | | Pdh | | - | | kW | | Tj=2°C | | COPd | | - - | |
| Tj=7°C | | Pdh | | - | | kW | | Tj=7°C | | COPd | | - - | |
| Tj=12°C | | Pdh | | - | | kW | | Tj=12°C | | COPd | | - - | |
| Tj=bivalent temperature | | Pdh | | - | | kW | | Tj=bivalent temperature | | COPd | | - - | |
| Tj=operating limit | | Pdh | | - | | kW | | Tj=operating limit | | COPd | | - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | | |
| Tj=-7°C | | Pdh | | - | | kW | | Tj=-7°C | | COPd | | - - | |
| Tj=2°C | | Pdh | | - | | kW | | Tj=2°C | | COPd | | - - | |
| Tj=7°C | | Pdh | | - | | kW | | Tj=7°C | | COPd | | - - | |
| Tj=12°C | | Pdh | | - | | kW | | Tj=12°C | | COPd | | - - | |
| Tj=bivalent temperature | | Pdh | | - | | kW | | Tj=bivalent temperature | | COPd | | - - | |
| Tj=operating limit | | Pdh | | - | | kW | | Tj=operating limit | | COPd | | - - | |
| Tj=-15°C | | Pdh | | - | | kW | | Tj=-15°C | | COPd | | - - | |
| Bivalent temperature | | | | | | | | Operating limit temperature | | | | | |
| heating / Average | | Tbiv | | -10 | | °C | | heating / Average | | Tol | | -20 °C | |
| heating / Warmer | | Tbiv | | - | | °C | | heating / Warmer | | Tol | | - °C | |
| heating / Colder | | Tbiv | | - | | °C | | heating / Colder | | Tol | | - °C | |
| Cycling interval capacity | | | | | | | | Cycling interval efficiency | | | | | |
| for cooling | | Pcycc | | - | | kW | | for cooling | | EERcyc | | - - | |
| for heating | | Pcyh | | - | | kW | | for heating | | COPcyc | | - - | |
| Degradation coefficient | | | | | | | | Degradation coefficient | | | | | |
| cooling | | Cdc | | 0.25 | | - | | heating | | Cdh | | 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | | | | | Annual electricity consumption | | | | | |
| off mode | | Poff | | 13 | | W | | cooling | | Qce | | 217 kWh/a | |
| standby mode | | Psb | | 13 | | W | | heating / Average | | Qhe | | 1070 kWh/a | |
| thermostat-off mode | | Pto(cooling) | | 13 | | W | | heating / Warmer | | Qhe | | - kWh/a | |
| | | Pto(heating) | | 28 | | W | | heating / colder | | Qhe | | - kWh/a | |
| crankcase heater mode | | Pck | | 0 | | W | | | | | | | |
| Capacity control(indicate one of three options) | | | | | | | | Other items | | | | | |
| fixed | | | | No | | | | Sound power level(indoor) | | Lwa | | 60 dB(A) | |
| staged | | | | No | | | | Sound power level(outdoor) | | Lwa | | 63 dB(A) | |
| variable | | | | Yes | | | | Global warming potential | | GWP | | 1,975 kgCO ₂ .eq. | |
| | | | | | | | | Rated air flow(indoor) | | - | | 780 m ³ /h | |
| | | | | | | | | Rated air flow(outdoor) | | - | | 2,160 m ³ /h | |
| Contact details for obtaining more information | | | | | | | | Name and address of the manufacturer or of its authorised representative. | | | | | |
| | | | | | | | | Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. | | | | | |
| | | | | | | | | 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, | | | | | |
| | | | | | | | | United Kingdom | | | | | |



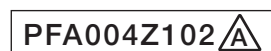
FDE50ZSXVH

| | | | | | | | |
|---|----------|---|------|--|--------|---------------------------------|-------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE50VH | | | | | |
| Outdoor unit model name | | SRC50ZSX-S | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 5.0 | kW | cooling | SEER | 6.10 | A++ |
| heating / Average | Pdesignh | 3.8 | kW | heating / Average | SCOP/A | 3.92 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 3.8 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 5.00 kW | | Tj=35°C | | EERd 3.29 - | |
| Tj=30°C | | Pdc 3.69 kW | | Tj=30°C | | EERd 5.12 - | |
| Tj=25°C | | Pdc 2.37 kW | | Tj=25°C | | EERd 7.18 - | |
| Tj=20°C | | Pdc 1.38 kW | | Tj=20°C | | EERd 13.14 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 3.36 kW | | Tj=-7°C | | COPd 2.99 - | |
| Tj=2°C | | Pdh 2.04 kW | | Tj=2°C | | COPd 4.32 - | |
| Tj=7°C | | Pdh 1.31 kW | | Tj=7°C | | COPd 3.72 - | |
| Tj=12°C | | Pdh 0.77 kW | | Tj=12°C | | COPd 5.13 - | |
| Tj=bivalent temperature | | Pdh 3.80 kW | | Tj=bivalent temperature | | COPd 2.53 - | |
| Tj=operating limit | | Pdh 3.15 kW | | Tj=operating limit | | COPd 2.22 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcycc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcyh - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 13 W | | cooling | | Qce 288 kWh/a | |
| standby mode | | Psb 13 W | | heating / Average | | Qhe 1359 kWh/a | |
| thermostat-off mode | | Pto(cooling) 13 W | | heating / Warmer | | Qhe - kWh/a | |
| | | Pto(heating) 28 W | | heating / colder | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 0 W | | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 60 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 63 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 1,975 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 780 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 2,400 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |



FDE60ZSXVH

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|---|---|------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE60VH | | | | | |
| Outdoor unit model name | | SRC60ZSX-S | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 5.6 | kW | cooling | SEER | 6.72 | A++ |
| heating / Average | Pdesignh | 4.3 | kW | heating / Average | SCOP/A | 4.08 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 4.3 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 5.60 | kW | Tj=35°C | EERd | 3.20 | - |
| Tj=30°C | Pdc | 4.13 | kW | Tj=30°C | EERd | 5.74 | - |
| Tj=25°C | Pdc | 2.65 | kW | Tj=25°C | EERd | 8.55 | - |
| Tj=20°C | Pdc | 1.55 | kW | Tj=20°C | EERd | 13.48 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 3.81 | kW | Tj=-7°C | COPd | 3.02 | - |
| Tj=2°C | Pdh | 2.31 | kW | Tj=2°C | COPd | 4.44 | - |
| Tj=7°C | Pdh | 1.49 | kW | Tj=7°C | COPd | 4.12 | - |
| Tj=12°C | Pdh | 0.81 | kW | Tj=12°C | COPd | 5.06 | - |
| Tj=bivalent temperature | Pdh | 4.30 | kW | Tj=bivalent temperature | COPd | 2.56 | - |
| Tj=operating limit | Pdh | 3.64 | kW | Tj=operating limit | COPd | 2.30 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 13 | W | cooling | Qce | 292 | kWh/a |
| standby mode | Psb | 13 | W | heating / Average | Qhe | 1476 | kWh/a |
| thermostat-off mode | Pto(cooling) | 20 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 65 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,200 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,490 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |



FDE71VNXVH

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|---|--------------|---|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE71VH | | | | | |
| Outdoor unit model name | | FDC71VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 4.87 | B |
| heating / Average | Pdesignh | 6.0 | kW | heating / Average | SCOP/A | 4.00 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 6.0 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 3.36 | - |
| Tj=30°C | Pdc | 5.23 | kW | Tj=30°C | EERd | 4.75 | - |
| Tj=25°C | Pdc | 3.37 | kW | Tj=25°C | EERd | 6.95 | - |
| Tj=20°C | Pdc | 2.95 | kW | Tj=20°C | EERd | 10.17 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 5.31 | kW | Tj=-7°C | COPd | 2.78 | - |
| Tj=2°C | Pdh | 3.23 | kW | Tj=2°C | COPd | 3.89 | - |
| Tj=7°C | Pdh | 2.08 | kW | Tj=7°C | COPd | 5.10 | - |
| Tj=12°C | Pdh | 2.42 | kW | Tj=12°C | COPd | 6.24 | - |
| Tj=bivalent temperature | Pdh | 6.00 | kW | Tj=bivalent temperature | COPd | 2.53 | - |
| Tj=operating limit | Pdh | 4.30 | kW | Tj=operating limit | COPd | 2.10 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 18 | W | cooling | Qce | 511 | kWh/a |
| standby mode | Psb | 18 | W | heating / Average | Qhe | 2102 | kWh/a |
| thermostat-off mode | Pto(cooling) | 20 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 40 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 66 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,200 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 3,600 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDE100VN XVH

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|---|--|--------------|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: Indoor unit model name FDE100VH Outdoor unit model name FDC100VNX | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling Yes | | | | Warmer(if designated) No | | | |
| heating Yes | | | | Colder(if designated) No | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.89 | A+ |
| heating / Average | Pdesignh | 11.2 | kW | heating / Average | SCOP/A | 4.18 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 11.2 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.92 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 5.80 | - |
| Tj=25°C | Pdc | 5.50 | kW | Tj=25°C | EERd | 8.70 | - |
| Tj=20°C | Pdc | 5.70 | kW | Tj=20°C | EERd | 11.52 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 9.91 | kW | Tj=-7°C | COPd | 2.84 | - |
| Tj=2°C | Pdh | 6.03 | kW | Tj=2°C | COPd | 3.92 | - |
| Tj=7°C | Pdh | 4.13 | kW | Tj=7°C | COPd | 5.73 | - |
| Tj=12°C | Pdh | 4.90 | kW | Tj=12°C | COPd | 6.85 | - |
| Tj=bivalent temperature | Pdh | 11.20 | kW | Tj=bivalent temperature | COPd | 2.59 | - |
| Tj=operating limit | Pdh | 7.80 | kW | Tj=operating limit | COPd | 2.26 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 595 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 3756 | kWh/a |
| thermostat-off mode | Pto(cooling) | 30 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 50 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 64 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,920 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

FDE100VSXVH

| | | | | | | | |
|---|--|--------------|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: Indoor unit model name FDE100VH Outdoor unit model name FDC100VSX | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | | | Warmer(if designated) | | | |
| heating | | | | Colder(if designated) | | | |
| Yes | | | | Yes | | | |
| Yes | | | | No | | | |
| Yes | | | | No | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.84 | A+ |
| heating / Average | Pdesignh | 11.2 | kW | heating / Average | SCOP/A | 4.17 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 11.2 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.92 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 5.80 | - |
| Tj=25°C | Pdc | 5.50 | kW | Tj=25°C | EERd | 8.70 | - |
| Tj=20°C | Pdc | 5.70 | kW | Tj=20°C | EERd | 11.52 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 9.91 | kW | Tj=-7°C | COPd | 2.83 | - |
| Tj=2°C | Pdh | 6.03 | kW | Tj=2°C | COPd | 3.92 | - |
| Tj=7°C | Pdh | 4.13 | kW | Tj=7°C | COPd | 5.73 | - |
| Tj=12°C | Pdh | 4.90 | kW | Tj=12°C | COPd | 6.85 | - |
| Tj=bivalent temperature | Pdh | 11.20 | kW | Tj=bivalent temperature | COPd | 2.59 | - |
| Tj=operating limit | Pdh | 7.80 | kW | Tj=operating limit | COPd | 2.26 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 599 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 3762 | kWh/a |
| thermostat-off mode | Pto(cooling) | 50 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 70 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 64 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,920 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

FDE71VNXPVH


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|---|--|--------------------|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE40VH x 2 | | | | | |
| Outdoor unit model name | | FDC71VNX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 5.26 | A |
| heating / Average | Pdesignh | 6.0 | kW | heating / Average | SCOP/A | 4.09 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 6.0 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 3.46 | - |
| Tj=30°C | Pdc | 5.23 | kW | Tj=30°C | EERd | 5.30 | - |
| Tj=25°C | Pdc | 3.37 | kW | Tj=25°C | EERd | 7.93 | - |
| Tj=20°C | Pdc | 3.15 | kW | Tj=20°C | EERd | 11.25 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 5.31 | kW | Tj=-7°C | COPd | 2.96 | - |
| Tj=2°C | Pdh | 3.23 | kW | Tj=2°C | COPd | 3.94 | - |
| Tj=7°C | Pdh | 2.08 | kW | Tj=7°C | COPd | 5.20 | - |
| Tj=12°C | Pdh | 2.44 | kW | Tj=12°C | COPd | 6.39 | - |
| Tj=bivalent temperature | Pdh | 6.00 | kW | Tj=bivalent temperature | COPd | 2.40 | - |
| Tj=operating limit | Pdh | 4.38 | kW | Tj=operating limit | COPd | 2.19 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 18 | W | cooling | Qce | 473 | kWh/a |
| standby mode | Psb | 18 | W | heating / Average | Qhe | 2056 | kWh/a |
| thermostat-off mode | Pto(cooling) | 28 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 45 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 66 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 3,600 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

FDE100VNXPVH

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|---|--------------|--|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE50VHx2 | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VNX | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.53 | A |
| heating / Average | Pdesignh | 10.8 | kW | heating / Average | SCOP/A | 3.94 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 10.8 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.33 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 5.34 | - |
| Tj=25°C | Pdc | 5.13 | kW | Tj=25°C | EERd | 8.02 | - |
| Tj=20°C | Pdc | 5.34 | kW | Tj=20°C | EERd | 10.47 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 9.56 | kW | Tj=-7°C | COPd | 2.72 | - |
| Tj=2°C | Pdh | 5.81 | kW | Tj=2°C | COPd | 3.75 | - |
| Tj=7°C | Pdh | 4.06 | kW | Tj=7°C | COPd | 5.27 | - |
| Tj=12°C | Pdh | 4.82 | kW | Tj=12°C | COPd | 6.16 | - |
| Tj=bivalent temperature | Pdh | 10.80 | kW | Tj=bivalent temperature | COPd | 2.36 | - |
| Tj=operating limit | Pdh | 7.60 | kW | Tj=operating limit | COPd | 2.05 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 634 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 3840 | kWh/a |
| thermostat-off mode | Pto(cooling) | 26 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 46 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

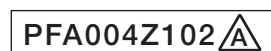
FDE100VXPVH

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|---|--------------|--|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE40VHx2 | | | | | |
| Outdoor unit model name | | FDC100VSX | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.49 | A |
| heating / Average | Pdesignh | 10.8 | kW | heating / Average | SCOP/A | 3.94 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 10.8 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.33 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 5.34 | - |
| Tj=25°C | Pdc | 5.13 | kW | Tj=25°C | EERd | 8.02 | - |
| Tj=20°C | Pdc | 5.34 | kW | Tj=20°C | EERd | 10.47 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 9.56 | kW | Tj=-7°C | COPd | 2.73 | - |
| Tj=2°C | Pdh | 5.81 | kW | Tj=2°C | COPd | 3.75 | - |
| Tj=7°C | Pdh | 4.06 | kW | Tj=7°C | COPd | 5.27 | - |
| Tj=12°C | Pdh | 4.82 | kW | Tj=12°C | COPd | 6.16 | - |
| Tj=bivalent temperature | Pdh | 10.80 | kW | Tj=bivalent temperature | COPd | 2.36 | - |
| Tj=operating limit | Pdh | 7.60 | kW | Tj=operating limit | COPd | 2.05 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 20 | W | cooling | Qce | 638 | kWh/a |
| standby mode | Psb | 20 | W | heating / Average | Qhe | 3841 | kWh/a |
| thermostat-off mode | Pto(cooling) | 46 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 65 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 25 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 6,000 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

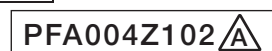
PFA004Z102 

FDE125VNXVH

| Model(s) : FDC125VNX / FDE125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 219.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 357.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 481.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 731.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,035.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{SB} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

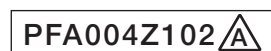


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDE125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 145.6 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 10.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 228.0 | % |
| Tj=+2°C | Pdh | 6.1 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 359.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 517.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 619.0 | % |
| Tbiv=bivalent temperature | Pdh | 11.4 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 239.0 | % |
| TOL=operation limit | Pdh | 9.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 213.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.075 | kW | Type of energy input | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE125VSXVH

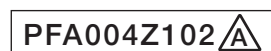
| Model(s) : FDC125VSX / FDE125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 226.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 357.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 491.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 746.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,056.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.030 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



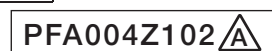
| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDE125VH | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 143.4 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.4 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 209.0 | % |
| Tj=+2°C | Pdh | 7.5 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 361.0 | % |
| Tj=+7°C | Pdh | 5.0 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 506.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 631.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 222.0 | % |
| TOL=operation limit | Pdh | 10.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 211.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.070 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNXVH

| Model(s) : FDC140VNX / FDE140VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 213.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 318.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 450.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 698.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,042.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.045 | kW | Standby mode | P _{SB} | 0.045 | kW |
| Thermostat-off mode | P _{TO} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

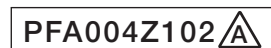


| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDE140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 143.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 215.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 357.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 511.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 619.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 227.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 211.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.045 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.080 | kW | Type of energy input | P _{SB} | 0.045 | kW |
| Crankcase heater mode | P _{CK} | 0.045 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE140VSXVH

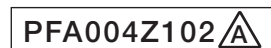
| Model(s) : FDC140VSX / FDE140VH | | | | | | | |
|---|---|----------|-------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 219.4 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 318.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 459.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 712.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,063.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.035 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: | | | |
| Capacity control | | variable | | air flow-rate,outdoor measured | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



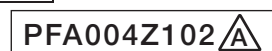
| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDE140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 141.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 203.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 360.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 494.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 631.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 219.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 211.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.070 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE125VNXPVH

| Model(s) : FDC125VNX / FDE60VH (2 units) | | | | | | | |
|---|---|----------|-------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 254.8 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 323.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 547.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 873.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,259.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

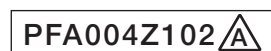


| Information to identify the model(s) to which the information relates : | | | | FDC125VNX / FDE60VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 162.0 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 10.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 243.0 | % |
| Tj=+2°C | Pdh | 6.1 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 392.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 603.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 741.0 | % |
| Tbiv=bivalent temperature | Pdh | 11.4 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 249.0 | % |
| TOL=operation limit | Pdh | 9.0 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 221.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE125VSPVH

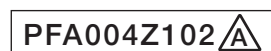
| Model(s) : FDC125VSX / FDE60VH (2 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 262.7 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 323.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 558.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 891.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,285.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{SB} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 70.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



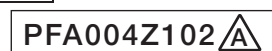
| Information to identify the model(s) to which the information relates : | | | | FDC125VSX / FDE60VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 159.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.4 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 224.0 | % |
| Tj=+2°C | Pdh | 7.5 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 396.0 | % |
| Tj=+7°C | Pdh | 5.0 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 584.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 758.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 235.0 | % |
| TOL=operation limit | Pdh | 10.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 223.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 70.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNXPVH

| Model(s) : FDC140VNX / FDE71VH (2 units) | | | | | | | |
|---|---|----------|-------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 243.6 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 307.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 514.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 782.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,259.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

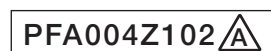


| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDE71VH (2 units) | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 159.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 227.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 595.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 741.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 234.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 217.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE140VSPVH

| Model(s) : FDC140VSX / FDE71VH (2 units) | | | | | | | |
|---|---|----------|-------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 250.7 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 307.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 524.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 798.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,285.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{SB} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

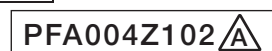


| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDE71VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 156.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 213.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 393.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 568.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 758.0 | % |
| Tbiv=bivalent temperature | Pdh | 15.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 230.0 | % |
| TOL=operation limit | Pdh | 11.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 220.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNXTVH

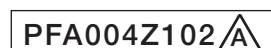
| Model(s) : FDC140VNX / FDE50VH (3 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 243.6 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 307.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 514.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 782.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,259.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.040 | kW | Standby mode | P _{SB} | 0.040 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VNX / FDE50VH (3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency ηs,h | | 159.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.5 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 227.0 | % |
| Tj=+2°C | Pdh | 7.0 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 4.5 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 595.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 741.0 | % |
| Tbiv=bivalent temperature | Pdh | 13.0 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 234.0 | % |
| TOL=operation limit | Pdh | 10.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 217.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.040 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input | P _{SB} | 0.040 | kW |
| Crankcase heater mode | P _{CK} | 0.040 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE140VSXTVH

| Model(s) : FDC140VSX / FDE50VH (3 units) | | | | | | | |
|---|---|----------|-------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 14.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 250.7 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 14.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 307.0 | % |
| Tj=+30°C | Pdc | 10.3 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 524.0 | % |
| Tj=+25°C | Pdc | 6.6 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 798.0 | % |
| Tj=+20°C | Pdc | 5.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,285.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.035 | kW | Standby mode | P _{SB} | 0.035 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: | | | |
| Capacity control | | variable | | air flow-rate,outdoor measured | | 6,000 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC140VSX / FDE50VH (3 units) | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 16.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 156.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 13.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 213.0 | % |
| Tj=+2°C | Pdh | 8.4 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 393.0 | % |
| Tj=+7°C | Pdh | 5.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 568.0 | % |
| Tj=+12°C | Pdh | 5.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 758.0 | % |
| T _{biv} =bivalent temperature | Pdh | 15.5 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 230.0 | % |
| T _{OL} =operation limit | Pdh | 11.9 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 220.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} <-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} <-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _a temperature | | — | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.035 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.040 | kW | Type of energy input | P _{SB} | 0.035 | kW |
| Crankcase heater mode | P _{CK} | 0.035 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 6,000 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 72.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If C _{dh} is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

Models FDE40VH, 50VH, 60VH, 71VH, 100VH, 125VH, 140VH

| Model(s) : FDE40VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.4 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 4.5 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE50VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

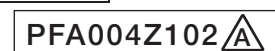
| Model(s) : FDE60VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.0 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE71VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.6 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.5 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE100VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 8.4 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE125VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 9.3 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 3.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE140VH | | | | | | | |
|-----------------------------|---|-------|------|---|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 10.2 | kW | Total electric power input | P_{elec} | 0.140 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 3.8 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 65.0 | dB |
| Heating capacity | $P_{rated,h}$ | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

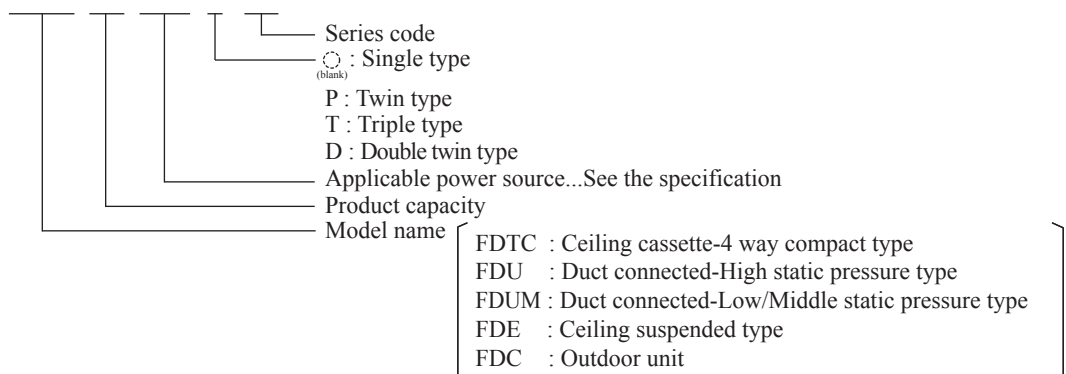


2. MICRO INVERTER PACKAGED AIR-CONDITIONERS

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Example: FDTC 100 VNA P VH



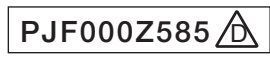
2.1 SPECIFICATIONS

(1) Ceiling cassette- 4 way compact type (FDTC)

(a) Twin type

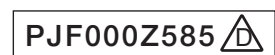
| Item | Model | | FDTC100VNAPVH | | | |
|--|--|--|--|---|--------------------------------|------------|
| | | | Indoor unit FDTC50VH (2 units) | Outdoor unit FDC100VNA | | |
| Power source | 1 phase 220-240V 50Hz / 220V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.30 | | |
| | | Heating | | 3.15 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 14.6 / 15.3 | | |
| | | Heating | | 14.0 / 14.6 | | |
| | Inrush current, max current | | 5 , 25 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.03 | | |
| | COP | Heating | | 3.56 | | |
| | Sound power level | Cooling | dB(A) | 59 | | |
| | | Heating | | 70 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | | |
| | Heating | | 54 56 | | | |
| Silent mode sound pressure level | | | 50 / 44 (Normal / Silent) | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 845×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | Unit 14 Panel 2.5 | 80 | | |
| Compressor type & Q'ty | | | — | RMT5126MCE3×1 | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan ×1 | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | |
| | Heating | | 75 73 | | | |
| Available external static pressure | Pa | | 0 | 0 | | |
| Outside air intake | | | Possible | — | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | — | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | |
| Electric heater | W | | — | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ②φ 9.52(3/8")x0.8 ①φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ②φ 12.7(1/2")x0.8 ①φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | | — | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | | Max.50 | | |
| | Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable with VP25(O.D.32) | Hole size φ 20 × 3pcs | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 850 | — | | |
| Recommended breaker size | A | | — | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | IPX24 | | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | | |
| Option parts | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | | Model | FDTC100VSAPVH | | |
|--|-----------------------------------|------------------------|--|---|--------------------|--------------|
| | | | | Indoor unit | FDTC50VH (2 units) | Outdoor unit |
| Power source | | | 3 phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | 3.30 | | |
| | | Heating | | 3.15 | | |
| | Max power consumption | | | 10.2 | | |
| | Running current | Cooling | A | 4.9 / 5.1 | | |
| | | Heating | | 4.6 / 4.9 | | |
| | Inrush current, max current | | | 5 , 15 | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 3.03 | | |
| | COP | Heating | | 3.56 | | |
| | Sound power level | Cooling | dB(A) | 59 | | |
| | | Heating | | 70 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | | |
| | Heating | | 54 | | | |
| Silent mode sound pressure level | | | 56 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 x 570 x 570 Panel 10 x 620 x 620 | | | |
| Exterior appearance (Munsell color) | | | Fine snow | | | |
| (RAL color) | | | (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | | |
| Stucco white | | | (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | Unit 14 Panel 2.5 | | | |
| Compressor type & Q'ty | | | — | | | |
| Compressor motor (Starting method) | | kW | — | | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan x1 | | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x1(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | | |
| Electric heater | | W | — | | | |
| Remote control | | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| Room temperature control | | | Thermostat by electronics | | | |
| Operation display | | | — | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ②φ 9.52(3/8")x0.8 ①φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ②φ 12.7(1/2")x0.8 ①φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | | m | — | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hose connectable with VP25(O.D.32) | | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mmx3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | | |
| Standard accessories | | | Mounting kit, Drain hose | | | |
| Option parts | | | Edging | | | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"x1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |



| Item | | Model | | FDTC125VNAPVH | | |
|--|-----------------------------------|-----------------------------------|--|---|---|--------------|
| | | | | Indoor unit | FDTC60VH (2 units) | Outdoor unit |
| Power source | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.90 | | |
| | | Heating | | 4.50 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 21.7 / 22.7 | | |
| | | Heating | | 20.0 / 20.9 | | |
| | Inrush current, max current | | 5 , 25 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 2.55 | | |
| | COP | Heating | | 3.11 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 71 |
| | | Heating | | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | | 55 |
| Sound pressure level | Cooling | dB(A) | | | 57 | |
| | Heating | | - | | 50 / 44 (Normal / Silent) | |
| Silent mode sound pressure level | | | | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | | 845×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | Unit 14 Panel 2.5 | | 80 | |
| Compressor type & Q'ty | | | - | | RMT5126MCE3×1 | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan ×1 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | | |
| | Heating | | | | | 75 73 |
| Available external static pressure | | Pa | 0 | | 0 | |
| Outside air intake | | | Possible | | - | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | | - | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | - | | 20(Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | Flare piping |
| | Attached length of piping | | m | - | | - |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 × 3pcs | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | - | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IPX24 | |
| Standard accessories | | | Mounting kit, Drain hose | | Edging | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Model | | | FDTC125VSAPVH | | | |
|--|-----------------------------------|------------------------|--|---|--------------|------------|
| Item | | | Indoor unit FDTC60VH (2 units) | Outdoor unit FDC125VA | | |
| Power source | | | 3 phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.90 | | |
| | | Heating | | 4.50 | | |
| | Max power consumption | | 10.2 | | | |
| | Running current | Cooling | A | 7.2 / 7.6 | | |
| | | Heating | | 6.6 / 7.0 | | |
| | Inrush current, max current | | 5 , 15 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 2.55 | | |
| | COP | Heating | | 3.11 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| | | Heating | | 71 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | | | |
| | Heating | | 55 | | | |
| Silent mode sound pressure level | | | 57 | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 845×970×370 | | |
| Exterior appearance (Munsell color) | | | Fine snow (8.0Y9.3/0.1) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent | | |
| Exterior appearance (RAL color) | | | (RAL 9001) near equivalent | (RAL 7004) near equivalent | | |
| Net weight | kg | | Unit 14 Panel 2.5 | 82 | | |
| Compressor type & Q'ty | | | — | RMT5126MCE4×1 | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan ×1 | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | Pa | | 0 | 0 | | |
| Outside air intake | | | Possible | — | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | — | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | |
| Electric heater | W | | — | 20(Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ②φ 9.52(3/8")x0.8 ①φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ②φ 12.7(1/2")x0.8 ①φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | Flare piping | |
| | Attached length of piping | m | | — | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP25(O.D.32) | Hole size φ 20 × 3pcs | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 850 | — | | |
| Recommended breaker size | A | | — | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IPX24 | | |
| Standard accessories | | | Mounting kit, Drain hose | Edging | | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |



(b) Triple type

| Item | | Model | | FDTC140VNATVH | | |
|--|-----------------------------------|--|--|---|---|--------------|
| | | | | Indoor unit | FDTC50VH (3 units) | Outdoor unit |
| Power source | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.75 | | |
| | | Heating | | 4.60 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 21.1 / 22.0 | | |
| | | Heating | | 20.4 / 21.3 | | |
| | Inrush current, max current | | 5 , 25 | | | |
| | Power factor | Cooling | % | 98 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | 2.86 | | | |
| | COP | Heating | 3.37 | | | |
| | Sound power level | Cooling | dB(A) | 59 | | 73 |
| | | Heating | | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | 57 |
| Sound pressure level | Cooling | dB(A) | | | 59 | |
| | Heating | | | | 59 | |
| Silent mode sound pressure level | | | | 50 / 44 (Normal / Silent) | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | | 845×970×370 | |
| Exterior appearance (Munsell color) | | | Fine snow (8.0Y9.3/0.1) near equivalent (RAL 9001) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | Unit 14 Panel 2.5 | | 80 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE3×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Turbo fan ×1 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | | Pa | 0 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | | — | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20(Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP25(O.D.32) | | Hole size φ 20 × 3pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 850 | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IPX24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | | Model | FDTC140VSATVH | |
|--|-----------------------------------|------------------------|--|---|--------------------|
| | | | | Indoor unit | FDTC50VH (3 units) |
| Power source | | | 3 phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | | kW | 13.6 [5.0(Min.)-14.5(Max.)] | |
| | Nominal heating capacity (range) | | kW | 15.5 [4.0(Min.)-16.5(Max.)] | |
| | Power consumption | Cooling | kW | 4.75 | |
| | | Heating | | 4.60 | |
| | Max power consumption | | | 10.2 | |
| | Running current | Cooling | A | 7.0 / 7.4 | |
| | | Heating | | 6.8 / 7.1 | |
| | Inrush current, max current | | | 5 , 15 | |
| | Power factor | Cooling | % | 98 | |
| | | Heating | | 98 | |
| | EER | Cooling | | 2.86 | |
| | COP | Heating | | 3.37 | |
| | Sound power level | Cooling | dB(A) | 59 | |
| | | Heating | | 73 | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | |
| | Heating | | 57 | | |
| Silent mode sound pressure level | | | 59 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | | |
| Exterior appearance (Munsell color) | | | Fine snow (8.0Y9.3/0.1) near equivalent | | |
| (RAL color) | | | (RAL 9001) near equivalent | | |
| Net weight | | kg | Unit 14 Panel 3.5 | | |
| Compressor type & Q'ty | | | — | | |
| Compressor motor (Starting method) | | kW | — | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8(Pre-charged up to the piping length of 30m)Outdoor unit | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Turbo fan x1 | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | |
| | Heating | | 75 | | |
| Available external static pressure | | Pa | 0 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x1(Washable) | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | — | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U ϕ 6.35 (1/4") ②ϕ 9.52(3/8")x0.8 ①ϕ 9.52(3/8")x0.8 O/U ϕ 9.52 (3/8") | |
| | | Gas line | | I/U ϕ 12.7 (1/2") ②ϕ 12.7(1/2")x0.8 ①ϕ 15.88(5/8")x1.0 O/U ϕ 15.88 (5/8") | |
| | Connecting method | | | Flare piping | |
| | Attached length of piping | | m | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | |
| | Refrigerant line (one way) length | | m | Max.50 | |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP25(O.D.32) | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 850 | | |
| Recommended breaker size | | A | — | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | |
| Interconnecting wires | | Size x Core number | ϕ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | | |
| Standard accessories | | | Mounting kit, Drain hose | | |
| Option parts | | | Edging | | |
| Option parts | | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | |
| Operation | Cooling | Indoor air temperature | Outdoor air temperature | | Standards |
| | | DB | WB | DB | |
| | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | | 7°C | | ISO5151-H1 |
| | — | | 6°C | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | |
| (7) Branching pipe set "DIS-TA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | |

(c) Double twin type

| Item | | Model | FDTC200VSADVH | | | | |
|--|---|--|--|--|------|-----------|------------|
| | | | Indoor unit FDTC50VH (4 units) | Outdoor unit FDC200VSA | | | |
| Power source | | 3 phase 380-415V 50Hz / 380V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 19.0 [5.2(Min.)-22.4(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 22.4 [3.3(Min.)-25.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 6.95 | | | |
| | | Heating | | 6.79 | | | |
| | Max power consumption | | kW | 10.2 | | | |
| | Running current | Cooling | | 10.9 / 11.4 | | | |
| | | Heating | 10.7 / 11.1 | | | | |
| | Inrush current, max current | | A | 5 , 20 | | | |
| | Power factor | Cooling | | 92 / 93 | | | |
| | | Heating | 92 / 93 | | | | |
| | EER | Cooling | % | 2.73 | | | |
| | COP | Heating | | 3.30 | | | |
| | Sound power level | Cooling | dB(A) | 59 | | | |
| | | Heating | | 72 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 40 Me : 35 Lo : 27 | | | | |
| | Heating | | 74 | | | | |
| Silent mode sound pressure level | | | 58 | | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 1300×970×370 | | | |
| Exterior appearance (Munsell color) | | | Fine snow (8.0Y9.3/0.1) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent | | | |
| Exterior appearance (RAL color) | | | (RAL 9001) near equivalent | (RAL 7004) near equivalent | | | |
| Net weight | kg | | Unit 14 Panel 2.5 | 115 | | | |
| Compressor type & Q'ty | | | — | RMT5134MDE3×1 | | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9(compressor) + 0.6(unit) (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 5.6(Pre-charged up to the piping length of 30m)Outdoor unit | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Turbo fan ×1 | Propeller fan ×2 | | | |
| Fan motor (Starting method) | W | | 50 < Direct line start > | 86×2 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 11 Me : 9 Lo : 7 | | | | |
| | Heating | | 135 | | | | |
| Available external static pressure | Pa | | 0 | 0 | | | |
| Outside air intake | | | Possible | — | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×1(Washable) | — | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | | |
| Electric heater | W | | — | 20(Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ③ φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 or φ 12.7(1/2")×0.8 O/U φ 9.52(3/8") | | | | |
| | | Gas line | I/U φ 12.7 (1/2") ③ φ 12.7×0.8 ② φ 15.88×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | | | | |
| | Connecting method | | Flare piping | Liquid : Flare / Gas : Brazing | | | |
| | Attached length of piping | m | — | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.70 (Liquid piping: φ 12.7, Gas piping: φ 25.4 or φ 28.58), Max.40 (Liquid piping: φ 9.52), Max.35 (Gas piping: φ 22.22) | | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | |
| Drain hose | | Hose connectable with VP25(O.D.32) | Hole size φ 20 × 3pcs | | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 850 | | — | | | |
| Recommended breaker size | A | — | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5/5 | | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | | |
| IP number | | IPX0 | | IPX24 | | | |
| Standard accessories | | Mounting kit, Drain hose | | Connecting pipe, Edging | | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards | |
| Operation | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-T1 |
| | Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is four indoor units are combined and run together. | | | | | | | |
| (7) Branching pipe set "DIS-WB1G"×1, "DIS-WA1G"×2 (Option). Pipe ① : O/U-Branch, ② : Branch-Branch, ③ : Branch-I/U | | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | | |

| Item | | Model | FDTC250VSADVH | | | |
|--|---|--|--|--------------------------------|------|-----------|
| | | | Indoor unit FDTC60VH (4 units) | Outdoor unit FDC250VSA | | |
| Power source | | 3 phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.)-28.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.)-31.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 10.65 | | |
| | | Heating | | 8.20 | | |
| | Max power consumption | | A | 10.2 | | |
| | Running current | Cooling | | 16.7 / 17.4 | | |
| | | Heating | 12.7 / 13.4 | | | |
| | Inrush current, max current | | | 5 , 21 | | |
| | Power factor | Cooling | % | 92 / 93 | | |
| | | Heating | | 92 / 93 | | |
| | EER | Cooling | | 2.25 | | |
| | COP | Heating | | 3.29 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| | | Heating | | 75 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 42 Me : 38 Lo : 31 | | | |
| | Heating | | 61 | | | |
| Silent mode sound pressure level | | | 62 | | | |
| Exterior dimensions (Height x Width x Depth) | mm | Unit 248 × 570 × 570 Panel 10 × 620 × 620 | 1505×970×370 | | | |
| Exterior appearance (Munsell color) | | Fine snow (8.0Y9.3/0.1) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent | | | |
| Exterior appearance (RAL color) | | (RAL 9001) near equivalent | (RAL 7004) near equivalent | | | |
| Net weight | kg | Unit 14 Panel 2.5 | 143 | | | |
| Compressor type & Q'ty | | — | GTC5150NC40KF(-T)×1 | | | |
| Compressor motor (Starting method) | kW | — | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | — | 1.45 (M-MA32R) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 7.2(Pre-charged up to the piping length of 30m)Outdoor unit | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Turbo fan ×1 | Propeller fan ×1 | | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | 86×2 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 14 Hi : 12 Me : 10 Lo : 8 | | | |
| | Heating | | 143 | | | |
| Available external static pressure | Pa | 0 | 0 | | | |
| Outside air intake | | Possible | — | | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×1(Washable) | — | | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | | |
| Electric heater | W | — | 20(Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-TC-5AW-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | Overload protection for fan motor, Frost protection thermostat Internal thermostat for fan motor, Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ③② φ 9.52(3/8")×0.8 ① φ 12.7(1/2")×0.8 O/U φ 12.7 (1/2") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ③ φ 12.7×0.8 ② φ 15.88×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | | | |
| | Connecting method | | Flare piping | Liquid : Flare / Gas : Brazing | | |
| | Attached length of piping | m | — | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP25(O.D.32) | Hole size φ 20 × 3pcs | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 850 | — | | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5/5 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | IPX24 | | | |
| Standard accessories | | Mounting kit, Drain hose | Connecting pipe, Edging | | | |
| Option parts | | OA Spacer : TC-OAS-E2 , TC-OAD-E , Motion sensor : LB-TC-5W-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | — | 7°C | 6°C | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is four indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WB1G"×1,"DIS-WA1G"×2 (Option). Pipe ① : O/U-Branch, ② : Branch-Branch, ③ : Branch-I/U | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | |

(2) Duct connected-High static pressure type (FDU)

Single type

| Item | | Model | FDU100VNAVH | | |
|---|---|---|--|-------------------------------------|--|
| | | | Indoor unit FDU100VH | Outdoor unit FDC100VNA | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | 2.84 | |
| | | Heating | | 2.78 | |
| | Max power consumption | | A | 6.40 | |
| | Running current | Cooling | | 13.6 / 14.2 | |
| | | Heating | 13.3 / 13.9 | | |
| | Inrush current, max current | | | 5, 26 | |
| | Power factor | Cooling | % | 91 | |
| | | Heating | | 91 | |
| | EER | Cooling | | 3.52 | |
| | COP | Heating | | 4.03 | |
| | Sound power level | Cooling | dB(A) | 65 | |
| Heating | | 70 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | |
| | Heating | | 54 | | |
| Silent mode sound pressure level | | | 56 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×1 | |
| Fan motor (Stating method) | W | | 100 + 130 < Direct line start > | 86 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | |
| | Heating | | 75 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | — | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| | Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) Hole size φ 20 × 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump,600 | | |
| Recommended breaker size | A | | — | | |
| L.R.A. (Locked rotor ampere) | A | | 5 | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | |
| Option parts | | | Motion sensor : LB-KIT | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

(6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

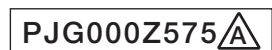
| Item | | Model | FDU100VSAVH | | | | | |
|---|-----------------------------------|--|--|--------------------------------|---|------|---|-----------|
| | | | Indoor unit FDU100VH | | Outdoor unit FDC100VSA | | | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | | | |
| | Power consumption | Cooling | kW | 2.84 | | | | |
| | | Heating | | 2.78 | | | | |
| | Max power consumption | | 10.20 | | | | | |
| | Running current | Cooling | A | 4.4 / 4.6 | | | | |
| | | Heating | | 4.3 / 4.5 | | | | |
| | Inrush current, max current | | | 5, 17 | | | | |
| | Power factor | Cooling | % | 93 / 94 | | | | |
| | | Heating | | 93 / 94 | | | | |
| | EER | Cooling | | 3.52 | | | | |
| | COP | Heating | | 4.03 | | | | |
| | Sound power level | Cooling | dB(A) | 65 | | 70 | | |
| Heating | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | 54 | | | | |
| Sound pressure level | Cooling | | | | 56 | | | |
| | Heating | | | | 56 | | | |
| Silent mode sound pressure level | | | 50/44 (Normal/Silent) | | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | 845 × 970 × 370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | | 54 | | 82 | | | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | | 86 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | | 75 | | |
| | Heating | | | | | 73 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | 0 | | | |
| Outside air intake | | | Possible | | — | | | |
| Air filter, Quality / Quantity | | | Procure locally | | — | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | | |
| Electric heater | W | | — | | 20 (Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | | |
| | Room temperature control | | Thermostat by electronics | | | | | |
| | Operation display | | — | | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | | | |
| | Connecting method | | Flare piping | | Flare piping | | | |
| | Attached length of piping | m | — | | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | | | |
| Drain pump, max lift height | mm | Built-in drain pump,600 | | | | | | |
| Recommended breaker size | A | — | | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5 | | | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | | | |
| IP number | | IPX0 | | IP24 | | | | |
| Standard accessories | | Mounting kit, Drain hose | | — | | | | |
| Option parts | | Motion sensor : LB-KIT | | | | | | |
| Notes (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | | | |
| Operation | Indoor air temperature | DB | WB | Outdoor air temperature | DB | WB | External static pressure of indoor unit | Standards |
| | | 27°C | 19°C | | | | | |
| | Cooling | 20°C | — | 7°C | 6°C | 60Pa | | |
| Heating | | | | | | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | | | |

| Item | | Model | FDU125VNAVH | | |
|---|-----------------------------------|--|--|------------------------|--|
| | | | Indoor unit FDU125VH | Outdoor unit FDC125VNA | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.36 | |
| | | Heating | | 3.69 | |
| | Max power consumption | | 6.40 | | |
| | Running current | Cooling | A | 20.3 / 21.3 | |
| | | Heating | | 17.8 / 18.7 | |
| | Inrush current, max current | | | 5, 26 | |
| | Power factor | Cooling | % | 93 | |
| | | Heating | | 90 | |
| | EER | Cooling | | 2.87 | |
| | COP | Heating | | 3.79 | |
| | Sound power level | Cooling | dB(A) | 67 | |
| Heating | | 71 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me 34 Lo : 29 | | |
| | Heating | | 55 | | |
| Silent mode sound pressure level | | | 57 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | | |
| Air flow | Cooling | m³/min | 75 | | |
| | Heating | | 73 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Max.15 (Outdoor unit is lower) | | | |
| Drain pump, max lift height | mm | Hose connectable VP25 (I.D.25, O.D.32) | | | |
| Recommended breaker size | A | Built-in drain pump,600 | | | |
| L.R.A. (Locked rotor ampere) | A | - | | | |
| Interconnecting wires | Size × Core number | 5 | | | |
| IP number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| Standard accessories | | IPX0 | | | |
| Option parts | | IP24 | | | |
| | | Mounting kit, Drain hose | | | |
| | | - | | | |
| | | Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)



| Item | | Model | FDU125VSAVH | | |
|---|-----------------------------------|--|--|------------------------|--|
| | | | Indoor unit FDU125VH | Outdoor unit FDC125VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.36 | |
| | | Heating | | 3.69 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 6.8 / 7.2 | |
| | | Heating | | 5.9 / 6.2 | |
| | Inrush current, max current | | 5, 17 | | |
| | Power factor | Cooling | % | 93 / 92 | |
| | | Heating | | 90 | |
| | EER | Cooling | | 2.87 | |
| | COP | Heating | | 3.79 | |
| | Sound power level | Cooling | dB(A) | 67 | |
| Heating | | 71 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | |
| | Heating | | 55 | | |
| Silent mode sound pressure level | | | 57 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | | |
| Air flow | Cooling | m³/min | 75 | | |
| | Heating | | 73 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Max.15 (Outdoor unit is lower) | | | |
| Drain pump, max lift height | mm | Hose connectable VP25 (I.D.25, O.D.32) | | | |
| Recommended breaker size | A | Built-in drain pump,600 | | | |
| L.R.A. (Locked rotor ampere) | A | - | | | |
| Interconnecting wires | Size × Core number | 5 | | | |
| IP number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| Standard accessories | | IPX0 | | | |
| Option parts | | IP24 | | | |
| | | Mounting kit, Drain hose | | | |
| | | - | | | |
| | | Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|---------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

(6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | FDU140VNAVH | | | | |
|---|-----------------------------------|--|--|--------------------------------|---|---|-----------|
| | | | Indoor unit FDU140VH | | Outdoor unit FDC140VNA | | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | | |
| | Power consumption | Cooling | kW | 4.93 | | | |
| | | Heating | | 4.21 | | | |
| | Max power consumption | | 6.40 | | | | |
| | Running current | Cooling | A | 22.8 / 23.8 | | | |
| | | Heating | | 20.3 / 21.3 | | | |
| | Inrush current, max current | | | 5, 27 | | | |
| | Power factor | Cooling | % | 94 | | | |
| | | Heating | | 90 | | | |
| | EER | Cooling | | 2.76 | | | |
| | COP | Heating | | 3.68 | | | |
| | Sound power level | Cooling | dB(A) | 70 | | 73 | |
| Heating | | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | 57 | | | |
| Sound pressure level | Cooling | dB(A) | — | | 59 | | |
| | Heating | | — | | 53/47 (Normal/Silent) | | |
| Silent mode sound pressure level | | | — | | 53/47 (Normal/Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 1368 × 740 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 54 | | 80 | | |
| Compressor type & Q'ty | | | — | | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 100 + 200 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | | | |
| | Heating | | 75 | | | | |
| Available external static pressure | | Pa | Standard : 60 Max : 200 | | 0 | | |
| Outside air intake | | | Possible | | — | | |
| Air filter, Quality / Quantity | | | Procure locally | | — | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | | |
| | Connecting method | | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | | |
| Drain pump, max lift height | | mm | Built-in drain pump,600 | | | | |
| Recommended breaker size | | A | — | | | | |
| L.R.A. (Locked rotor ampere) | | A | 5 | | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | — | | |
| Option parts | | | Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | | |
| Operation | Cooling | Indoor air temperature | DB | WB | Outdoor air temperature | External static pressure of indoor unit | Standards |
| | | DB | 19°C | 35°C | 24°C | | |
| | Heating | 20°C | — | 7°C | 6°C | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | | |

| Item | | Model | FDU140VSAVH | | |
|---|-----------------------------------|--|--|------------------------|--|
| | | | Indoor unit FDU140VH | Outdoor unit FDC140VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | |
| | Power consumption | Cooling | kW | 4.93 | |
| | | Heating | | 4.21 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 7.8 / 8.2 | |
| | | Heating | | 6.8 / 7.1 | |
| | Inrush current, max current | | 5, 18 | | |
| | Power factor | Cooling | % | 91 | |
| | | Heating | | 89 / 90 | |
| | EER | Cooling | | 2.76 | |
| | COP | Heating | | 3.68 | |
| | Sound power level | Cooling | dB(A) | 70 | |
| Heating | | 73 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | | 57 | | |
| Silent mode sound pressure level | | | 59 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | | |
| Air flow | Cooling | m³/min | 75 | | |
| | Heating | | 73 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Max.15 (Outdoor unit is lower) | | | |
| Drain pump, max lift height | mm | Hose connectable VP25 (I.D.25, O.D.32) | | | |
| Recommended breaker size | A | Built-in drain pump,600 | | | |
| L.R.A. (Locked rotor ampere) | A | - | | | |
| Interconnecting wires | Size × Core number | 5 | | | |
| IP number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| Standard accessories | | IPX0 | | | |
| Option parts | | IP24 | | | |
| | | Mounting kit, Drain hose | | | |
| | | - | | | |
| | | Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | Model | | FDU200VSAVG | | |
|---|---|--|---|---|--------------------------------|
| | | | Indoor unit FDU200VG | Outdoor unit FDC200VSA | |
| Power source | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 19.0 [5.2(Min.) – 22.4(Max.)] | | |
| | Nominal heating capacity (range) | kW | 22.4 [3.3(Min.) – 25.0(Max.)] | | |
| | Power consumption | Cooling | kW | 6.15 | |
| | | Heating | | 6.03 | |
| | Max power consumption | | 12.0 | | |
| | Running current | Cooling | A | 9.6 / 10.0 | |
| | | Heating | | 9.5 / 9.9 | |
| | Inrush current, max current | | 5 , 25 | | |
| | Power factor | Cooling | % | 92 / 93 | |
| | | Heating | | 92 / 93 | |
| | EER | Cooling | | 3.09 | |
| | COP | Heating | | 3.71 | |
| | Sound power level | Cooling | dB(A) | 75 | |
| Heating | | 74 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi:52 Hi:50 Me:47 Lo:45 | | |
| | Heating | | 58 | | |
| Silent mode sound pressure level | | | 59 | | |
| Exterior dimensions (Height x Width x Depth) | mm | 379 × 1600 × 893 | | 1300 x 970 x 370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 89 | | 115 | |
| Compressor type & Q'ty | | - | | RMT513MDE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9(compressor) + 0.6(unit) (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan ×3 | | Propeller fan ×2 | |
| Fan motor (Starting method) | W | 130 + 350 < Direct line start > | | 86 ×2 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi:80 Hi:72 Me:64 Lo:56 | | |
| | Heating | | 135 | | |
| Available external static pressure | Pa | Standard:72 Max:200 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | Overload protection for fan motor | | | | |
| | Frost protection thermostat | | | | |
| | Internal thermostat for fan motor | | | | |
| | Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52 (3/8")x0.8 or φ 12.7 (1/2")x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 25.4 (1") φ 22.22 (7/8")x1.0 or φ 25.4 (1")x1.0 or φ 28.58 (1 1/8")x1.0 O/U φ 22.22 (7/8") | | |
| | Connecting method | Brazing | | Liquid : Flare / Gas : Brazing | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70(Liquid piping: φ 12.7, Gas piping: φ 25.4 or φ 28.58), Max.40(Liquid piping: φ 9.52), Max.35(Gas piping: φ 22.22) | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ20 x 3 pcs | |
| Drain pump, max lift height | mm | - | | - | |
| Recommended breaker size | A | - | | - | |
| L.R.A. (Locked rotor ampere) | A | - | | 5 | |
| Interconnecting wires | Size x Core number | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit | | Connecting pipe, Edging | |
| Option parts | | Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|---------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 72Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)
- (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes.

| Item | | Model | | FDU250VSAVG | | |
|---|-----------------------------------|--|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDU250VG | Outdoor unit FDC250VSA | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.) - 28.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.) - 31.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 7.98 | | |
| | | Heating | | 7.20 | | |
| | Max power consumption | | 13.7 | | | |
| | Running current | Cooling | A | 12.2 / 12.8 | | |
| | | Heating | | 11.3 / 12.0 | | |
| | Inrush current, max current | | 5 , 27 | | | |
| | Power factor | Cooling | % | 94 | | |
| | | Heating | | 92 | | |
| | EER | Cooling | 3.01 | | | |
| | COP | Heating | 3.75 | | | |
| | Sound power level | Cooling | dB(A) | 75 | | 73 |
| Heating | | P-Hi:52 Hi:50 Me:47 Lo:45 | | 75 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi:52 Hi:50 Me:47 Lo:45 | | 59 | |
| | Heating | | - | | 62 | |
| Silent mode sound pressure level | | - | | 54 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 379 x 1600 x 893 | | 1505 x 970 x 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 89 | | 143 | |
| Compressor type & Q'ty | | | - | | GTC5150NC40KF(-T) (Scroll type)x1 | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 1.45 (M-MA32R) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 7.2 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan x3 | | Propeller fan x2 | |
| Fan motor (Starting method) | | W | 130 + 350 < Direct line start > | | 86 x2 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi:80 Hi:72 Me:64 Lo:56 | | 143 | |
| | Heating | | | | 151 | |
| Available external static pressure | | Pa | Standard:72 Max:200 | | 0 | |
| Outside air intake | | | Possible | | - | |
| Air filter, Quality / Quantity | | | Procure locally | | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired :RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 12.7 (1/2") Pipe φ 12.7 (1/2")x0.8 O/U φ 12.7 (1/2") | | | |
| | | Gas line | I/U φ 25.4 (1") φ 22.22 (7/8")x1.0 or φ 25.4 (1")x1.0 or φ 28.58 (1 1/8")x1.0 O/U φ 22.22 (7/8") | | | |
| | Connecting method | | Brazing | | Liquid : Flare / Gas : Brazing | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70(Gas piping: φ 25.4 or φ 28.58), Max.35(Gas piping: φ 22.22) | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | | mm | - | | - | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5 | | | |
| Interconnecting wires | | Size x Core number | φ 1.6mm x 3 cores + earth cable/ Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit | | Connecting pipe, Edging | |
| Option parts | | | Motion sensor : LB-KIT | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Cooling | Indoor air temperature | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | | |
| | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. | | | | | | |
| (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | |

(3) Duct connected-Low/Middle static pressure type (FDUM)

(a) Single type

| Item | | Model | | FDUM100VNAVH | | |
|---|-----------------------------------|---------------------------------------|--|--------------------------------|---|----|
| | | | | Indoor unit FDUM100VH | Outdoor unit FDC100VNA | |
| Power source | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.84 | | |
| | | Heating | | 2.78 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 13.6 / 14.2 | | |
| | | Heating | | 13.3 / 13.9 | | |
| | Inrush current, max current | | 5, 26 | | | |
| | Power factor | Cooling | % | 91 | | |
| | | Heating | | 91 | | |
| | EER | Cooling | 3.52 | | | |
| | COP | Heating | 4.03 | | | |
| | Sound power level | Cooling | dB(A) | 65 | | 70 |
| Heating | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | 54 | | |
| Sound pressure level | Cooling | | — | | 56 | |
| | Heating | | — | | 50/44 (Normal/Silent) | |
| Silent mode sound pressure level | | 50/44 (Normal/Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 1368 × 740 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 54 | | 80 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | |
| Fan motor (Stating method) | | W | 100 + 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling Heating | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | 75 | |
| | | | | | 73 | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | — | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size × Core number | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

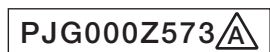
(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM100VSAVH | | |
|---|-----------------------------------|---|--|------------------------|--|
| | | | Indoor unit FDUM100VH | Outdoor unit FDC100VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | 2.84 | |
| | | Heating | | 2.78 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 4.4 / 4.6 | |
| | | Heating | | 4.3 / 4.5 | |
| | Inrush current, max current | | | 5, 17 | |
| | Power factor | Cooling | % | 93 / 94 | |
| | | Heating | | 93 / 94 | |
| | EER | Cooling | | 3.52 | |
| | COP | Heating | | 4.03 | |
| | Sound power level | Cooling | dB(A) | 65 | |
| Heating | | 70 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | |
| | Heating | | 54 | | |
| Silent mode sound pressure level | | | 56 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | | |
| Air flow | Cooling | m³/min | 75 | | |
| | Heating | | 73 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | | |
| Outside air intake | | | Possible | | |
| Air filter, Quality / Quantity | | | Procure locally | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Max.15 (Outdoor unit is lower) | | | |
| Drain pump, max lift height | mm | Hose connectable VP25(I.D.25, O.D.32) | | | |
| Recommended breaker size | A | Built-in drain pump , 600 | | | |
| L.R.A. (Locked rotor ampere) | A | - | | | |
| Interconnecting wires | Size × Core number | 5.0 | | | |
| IP number | | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | |
| Standard accessories | | IPX0 | | | |
| Option parts | | IP24 | | | |
| | | Mounting kit, Drain hose | | | |
| | | - | | | |
| | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)



| Item | | Model | FDUM125VNAVH | | | |
|--|-----------------------------------|---|--|-------------------------------------|---|-----------|
| | | | Indoor unit FDUM125VH | Outdoor unit FDC125VNA | | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.36 | | |
| | | Heating | | 3.69 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 20.3 / 21.3 | | |
| | | Heating | | 17.8 / 18.7 | | |
| | Inrush current, max current | | | 5, 26 | | |
| | Power factor | Cooling | % | 93 | | |
| | | Heating | | 90 | | |
| | EER | Cooling | | 2.87 | | |
| | COP | Heating | | 3.79 | | |
| | Sound power level | Cooling | dB(A) | 67 | | |
| Heating | | 71 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | | |
| | Heating | | 55 | | | |
| Silent mode sound pressure level | | | 57 | | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | | 54 | | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | kW | | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | | | |
| Outside air intake | | | Possible | | | |
| Air filter, Quality / Quantity | | | Procure locally | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | | |
| Electric heater | W | | 20 (Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | | |
| Drain hose | | Max.15 (Outdoor unit is lower) | | | | |
| Drain pump, max lift height | mm | Hose connectable VP25(I.D.25, O.D.32) | | | | |
| Recommended breaker size | A | Hole size φ 20 × 3 pcs | | | | |
| L.R.A. (Locked rotor ampere) | A | Built-in drain pump , 600 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | | | |
| Standard accessories | | IP24 | | | | |
| Option parts | | Mounting kit, Drain hose | | | | |
| | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | |
| Operation | Indoor air temperature | DB | WB | Outdoor air temperature | External static pressure of indoor unit | Standards |
| | | DB | WB | | | |
| | 27°C | 19°C | 35°C | 24°C | | |
| 20°C | - | 7°C | 6°C | ISO5151-H1 | | |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM125VSAVH | | | | |
|--|-----------------------------------|---------------------------------------|--|--------------------------------|---|---|-----------|
| | | | Indoor unit FDUM125VH | | Outdoor unit FDC125VSA | | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 4.36 | | | |
| | | Heating | | 3.69 | | | |
| | Max power consumption | | 10.20 | | | | |
| | Running current | Cooling | A | 6.8 / 7.2 | | | |
| | | Heating | | 5.9 / 6.2 | | | |
| | Inrush current, max current | | | 5, 17 | | | |
| | Power factor | Cooling | % | 93 / 92 | | | |
| | | Heating | | 90 | | | |
| | EER | Cooling | | 2.87 | | | |
| | COP | Heating | | 3.79 | | | |
| | Sound power level | Cooling | dB(A) | 67 | | 71 | |
| Heating | | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | 55 | | | |
| Sound pressure level | Cooling | | | | 57 | | |
| | Heating | | | | 51/45 (Normal/Silent) | | |
| Silent mode sound pressure level | | | - | | 51/45 (Normal/Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 1368 × 740 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 54 | | 82 | | |
| Compressor type & Q'ty | | | - | | RMT5126MCE4 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 100 + 200 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | | | |
| | Heating | | 75 | | | | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | - | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | - | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | | |
| | Connecting method | | Flare piping | | Flare piping | | |
| | Attached length of piping | m | - | | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 × 3 pcs | | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | | | |
| Recommended breaker size | | A | - | | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | - | | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 | |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM140VNAVH | | |
|---|-----------------------------------|--|---|---|-------------------------------|----|
| | | | | Indoor unit FDUM140VH | Outdoor unit FDC140VNA | |
| Power source | | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.93 | | |
| | | Heating | | 4.21 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 22.8 / 23.8 | | |
| | | Heating | | 20.3 / 21.3 | | |
| | Inrush current, max current | | | 5, 27 | | |
| | Power factor | Cooling | % | 94 | | |
| | | Heating | | 90 | | |
| | EER | Cooling | | 2.76 | | |
| | COP | Heating | | 3.68 | | |
| | Sound power level | Cooling | dB(A) | 70 | | 73 |
| Heating | | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | 57 | | |
| Sound pressure level | Cooling | | | | 59 | |
| | Heating | | | | 53/47 (Normal/Silent) | |
| Silent mode sound pressure level | | | - | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 280 × 1368 × 740 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 54 | | 80 | | |
| Compressor type & Q'ty | | - | | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×3 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | 100 + 200 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | 75 | |
| | Heating | | | | 73 | |
| Available external static pressure | Pa | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | Possible | | - | | |
| Air filter, Quality / Quantity | | Procure locally | | - | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 × 3 pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | - | | |
| Option parts | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM140VSAVH | | |
|--|-----------------------------------|---------------------|--|--|---|--------------|
| | | | | Indoor unit FDUM140VH | Outdoor unit FDC140VSA | |
| Power source | | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | | 13.6 [5.0(Min.)-14.5(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 15.5 [4.0(Min.)-16.5(Max.)] | | |
| | Power consumption | Cooling | kW | | 4.93 | |
| | | Heating | kW | | 4.21 | |
| | Max power consumption | | | 10.20 | | |
| | Running current | Cooling | A | | 7.8 / 8.2 | |
| | | Heating | A | | 6.8 / 7.1 | |
| | Inrush current, max current | | | 5, 18 | | |
| | Power factor | Cooling | % | | 91 | |
| | | Heating | % | | 89 / 90 | |
| | EER | Cooling | | | | 2.76 |
| | COP | Heating | | | | 3.68 |
| | Sound power level | Cooling | dB(A) | | 70 | |
| Heating | | dB(A) | | 73 | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 47 Hi : 40 Me : 35 Lo : 30 | | |
| | Heating | dB(A) | | 57 | | |
| Silent mode sound pressure level | | | | | 59 | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 54 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | | | Electronic expansion valve | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | |
| Fan motor (Starting method) | W | | 100 + 200 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m ³ /min | | P-Hi : 48 Hi : 35 Me : 28 Lo : 22 | | |
| | Heating | m ³ /min | | | | 75 |
| Available external static pressure | Pa | | Standard : 60 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | | Thermostat by electronics | | |
| | Operation display | | | — | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | |
| | | Gas line | mm | | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | |
| | Connecting method | | | Flare piping | | Flare piping |
| | Attached length of piping | m | | — | | — |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | | — | |
| Recommended breaker size | A | | — | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | DB | WB | Outdoor air temperature | External static pressure of indoor unit | Standards |
| | | DB | WB | | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.

(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

(b) Twin type

| Item | | Model | FDUM100VNAPVH | | | |
|--|-----------------------------------|--|---|---|-----------|------------|
| | | | Indoor unit FDUM50VH (2 units) | Outdoor unit FDC100VNA | | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.25 | | |
| | | Heating | | 3.21 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 14.6 / 15.2 | | |
| | | Heating | | 14.4 / 15.0 | | |
| | Inrush current, max current | | 5, 26 | | | |
| | Power factor | Cooling | % | 97 | | |
| | | Heating | | 97 | | |
| | EER | Cooling | | 3.08 | | |
| | COP | Heating | | 3.49 | | |
| | Sound power level | Cooling | dB(A) | 60 | 70 | |
| Heating | | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | | | |
| Sound pressure level | Cooling | | 54 | | | |
| | Heating | | 56 | | | |
| Silent mode sound pressure level | | | 50 / 44 (Normal / Silent) | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 280 × 750 × 635 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 29 | | 80 | | |
| Compressor type & Q'ty | | - | | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×1 | | Propeller fan ×1 | | |
| Fan motor (Stating method) | W | 100 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | | |
| Outside air intake | | Possible | | - | | |
| Air filter, Quality / Quantity | | Procure locally | | - | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | 1/U φ 6.35 (1/4") ② φ 9.52(3/8")x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | 1/U φ 12.7 (1/2") ② φ 12.7(1/2")x0.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | - | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | - | | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | |
| Operation | Indoor air temperature | DB | WB | External static pressure of indoor unit | Standards | |
| | | DB | WB | | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM100VSAPVH | | |
|---|-----------------------------------|--|--|---|---------------------------|----|
| | | | | Indoor unit FDUM50VH (2 units) | Outdoor unit FDC100VSA | |
| Power source | | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.25 | | |
| | | Heating | | 3.21 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 4.8 / 5.1 | | |
| | | Heating | | 4.8 / 5.0 | | |
| | Inrush current, max current | | 5, 17 | | | |
| | Power factor | Cooling | % | 98 / 97 | | |
| | | Heating | | 97 / 98 | | |
| | EER | Cooling | 3.08 | | | |
| | COP | Heating | 3.49 | | | |
| | Sound power level | Cooling | dB(A) | 60 | | 70 |
| Heating | | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | 54 | | |
| Sound pressure level | Cooling | dB(A) | — | | 56 | |
| | Heating | | — | | 50 / 44 (Normal / Silent) | |
| Silent mode sound pressure level | | 50 / 44 (Normal / Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 280 × 750 × 635 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 29 | | 82 | | |
| Compressor type & Q'ty | | — | | RMT5126MCE4 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×1 | | Propeller fan ×1 | | |
| Fan motor (Stating method) | W | 100 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | 75 | |
| | Heating | | | | 73 | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | | |
| Outside air intake | | Possible | | — | | |
| Air filter, Quality / Quantity | | Procure locally | | — | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | 1/2" φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | 1/2" φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 x 3 pcs | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | — | | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|---------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G" ×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM125VNAPVH | | |
|--|-----------------------------------|-------------|--|--|---|--------------|
| | | | | Indoor unit FDUM60VH (2 units) | Outdoor unit FDC125VNA | |
| Power source | | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | | 4.53 | |
| | | Heating | kW | | 3.75 | |
| | Max power consumption | | | 6.40 | | |
| | Running current | Cooling | A | | 20.3 / 21.2 | |
| | | Heating | A | | 16.8 / 17.6 | |
| | Inrush current, max current | | | 5, 26 | | |
| | Power factor | Cooling | % | | 97 | |
| | | Heating | % | | 97 | |
| | EER | Cooling | | | | 2.76 |
| | COP | Heating | | | | 3.73 |
| | Sound power level | Cooling | dB(A) | | 60 | 71 |
| Heating | | dB(A) | | P-Hi : 36 Hi : 31 Me : 28 Lo : 25 | | |
| Sound pressure level | Cooling | dB(A) | | 55 | | |
| | Heating | dB(A) | | 57 | | |
| Silent mode sound pressure level | | | - | | 51 / 45 (Normal / Silent) | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 950 × 635 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | | 34 | | 80 | |
| Compressor type & Q'ty | | | - | | RMT5126MCE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | kW | | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | | | Electronic expansion valve | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | | P-Hi : 20 Hi : 15 Me : 13 Lo : 10 | | |
| | Heating | m³/min | | | | 75 73 |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | - | |
| Air filter, Quality / Quantity | | | Procure locally | | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | | - | | 20 (Crank case heater) | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | |
| | Room temperature control | | | Thermostat by electronics | | |
| | Operation display | | | - | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | |
| | | Gas line | mm | | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | |
| | Connecting method | | | Flare piping | | Flare piping |
| | Attached length of piping | m | | - | | - |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 x 3 pcs | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | | - | |
| Recommended breaker size | A | | - | | - | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | - | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | DB | WB | Outdoor air temperature | External static pressure of indoor unit | Standards |
| | | DB | WB | | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| <p>(2) This air-conditioner is manufactured and tested in conformity with the ISO.</p> <p>(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.</p> <p>(4) Select the breaker size according to the own national standard.</p> <p>(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.</p> <p>(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.</p> <p>(7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U</p> <p>(8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.</p> <p>(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)</p> | | | | | | |

| Item | | Model | FDUM125VSAPVH | | |
|---|-----------------------------------|--|---|---|--|
| | | | Indoor unit FDUM60VH (2 units) | Outdoor unit FDC125VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.53 | |
| | | Heating | | 3.75 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 6.7 / 7.1 | |
| | | Heating | | 5.9 / 5.9 | |
| | Inrush current, max current | | 5, 17 | | |
| | Power factor | Cooling | % | 98 / 97 | |
| | | Heating | | 97 | |
| | EER | Cooling | 2.76 | | |
| | COP | Heating | 3.73 | | |
| Sound power level | Cooling | dB(A) | 60 | | |
| | Heating | | 71 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 36 Hi : 31 Me : 28 Lo : 25 | | |
| | Heating | | 55 | | |
| Silent mode sound pressure level | | 57 | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 280 × 950 × 635 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 34 | | 82 | |
| Compressor type & Q'ty | | — | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Stating method) | W | 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 15 Me : 13 Lo : 10 | | |
| | Heating | | 75 | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | Possible | | — | |
| Air filter, Quality / Quantity | | Procure locally | | — | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | — | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | A | — | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | — | |
| Option parts | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|---------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G" ×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM140VNAPVH | | |
|---|-----------------------------------|---------------------------------------|--|--------------------------------|---|----|
| | | | | Indoor unit FDUM71VH (2 units) | Outdoor unit FDC140VNA | |
| Power source | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 5.02 | | |
| | | Heating | | 4.20 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 22.5 / 23.5 | | |
| | | Heating | | 18.8 / 19.7 | | |
| | Inrush current, max current | | | 5, 27 | | |
| | Power factor | Cooling | % | 97 | | |
| | | Heating | | 97 | | |
| | EER | Cooling | | 2.71 | | |
| | COP | Heating | | 3.69 | | |
| | Sound power level | Cooling | dB(A) | 65 | | 73 |
| Heating | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | 57 | | |
| Sound pressure level | Cooling | | | | 59 | |
| | Heating | | | | 53 / 47 (Normal / Silent) | |
| Silent mode sound pressure level | | | 53 / 47 (Normal / Silent) | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 950 × 635 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 34 | | 80 | |
| Compressor type & Q'ty | | | - | | RMT5126MCE3 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | 75 | |
| | Heating | | | | 73 | |
| Available external static pressure | | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | - | |
| Air filter, Quality / Quantity | | | Procure locally | | - | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | - | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM140VSAPVH | | |
|---|-----------------------------------|---------------------------------------|--|--------------------------------|---|----|
| | | | | Indoor unit FDUM71VH (2 units) | Outdoor unit FDC140VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 5.02 | | |
| | | Heating | | 4.20 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 7.5 / 7.9 | | |
| | | Heating | | 6.2 / 6.6 | | |
| | Inrush current, max current | | 5, 18 | | | |
| | Power factor | Cooling | % | 97 | | |
| | | Heating | | 98 / 97 | | |
| | EER | Cooling | 2.71 | | | |
| | COP | Heating | 3.69 | | | |
| | Sound power level | Cooling | dB(A) | 65 | | 73 |
| Heating | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | 57 | | |
| Sound pressure level | Cooling | dB(A) | — | | 59 | |
| | Heating | | — | | 53 / 47 (Normal / Silent) | |
| Silent mode sound pressure level | | 53 / 47 (Normal / Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 950 × 635 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 34 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Stating method) | | W | 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | 75 | |
| | Heating | | | | 73 | |
| Available external static pressure | | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|---------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM200VSAPVH | | | |
|--|---|------------------------|--|--|---|---|-----------|
| | | | | Indoor unit FDUM100VH (2 units) | | Outdoor unit FDC200VSA | |
| Power source | | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | | kW | 19.0 [5.2(Min.)— 22.4(Max.)] | | | |
| | Nominal heating capacity (range) | | kW | 22.4 [3.3(Min.)— 25.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 6.51 | | | |
| | | Heating | | 6.04 | | | |
| | Max power consumption | | | 12.0 | | | |
| | Running current | Cooling | A | 10.2 / 10.6 | | | |
| | | Heating | | 9.5 / 9.9 | | | |
| | Inrush current, max current | | | 5, 22 | | | |
| | Power factor | Cooling | % | 92 / 93 | | | |
| | | Heating | | 92 / 93 | | | |
| | EER | | Cooling | 2.92 | | | |
| | COP | | Heating | 3.71 | | | |
| Sound power level | Cooling | dB(A) | 65 | | 72 | | |
| | Heating | | | | 74 | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | | | |
| | Heating | | | | | | |
| Silent mode sound pressure level | | | — | | 52 | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 1368 × 740 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 54 | | 115 | | |
| Compressor type & Q'ty | | | — | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9(compressor) + 0.6(unit) (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | | W | 100 + 130 < Direct line start > | | 86 × 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | 135 | | |
| | Heating | | | | | | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | | Possible | | — | | |
| Air filter, Quality / Quantity | | | Procure locally | | — | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 or φ 12.7(1/2")×0.8 O/U φ 9.52(3/8") | | | |
| | | Gas line | | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 | | | |
| | Connecting method | | | Flare piping | | Liquid : Flare / Gas : Brazing | |
| | Attached length of piping | | m | — | | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | | m | Max.70 (Liquid piping : φ 12.7, Gas piping : φ 25.4 or φ 28.58), Max.40 (Liquid piping : φ 9.52), Max.35 (Gas piping : φ 22.22) | | | |
| | Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | Built-in Drain pump , 600 | | — | | |
| Recommended breaker size | | A | — | | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Connecting pipe, Edging | | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units combined run together. (7) Branching pipe set "DIS-WB1G"×1(option). ① : Pipe of O/U-Branch ② : Pipe of Branch-I/U (8) Static pressure of optional air filter "UM-FL3EF" is 5Pa initially. (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only) (10) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | | |

| Item | | Model | FDUM250VSAPVH | | | | |
|--|-----------------------------------|---|---|--------------------------------|---|---|-----------|
| | | | Indoor unit | FDUM125VH (2 units) | | Outdoor unit | FDC250VSA |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.) - 28.0(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.) - 31.5(Max.)] | | | | |
| | Power consumption | Cooling | kW | 8.33 | | | |
| | | Heating | | 7.52 | | | |
| | Max power consumption | | 13.7 | | | | |
| | Running current | Cooling | A | 13.2 / 13.9 | | | |
| | | Heating | | 12.1 / 12.7 | | | |
| | Inrush current, max current | | 5 , 24 | | | | |
| | Power factor | Cooling | % | 91 | | | |
| | | Heating | | 90 | | | |
| | EER | Cooling | | 2.88 | | | |
| | COP | Heating | | 3.59 | | | |
| | Sound power level | Cooling | dB(A) | 67 | | 73 | |
| Heating | | | | 75 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 45 Hi : 40 Me : 34 Lo : 29 | | | 59 | |
| | Heating | | | | | 62 | |
| Silent mode sound pressure level | | | - | | | 54 | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 × 1368 × 740 | | 1505×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 54 | | 143 | | |
| Compressor type & Q'ty | | | - | | GTC5150NC40KF(-T)(Scroll type)×1 | | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 1.45 (M-MA32R) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 7.2 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×2 | | |
| Fan motor (Stating method) | | W | 100 + 200 < Direct line start > | | 86 x 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 39 Hi : 32 Me : 26 Lo : 20 | | | 143 | |
| | Heating | | | | | 151 | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | - | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for Compressor) | | |
| Electric heater | | W | - | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | - | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection. | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid | 1/11 U φ9.52 (3/8") ②φ9.52(3/8")x0.8 ①φ12.7(1/2")x0.8 O/Uφ12.7 (1/2") | | | | |
| | | Gas line | 1/11 U φ15.88 (5/8") ②φ15.88(5/8")x1.0 ①φ22.22(7/8")x1.0 or φ25.4(1")x1.0 or φ28.58(1 1/8")x1.0 O/Uφ22.22 (7/8") | | | | |
| | Connecting method | | Flare piping | | Liquid : Flare / Gas : Brazing | | |
| | Attached length of piping | m | - | | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.70(Gas piping: φ 25.4 or φ 28.58), Max.35(Gas piping: φ 22.22) | | | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 x 3 pcs | | | |
| Drain pump, max lift height | | mm | Built-in Drain pump , 600 | | - | | |
| Recommended breaker size | | A | - | | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Connecting pipe, Edging | | |
| Option parts | | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | | |
| (7) Branching pipe set "DIS-WB1G"×1(option). ① : Pipe of O/U- Branch, ② : Pipe of Branch-I/U | | | | | | | |
| (8) Static pressure of option air filter "UM-FL3EF" is 5Pa initially. | | | | | | | |
| (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only) | | | | | | | |
| (10) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | | |

(c) Triple type

| Item | | Model | FDUM140VNATVH | | | | |
|--|-----------------------------------|--|--|---|------|---|-----------|
| | | | Indoor unit FDUM50VH (3 units) | Outdoor unit FDC140VNA | | | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | | |
| | Power consumption | Cooling | kW | 5.02 | | | |
| | | Heating | | 4.20 | | | |
| | Max power consumption | | A | 6.40 | | | |
| | Running current | Cooling | | 22.5 / 23.5 | | | |
| | | Heating | 18.8 / 19.7 | | | | |
| | Inrush current, max current | | | 5, 27 | | | |
| | Power factor | Cooling | % | 97 | | | |
| | | Heating | | 97 | | | |
| | EER | Cooling | | 2.71 | | | |
| | COP | Heating | | 3.69 | | | |
| | Sound power level | Cooling | dB(A) | 60 | 73 | | |
| Heating | | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | | | | |
| Sound pressure level | Cooling | | 57 | | | | |
| | Heating | | 59 | | | | |
| Silent mode sound pressure level | | | 53 / 47 (Normal / Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 750 × 635 | 845 × 970 × 370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | | 29 | 80 | | | |
| Compressor type & Q'ty | | | — | RMT5126MCE3 (Twin rotary type) ×1 | | | |
| Compressor motor (Starting method) | kW | | — | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | — | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×1 | Propeller fan ×1 | | | |
| Fan motor (Stating method) | W | | 100 < Direct line start > | 86 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | | | |
| | Heating | | 75 | | | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | 0 | | | |
| Outside air intake | | | Possible | — | | | |
| Air filter, Quality / Quantity | | | Procure locally | — | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve(for compressor) | | | |
| Electric heater | W | | — | 20 (Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 2.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | | |
| | Connecting method | | Flare piping | Flare piping | | | |
| | Attached length of piping | m | — | | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | Hole size φ 20 × 3 pcs | | | |
| Drain pump, max lift height | mm | | Built-in drain pump , 600 | — | | | |
| Recommended breaker size | A | | — | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | IP24 | | | |
| Standard accessories | | | Mounting kit, Drain hose | — | | | |
| Option parts | | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 | |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.

(7) Branching pipe set "DIS-TA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | FDUM140VSATVH | | |
|---|-----------------------------------|--|---|---|--|
| | | | Indoor unit FDUM50VH (3 units) | Outdoor unit FDC140VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | |
| | Power consumption | Cooling | kW | 5.02 | |
| | | Heating | | 4.20 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 7.5 / 7.9 | |
| | | Heating | | 6.2 / 6.6 | |
| | Inrush current, max current | | 5, 18 | | |
| | Power factor | Cooling | % | 97 | |
| | | Heating | | 98 / 97 | |
| | EER | Cooling | 2.71 | | |
| | COP | Heating | 3.69 | | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 73 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 37 Hi : 32 Me : 29 Lo : 26 | | |
| | Heating | | 57 | | |
| Silent mode sound pressure level | | 59 | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 280 × 750 × 635 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | kg | 29 | | 82 | |
| Compressor type & Q'ty | | - | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | Electronic expansion valve | | | |
| Fan type & Q'ty | | Centrifugal fan ×1 | | Propeller fan ×1 | |
| Fan motor (Stating method) | W | 100 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 8 | | |
| | Heating | | 75 | | |
| Available external static pressure | Pa | Standard : 35 Max : 100 | | 0 | |
| Outside air intake | | Possible | | - | |
| Air filter, Quality / Quantity | | Procure locally | | - | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | |
| Electric heater | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | Thermostat by electronics | | | |
| | Operation display | - | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 × 3 pcs | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | IP24 | |
| Standard accessories | | Mounting kit, Drain hose | | - | |
| Option parts | | Filter set : UM-FL1EF, Motion sensor : LB-KIT | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.

(7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | Model | | FDUM200VSATVH | | | |
|---|---|---|--|-------------------------|---|--|-----------|
| | | | | Indoor unit | FDUM71VH (3 units) | Outdoor unit | FDC200VSA |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 19.0 [5.2(Min.) - 22.4(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 22.4 [3.3(Min.) - 25.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 6.46 | | | |
| | | Heating | | 6.15 | | | |
| | Max power consumption | | 12.0 | | | | |
| | Running current | Cooling | A | 10.0 / 10.6 | | | |
| | | Heating | | 9.6 / 10.0 | | | |
| | Inrush current, max current | | 5 , 22 | | | | |
| | Power factor | Cooling | % | 93 | | | |
| | | Heating | | 92 / 93 | | | |
| | EER | Cooling | | 2.94 | | | |
| | COP | Heating | | 3.64 | | | |
| Sound power level | Cooling | dB(A) | 65 | | 72 | | |
| | Heating | | | | 74 | | |
| Sound pressure level | Cooling | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | 58 | | |
| | Heating | | | | 59 | | |
| Silent mode sound pressure level | | | - | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 × 950 × 635 | | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 34 | | 115 | | |
| Compressor type & Q'ty | | | - | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.9(compressor) + 0.6(unit) (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×2 | | |
| Fan motor (Stating method) | | W | 130 < Direct line start > | | 86 x 2 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | 135 | | |
| | Heating | | | | | | |
| Available external static pressure | | Pa | Standard : 35 Max : 100 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | | W | - | | 20(Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | - | | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | | I/U φ9.52 (3/8") ② φ9.52(3/8")x0.8 ① φ9.52(3/8")x0.8 or φ12.7(1/2")x0.8 O/U φ9.52(3/8") | |
| | | Gas line | | | | I/U φ15.88 (5/8") ② φ 15.88(5/8")x1.0 ① φ22.22(7/8")x1.0 or φ25.4(1")x1.0 or φ28.58(1 1/8")x1.0 O/U φ22.22 (7/8") | |
| | Connecting method | | Flare piping | | Liquid : Flare / Gas : Brazing | | |
| | Attached length of piping | m | - | | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.70(Liquid piping: φ12.7, Gas piping:φ25.4 or φ28.58), Max.40 (Liquid piping:φ9.52), Max.35 (Gas piping:φ22.22) | | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ20 x 3 pcs | | | |
| Drain pump, max lift height | mm | Built-in Drain pump , 600 | | | | | |
| Recommended breaker size | A | - | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm × 3 cores + earth cable/ Terminal block (Screw fixing type) | | | | | |
| IP number | | IPX0 | | IP24 | | | |
| Standard accessories | | Mounting kit, Drain hose | | Connecting pipe, Edging | | | |
| Option parts | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 | |
| <p>(2) This air-conditioner is manufactured and tested in conformity with the ISO.</p> <p>(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.</p> <p>(4) Select the breaker size according to the own national standard.</p> <p>(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.</p> <p>(6) Indoor unit specifications for one unit. Capacity and operation data are three indoor units combined and run together.</p> <p>(7) Branching pipe set "DIS-TB1G"×1(Option).①: Pipe of O/U- Branch. ②: Pipe of Branch- I/U</p> <p>(8) Static pressure of option air filter "UM-FL2EF" is 5Pa initially.</p> <p>(9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)</p> <p>(10) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes.</p> | | | | | | | |

(4) Ceiling suspended type (FDE)

(a) Single type

| Item | | Model | | FDE100VNAVH | | |
|---|-----------------------------------|--|---|---|------------------------|----|
| | | | | Indoor unit FDE100VH | Outdoor unit FDC100VNA | |
| Power source | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.85 | | |
| | | Heating | | 2.70 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 13.8 / 14.4 | | |
| | | Heating | | 13.2 / 13.8 | | |
| | Inrush current, max current | | 5, 24 | | | |
| | Power factor | Cooling | % | 90 | | |
| | | Heating | | 89 | | |
| | EER | Cooling | | 3.51 | | |
| | COP | Heating | | 4.15 | | |
| | Sound power level | Cooling | dB(A) | 64 | | 70 |
| Heating | | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | | 54 | | |
| Sound pressure level | Cooling | | — | | 56 | |
| | Heating | | — | | 50/44 (Normal/Silent) | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 250 × 1620 × 690 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 43 | | 80 | | |
| Compressor type & Q'ty | | — | | RMT5126MCE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | 80 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | — | | |
| Option parts | | Motion sensor : LB-E | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|-----------|------|------------------------|------|-------------------------|------|------------|
| | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | | 20°C | — | 7°C | 6°C | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | | FDE100VSAVH | | |
|--|-----------------------------------|--------------------------------------|--|--------------------------------|---|------------|
| | | | | Indoor unit FDE100VH | Outdoor unit FDC100VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.85 | | |
| | | Heating | | 2.70 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 4.5 / 4.8 | | |
| | | Heating | | 4.3 / 4.5 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 91 / 90 | | |
| | | Heating | | 91 | | |
| | EER | Cooling | 3.51 | | | |
| | COP | Heating | 4.15 | | | |
| Sound power level | Cooling | dB(A) | 64 | | 70 | |
| | Heating | | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | | 54 | |
| Sound pressure level | Cooling | dB(A) | — | | 56 | |
| | Heating | | — | | 50/44 (Normal/Silent) | |
| Silent mode sound pressure level | | 50/44 (Normal/Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 250 × 1620 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 43 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 80 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | | | 75 |
| | Heating | | — | | | 73 |
| Available external static pressure | | Pa | 0 | | | 0 |
| Outside air intake | | | Not possible | | | — |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | — |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ9.52 (3/8") Pipe φ9.52(3/8")×0.8 O/U φ9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 | | φ 15.88 (5/8") | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | — | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |

| Model | | | FDE125VNAVH | | |
|--|-----------------------------------|--|--|------------------------|------------|
| Item | | | Indoor unit FDE125VH | Outdoor unit FDC125VNA | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Power consumption | Cooling | kW | 4.45 | |
| | | Heating | | 3.74 | |
| | Max power consumption | | 6.40 | | |
| | Running current | Cooling | A | 20.3 / 21.3 | |
| | | Heating | | 17.5 / 18.3 | |
| | Inrush current, max current | | 5, 24 | | |
| | Power factor | Cooling | % | 95 | |
| | | Heating | | 93 | |
| | EER | Cooling | | 2.81 | |
| | COP | Heating | | 3.74 | |
| | Sound power level | Cooling | dB(A) | 64 | |
| Heating | | 71 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 48 Hi : 45 Me : 40 Lo : 35 | | |
| | Heating | | 55 | | |
| Silent mode sound pressure level | | | 57 | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 250 × 1620 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| Net weight | kg | | 43 | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | |
| Fan motor (Starting method) | W | | 80 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 29 Me : 23 Lo : 17 | | |
| | Heating | | 75 | | |
| Available external static pressure | Pa | | 0 | | |
| Outside air intake | | | Not possible | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | W | | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | | |
| Drain pump, max lift height | mm | - | | | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | | |
| Standard accessories | | Mounting kit, Drain hose | | | |
| Option parts | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | Outdoor air temperature | Standards | | |
| | | | DB | WB | DB |
| | Cooling | 27°C | 19°C | 35°C | 24°C |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | | FDE125VSAVH | | |
|--|-----------------------------------|--|---|---|------------------------|-----------|
| | | | | Indoor unit FDE125VH | Outdoor unit FDC125VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.45 | | |
| | | Heating | | 3.74 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 6.9 / 7.3 | | |
| | | Heating | | 5.9 / 6.2 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 93 | | |
| | | Heating | | 91 / 92 | | |
| | EER | Cooling | 2.81 | | | |
| | COP | Heating | 3.74 | | | |
| Sound power level | Cooling | dB(A) | 64 | | 71 | |
| | Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 48 Hi : 45 Me : 40 Lo : 35 | | 55 | |
| | Heating | | | | 57 | |
| Silent mode sound pressure level | | | — | | 51/45 (Normal/Silent) | |
| Exterior dimensions (Height × Width × Depth) | mm | 250 × 1620 × 690 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 43 | | 82 | | |
| Compressor type & Q'ty | | — | | RMT5126MCE4 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | 80 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 29 Me : 23 Lo : 17 | | 75 | |
| | Heating | | | | 73 | |
| Available external static pressure | Pa | 0 | | | | |
| Outside air intake | | Not possible | | | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | mm | — | | | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | — | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |

| Item | | Model | | FDE140VNAVH | | |
|--|-----------------------------------|--------------------------------------|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDE140VH | Outdoor unit FDC140VNA | |
| Power source | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 5.21 | | |
| | | Heating | | 4.42 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 22.9 / 23.9 | | |
| | | Heating | | 19.4 / 20.3 | | |
| | Inrush current, max current | | 5, 24 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | 2.61 | | | |
| | COP | Heating | 3.51 | | | |
| Sound power level | Cooling | dB(A) | 65 | | 73 | |
| | Heating | | P-Hi : 49 Hi : 45 Me : 40 Lo : 36 | | 57 | |
| Sound pressure level | Cooling | dB(A) | — | | 59 | |
| | Heating | | — | | 53/47 (Normal/Silent) | |
| Silent mode sound pressure level | | — | | | 53/47 (Normal/Silent) | |
| Exterior dimensions (Height × Width × Depth) | | mm | 250 × 1620 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 43 | | 80 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE3 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 90 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 34 Hi : 29 Me : 23 Lo : 18 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ9.52 (3/8") Pipe φ9.52(3/8")×0.8 O/U φ9.52 (3/8") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | FDE140VSAVH | | |
|---|-----------------------------------|--|--|------------------------|--|
| | | | Indoor unit FDE140VH | Outdoor unit FDC140VSA | |
| Power source | | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | |
| | Power consumption | Cooling | kW | 5.21 | |
| | | Heating | | 4.42 | |
| | Max power consumption | | 10.20 | | |
| | Running current | Cooling | A | 8.0 / 8.4 | |
| | | Heating | | 6.8 / 7.2 | |
| | Inrush current, max current | | 5, 15 | | |
| | Power factor | Cooling | % | 94 | |
| | | Heating | | 94 / 93 | |
| | EER | Cooling | | 2.61 | |
| | COP | Heating | | 3.51 | |
| | Sound power level | Cooling | dB(A) | 65 | |
| Heating | | 73 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 49 Hi : 45 Me : 40 Lo : 36 | | |
| | Heating | | 57 | | |
| Silent mode sound pressure level | | | 59 | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 250 × 1620 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | 43 | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | |
| Fan motor (Stating method) | | W | 90 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 34 Hi : 29 Me : 23 Lo : 18 | | |
| | Heating | | 75 | | |
| Available external static pressure | | Pa | 0 | | |
| Outside air intake | | | Not possible | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2 (Washable) | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | |
| | Room temperature control | | Thermostat by electronics | | |
| | Operation display | | - | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | - | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | | |
| Drain pump, max lift height | mm | - | | | |
| Recommended breaker size | A | - | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | IPX0 | | | |
| Standard accessories | | Mounting kit, Drain hose | | | |
| Option parts | | Motion sensor : LB-E | | | |

Notes (1) The data are measured at the following conditions.

The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(b) Twin type

| Item | | Model | FDE100VNAPVH | | | |
|---|-----------------------------------|-------------------------------------|--|---|------------|-----------|
| | | | Indoor unit FDE50VH (2 units) | Outdoor unit FDC100VNA | | |
| Power source | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.12 | | |
| | | Heating | | 2.99 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 13.7 / 14.3 | | |
| | | Heating | | 13.1 / 13.7 | | |
| | Inrush current, max current | | 5, 24 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | | 3.21 | | |
| | COP | Heating | | 3.75 | | |
| Sound power level | Cooling | dB(A) | 60 | 70 | | |
| | Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | 54 | | |
| | Heating | | | 56 | | |
| Silent mode sound pressure level | | | 50 / 44 (Normal / Silent) | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 210 × 1070 × 690 | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 28 | 80 | | |
| Compressor type & Q'ty | | | — | RMT5126MCE3 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | | kW | — | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | | | | |
| Available external static pressure | | Pa | 0 | 0 | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for compressor) | | |
| Electric heater | | W | — | 20 (Crank case heater) | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52 (3/8") ×0.8 ① φ 9.52 (3/8") ×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7 (1/2") ×0.8 ① φ 15.88 (5/8") ×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | Flare piping | | |
| | Attached length of piping | m | — | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IP24 | | |
| Standard accessories | | | Mounting kit, Drain hose | — | | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDE100VSAPVH | | |
|--|-----------------------------------|--------------------------------------|--|--------------------------------|---|--------------|
| | | | | Indoor unit | FDE50VH (2 units) | Outdoor unit |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 3.12 | | |
| | | Heating | | 2.99 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 4.6 / 4.8 | | |
| | | Heating | | 4.4 / 4.6 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 98 / 99 | | |
| | | Heating | | 98 / 99 | | |
| | EER | Cooling | 3.21 | | | |
| | COP | Heating | 3.75 | | | |
| Sound power level | Cooling | dB(A) | 60 | | 70 | |
| | Heating | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | 54 | |
| Sound pressure level | Cooling | dB(A) | — | | 56 | |
| | Heating | | — | | 50 / 44 (Normal / Silent) | |
| Silent mode sound pressure level | | 50 / 44 (Normal / Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 210 × 1070 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 28 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2 (Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52 (3/8") x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7 (1/2") x0.8 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | — | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | | Model | FDE125VNAPVH | | |
|---|-----------------------------------|-----------------------------------|--|--|---------------------------|----|
| | | | | Indoor unit FDE60VH (2 units) | Outdoor unit FDC125VNA | |
| Power source | | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.16 | | |
| | | Heating | | 3.54 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 18.3 / 19.1 | | |
| | | Heating | | 15.6 / 16.3 | | |
| | Inrush current, max current | | 5, 24 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | 3.00 | | | |
| | COP | Heating | 3.95 | | | |
| | Sound power level | Cooling | dB(A) | 60 | | 71 |
| Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 55 | | |
| Sound pressure level | Cooling | dB(A) | — | | 57 | |
| | Heating | | — | | 51 / 45 (Normal / Silent) | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height × Width × Depth) | | | mm | 210 × 1320 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| | | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | | kg | 33 | | |
| Compressor type & Q'ty | | | | — | | |
| Compressor motor (Starting method) | | | kW | — | | |
| Refrigerant oil (Amount, type) | | | ℓ | — | | |
| Refrigerant (Type, amount, pre-charge length) | | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | | |
| Fan motor (Starting method) | | | W | 50 < Direct line start > | | |
| Air flow | | | Cooling Heating m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | |
| Available external static pressure | | | Pa | 0 | | |
| Outside air intake | | | | Not possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2 (Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | | W | — | | |
| Operation control | | | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 6.35 (1/4") ② φ 9.52 (3/8") x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | | I/U φ 12.7 (1/2") ② φ 12.7 (1/2") x0.8 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | | m | — | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.50 | | |
| Vertical height diff. between O/U and I/U | | m | Max.50 (Outdoor unit is higher) | | | |
| Drain hose | | | Hose connectable with VP20 (O.D.26) | | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | | |
| Standard accessories | | | Mounting kit, Drain hose | | | |
| Option parts | | | Motion sensor : LB-E | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | Standards |
|-----------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

| Item | | Model | | FDE125VSAPVH | | |
|--|-----------------------------------|--------------------------------------|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDE60VH (2 units) | Outdoor unit FDC125VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.16 | | |
| | | Heating | | 3.54 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 6.1 / 6.4 | | |
| | | Heating | | 5.2 / 5.5 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 98 / 99 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | 3.00 | | | |
| | COP | Heating | 3.95 | | | |
| | Sound power level | Cooling | dB(A) | 60 | | 71 |
| Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 55 | | |
| Sound pressure level | Cooling | dB(A) | — | | 57 | |
| | Heating | | — | | 51 / 45 (Normal / Silent) | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 210 × 1320 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 33 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2 (Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52 (3/8") x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7 (1/2") x0.8 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | | Model | FDE140VNAPVH | |
|---|-----------------------------------|--------------------|-------------------------------------|--|------------------------|
| | | | | Indoor unit FDE71VH (2 units) | Outdoor unit FDC140VNA |
| Power source | | | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | |
| Operation data | Nominal cooling capacity (range) | | kW | 13.6 [5.0(Min.)-14.5(Max.)] | |
| | Nominal heating capacity (range) | | kW | 15.5 [4.0(Min.)-16.5(Max.)] | |
| | Power consumption | Cooling | kW | 4.74 | |
| | | Heating | | 4.21 | |
| | Max power consumption | | | 6.40 | |
| | Running current | Cooling | A | 20.8 / 21.8 | |
| | | Heating | | 18.5 / 19.3 | |
| | Inrush current, max current | | | 5, 24 | |
| | Power factor | Cooling | % | 99 | |
| | | Heating | | 99 | |
| | EER | | Cooling | 2.87 | |
| | COP | | Heating | 3.68 | |
| | Sound power level | Cooling | dB(A) | 60 | |
| Heating | | 73 | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | |
| | Heating | | 57 | | |
| Silent mode sound pressure level | | | 59 | | |
| Exterior dimensions (Height × Width × Depth) | | | mm | 210 × 1320 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | | kg | 33 | |
| Compressor type & Q'ty | | | | — | |
| Compressor motor (Starting method) | | | kW | — | |
| Refrigerant oil (Amount, type) | | | ℓ | — | |
| Refrigerant (Type, amount, pre-charge length) | | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | |
| Refrigerant control | | | | Electronic expansion valve | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | |
| Fan motor (Starting method) | | | W | 50 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | |
| | Heating | | 75 | | |
| Available external static pressure | | | Pa | 0 | |
| Outside air intake | | | | Not possible | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2 (Washable) | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | |
| Electric heater | | | W | — | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | | Thermostat by electronics | |
| | Operation display | | | — | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 9.52 (3/8") ② φ 9.52 (3/8") x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8") | |
| | | Gas line | | I/U φ 15.88 (5/8") ② φ 15.88 (5/8") x1.0 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8") | |
| | Connecting method | | | Flare piping | |
| | Attached length of piping | | m | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | |
| | Refrigerant line (one way) length | | m | Max.50 | |
| Vertical height diff. between O/U and I/U | | m | Max.50 (Outdoor unit is higher) | | |
| Drain hose | | | Hose connectable with VP20 (O.D.26) | | |
| Drain pump, max lift height | | | mm | — | |
| Recommended breaker size | | | A | — | |
| L.R.A. (Locked rotor ampere) | | | A | 5.0 | |
| Interconnecting wires | | Size × Core number | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | |
| IP number | | | | IPX0 | |
| Standard accessories | | | | Mounting kit, Drain hose | |
| Option parts | | | | Motion sensor : LB-E | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|-------------------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Operation Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

| Item | | Model | | FDE140VSAPVH | | |
|--|-----------------------------------|--|---|---|---------------------------|-----------|
| | | | | Indoor unit FDE71VH (2 units) | Outdoor unit FDC140VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.74 | | |
| | | Heating | | 4.21 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 6.9 / 7.3 | | |
| | | Heating | | 6.2 / 6.5 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | 2.87 | | | |
| | COP | Heating | 3.68 | | | |
| Sound power level | Cooling | dB(A) | 60 | | 73 | |
| | Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 57 | |
| Sound pressure level | Cooling | dB(A) | — | | 59 | |
| | Heating | | — | | 53 / 47 (Normal / Silent) | |
| Silent mode sound pressure level | | 53 / 47 (Normal / Silent) | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | 210 × 1320 × 690 | | 845 × 970 × 370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 33 | | 82 | | |
| Compressor type & Q'ty | | — | | RMT5126MCE4 (Twin rotary type) ×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 75 | | | |
| Available external static pressure | Pa | 0 | | | | |
| Outside air intake | | Not possible | | | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2 (Washable) | | | | |
| Shock & vibration absorber | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | | |
| Electric heater | W | — | | 20 (Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52 (3/8") ×0.8 ① φ 9.52 (3/8") ×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88 (5/8") ×1.0 ① φ 15.88 (5/8") ×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | mm | — | | | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size × Core number | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | — | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) Select the breaker size according to the own national standard.

(5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

(7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U

| Item | | Model | | FDE200VSAPVH | | | |
|--|-----------------------------------|--|--|--|---|------------------------|--|
| | | | | Indoor unit FDE100VH (2 units) | | Outdoor unit FDC200VSA | |
| Power source | | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 19.0 [5.2(Min.)-22.4(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 22.4 [3.3(Min.)-25.0(Max.)] | | | |
| | Power consumption | Cooling | kW | | 6.34 | | |
| | | Heating | kW | | 6.10 | | |
| | Max power consumption | | | 12.0 | | | |
| | Running current | Cooling | A | | 9.7 / 10.2 | | |
| | | Heating | A | | 9.4 / 9.9 | | |
| | Inrush current, max current | | | 5 , 20 | | | |
| | Power factor | Cooling | % | | 94 | | |
| | | Heating | % | | 94 | | |
| | EER | Cooling | | | | 3.00 | |
| | COP | Heating | | | | 3.67 | |
| Sound power level | Cooling | dB(A) | | 64 | | | |
| | Heating | dB(A) | | 72 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | | | |
| | Heating | dB(A) | | 74 | | | |
| Silent mode sound pressure level | | | | | 58 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | | 250 × 1620 × 690 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | |
| Net weight | | kg | | 43 | | | |
| Compressor type & Q'ty | | | | RMT5134MDE3 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | | — | | | |
| Refrigerant oil (Amount, type) | | ℓ | | — | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | | |
| Refrigerant control | | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | | | |
| Fan motor (Starting method) | | W | | 80 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | | | |
| | Heating | m ³ /min | | 135 | | | |
| Available external static pressure | | Pa | | 0 | | | |
| Outside air intake | | | | Not possible | | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | | Rubber sleeve(for fan motor) | | | |
| Electric heater | | W | | — | | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | | Thermostat by electronics | | | |
| | Operation display | | | — | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 or φ 12.7(1/2")×0.8 O/U φ 9.52 (3/8") | | |
| | | Gas line | mm | | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | | |
| | Connecting method | | | Flare piping | | | |
| | Attached length of piping | m | | — | | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.70(Liquid piping: φ 12.7, Gas piping: φ 25.4 or φ 28.58), Max.40(Liquid piping: φ 9.52, Max.35(Gas piping: φ 22.22) | | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | | | | |
| Drain hose | | | Hose connectable with VP20(O.D.26) | | | | |
| Drain pump, max lift height | mm | | — | | | | |
| Recommended breaker size | A | | — | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | | | |
| Standard accessories | | | Mounting kit, Drain hose | | | | |
| Option parts | | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | | |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | — | 7°C | 6°C | | | |
| | | | | Standards | | | |
| | | | | ISO5151-T1 | | | |
| | | | | ISO5151-H1 | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units combined and run together. | | | | | | | |
| (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch ② : Pipe of Branch-I/U | | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | | |

| Item | | Model | | FDE250VSAPVH | | |
|---|---|--|---|---|--------------------------------|----|
| | | | | Indoor unit FDE125VH (2 units) | Outdoor unit FDC250VSA | |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.)-28.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.)-31.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 8.52 | | |
| | | Heating | | 7.54 | | |
| | Max power consumption | | 13.7 | | | |
| | Running current | Cooling | A | 13.4 / 14.1 | | |
| | | Heating | | 11.8 / 12.5 | | |
| | Inrush current, max current | | 5 , 21 | | | |
| | Power factor | Cooling | % | 92 | | |
| | | Heating | | 92 | | |
| | EER | Cooling | 2.82 | | | |
| | COP | Heating | 3.58 | | | |
| | Sound power level | Cooling | dB(A) | 64 | | 73 |
| | | Heating | | | | 75 |
| Sound pressure level | Cooling | dB(A) | P-Hi : 48 Hi : 45 Me : 40 Lo : 35 | | | |
| | Heating | | | | | |
| Silent mode sound pressure level | | | - | | 54 | |
| Exterior dimensions (Height x Width x Depth) | mm | 250 × 1620 × 690 | | 1505×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 43 | | 143 | | |
| Compressor type & Q'ty | | - | | GTC5150NC40KF (-T) (Scroll type) ×1 | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 1.45 (M-MA32R) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 7.2 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | 80 < Direct line start > | | 86 × 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 29 Me : 23 Lo : 17 | | | |
| | Heating | | | | | |
| Available external static pressure | Pa | 0 | | 0 | | |
| Outside air intake | | Not possible | | | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | - | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | - | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 12.7(1/2")×0.8 O/U φ 12.7 (1/2") | | | |
| | | Gas line | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | | | |
| | Connecting method | | Flare piping | | Liquid : Flare / Gas : Brazing | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70(Gas piping: φ 25.4 or φ 28.58), Max.35(Gas piping: φ 22.22) | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | - | | - | | |
| Recommended breaker size | A | - | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Connecting pipe, Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data are two indoor units combined and run together.
- (7) Branching pipe set "DIS-WA1G"×1(Option). ① : Pipe of O/U-Branch ② : Pipe of Branch-I/U
- (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes.

(c) Triple type

| Item | | Model | | FDE140VNATVH | | |
|---|-----------------------------------|--------------------------------------|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDE50VH (3 units) | Outdoor unit FDC140VNA | |
| Power source | | 1 Phase, 220-240V, 50Hz / 220V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.74 | | |
| | | Heating | | 4.21 | | |
| | Max power consumption | | 6.40 | | | |
| | Running current | Cooling | A | 20.8 / 21.8 | | |
| | | Heating | | 18.5 / 19.3 | | |
| | Inrush current, max current | | 5, 24 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 99 | | |
| | EER | Cooling | 2.87 | | | |
| | COP | Heating | 3.68 | | | |
| Sound power level | Cooling | dB(A) | 60 | 73 | | |
| | Heating | | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | 57 | |
| | Heating | | | | 59 | |
| Silent mode sound pressure level | | - | | 53 / 47 (Normal / Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 210 × 1070 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 28 | | 80 | |
| Compressor type & Q'ty | | | - | | RMT5126MCE3 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2 (Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | - | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | 1/U φ 6.35 (1/4") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | 1/U φ 12.7 (1/2") ② φ 12.7(1/2")×0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | - | | - | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | - | | - | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | - | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together. (7) Branching pipe set "DIS-TA1G"×1(Option). ① : Pipe of O/U-Branch, ② : Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDE140VSATVH | | |
|--|-----------------------------------|--------------------------------------|--|--------------------------------|---|-----------|
| | | | | Indoor unit FDE50VH (3 units) | Outdoor unit FDC140VSA | |
| Power source | | 3 Phase, 380-415V, 50Hz / 380V, 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 4.74 | | |
| | | Heating | | 4.21 | | |
| | Max power consumption | | 10.20 | | | |
| | Running current | Cooling | A | 6.9 / 7.3 | | |
| | | Heating | | 6.2 / 6.5 | | |
| | Inrush current, max current | | 5, 15 | | | |
| | Power factor | Cooling | % | 99 | | |
| | | Heating | | 98 | | |
| | EER | Cooling | | 2.87 | | |
| | COP | Heating | | 3.68 | | |
| | Sound power level | Cooling | dB(A) | 60 | | 73 |
| Heating | | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | 57 | | |
| Sound pressure level | Cooling | dB(A) | | | 59 | |
| | Heating | | | | 53 / 47 (Normal / Silent) | |
| Silent mode sound pressure level | | | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 210 × 1070 × 690 | | 845 × 970 × 370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 28 | | 82 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE4 (Twin rotary type) ×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | Straight fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2 (Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for compressor) | |
| Electric heater | | W | — | | 20 (Crank case heater) | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A, RC-E5, RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ② φ 9.52 (3/8") x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ② φ 12.7 (1/2") x0.8 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | |
| | Attached length of piping | m | — | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | |
| Drain hose | | Hose connectable with VP20 (O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | | mm | — | | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | | φ 1.6mm × 3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | | IP24 | |
| Standard accessories | | | Mounting kit, Drain hose | | — | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U | | | | | | |

| Item | | Model | | FDE200VSATVH | | |
|--|-----------------------------------|-----------------------------------|--|--|---|------------------------|
| | | | | Indoor unit FDE71VH (3 units) | | Outdoor unit FDC200VSA |
| Power source | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 19.0 [5.2(Min.)-22.4(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 22.4 [3.3(Min.)-25.0(Max.)] | | |
| | Power consumption | Cooling | kW | | 6.33 | |
| | | Heating | kW | | 5.94 | |
| | Max power consumption | | | 12.0 | | |
| | Running current | Cooling | A | | 9.7 / 10.2 | |
| | | Heating | A | | 9.1 / 9.6 | |
| | Inrush current, max current | | | 5 , 20 | | |
| | Power factor | Cooling | % | | 94 | |
| | | Heating | % | | 94 | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.77 | | |
| Sound power level | Cooling | dB(A) | | 60 | | |
| | Heating | dB(A) | | 72 | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | |
| | Heating | dB(A) | | 74 | | |
| Silent mode sound pressure level | | | 58 | | | |
| | | | | 59 | | |
| | | | | 52 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | | 210 × 1320 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| | | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | | 33 | | |
| Compressor type & Q'ty | | | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | | 0.9(compressor) + 0.6(unit) (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| | | | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | | |
| Fan motor (Starting method) | | W | | 50 < Direct line start > | | |
| | | | | Propeller fan ×2 | | |
| | | | | 86 x 2 < Direct line start > | | |
| Air flow | Cooling | m³/min | | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | |
| | Heating | m³/min | | 135 | | |
| Available external static pressure | | Pa | | 0 | | |
| Outside air intake | | | | Not possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2(Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve(for fan motor) | | |
| Electric heater | | W | | 20(Crank case heater) | | |
| Remote control | | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | |
| Room temperature control | | | | Thermostat by electronics | | |
| Operation display | | | | — | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") ② φ 9.52(3/8")×0.8 ① φ 9.52(3/8")×0.8 or φ 12.7(1/2")×0.8 O/U φ 9.52 (3/8") | |
| | | Gas line | mm | | I/U φ 15.88 (5/8") ② φ 15.88(5/8")×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | m | | Liquid : Flare / Gas : Brazing | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | | Max.70(Liquid piping: φ 12.7, Gas piping: φ 25.4 or φ 28.58), Max.40(Liquid piping: φ 9.52, Max.35(Gas piping: φ 22.22) | | |
| Vertical height diff. between O/U and I/U | m | | Max.30 (Outdoor unit is higher) | | | |
| Drain hose | | | Max.15 (Outdoor unit is lower) | | | |
| Drain pump, max lift height | mm | | Hose connectable with VP20(O.D.26) | | | |
| Recommended breaker size | A | | Hole size φ 20 x 3 pcs | | | |
| L.R.A. (Locked rotor ampere) | A | | — | | | |
| Interconnecting wires | Size x Core number | | 5.0 | | | |
| IP number | | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | |
| Standard accessories | | | IPX0 | | | |
| Option parts | | | IP24 | | | |
| | | | | Mounting kit, Drain hose | | |
| | | | | Connecting pipe, Edging | | |
| | | | | Motion sensor : LB-E | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards | |
| | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | | 24°C |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data are three indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-TB1G"×1(Option). ① : Pipe of O/U-Branch. ② : Pipe of Branch-I/U | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | |

(d) Double twin type

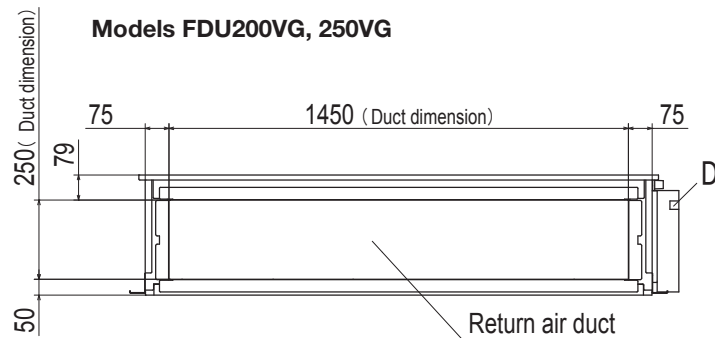
'19 • PAC-DB-319

| Item | | Model | FDE200VSADVH | | | |
|--|---|--|--|-------------------------|------------|-----------|
| | | | Indoor unit FDE50VH (4 units) | Outdoor unit FDC200VSA | | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 19.0 [5.2(Min.)-22.4(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 22.4 [3.3(Min.)-25.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 6.90 | | |
| | | Heating | | 7.10 | | |
| | Max power consumption | | 12.0 | | | |
| | Running current | Cooling | A | 10.6 / 11.2 | | |
| | | Heating | | 10.8 / 11.4 | | |
| | Inrush current, max current | | 5 , 20 | | | |
| | Power factor | Cooling | % | 94 | | |
| | | Heating | | 95 | | |
| | EER | Cooling | | 2.75 | | |
| | COP | Heating | | 3.15 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| Heating | | 72 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | | | |
| | Heating | | 58 | | | |
| Silent mode sound pressure level | | | 59 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1070 × 690 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | |
| Net weight | | kg | 28 | | | |
| Compressor type & Q'ty | | | RMT5134MDE3 (Twin rotary type) ×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9(compressor) + 0.6(unit) (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 5.6 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | |
| | Heating | | 135 | | | |
| Available external static pressure | | Pa | 0 | | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | | |
| Electric heater | | W | 20(Crank case heater) | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ③ ② φ 9.52(3/8")×0.8 | | | |
| | | Gas line | ① φ 9.52(3/8")×0.8 or φ 12.7(1/2")×0.8 O/U φ 9.52 (3/8") I/U φ 12.7 (1/2") ③ φ 12.7×0.8 ③ φ 15.88×1.0 | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | Liquid : Flare / Gas : Brazing | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70(Liquid piping: φ 12.7, Gas piping: φ 25.4 or φ 28.58), Max.40(Liquid piping: φ 9.52, Max.35(Gas piping: φ 22.22) | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) | | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | | | |
| Drain pump, max lift height | mm | Hole size φ 20 x 3 pcs | | | | |
| Recommended breaker size | A | — | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | | | |
| Standard accessories | | Mounting kit, Drain hose | | | | |
| Option parts | | Connecting pipe, Edging | | | | |
| Notes | | Motion sensor : LB-E | | | | |
| (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data are four indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WB1G"×1, "DIS-WA1G"×2 (Option). Pipe ① : O/U-Branch, ② : Branch-Branch, ③ : Branch-I/U | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | |

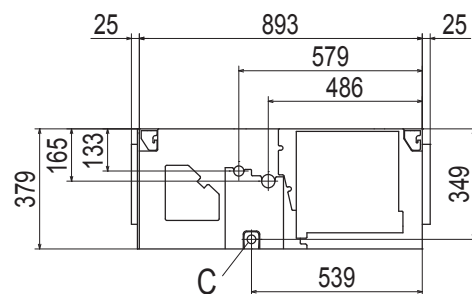
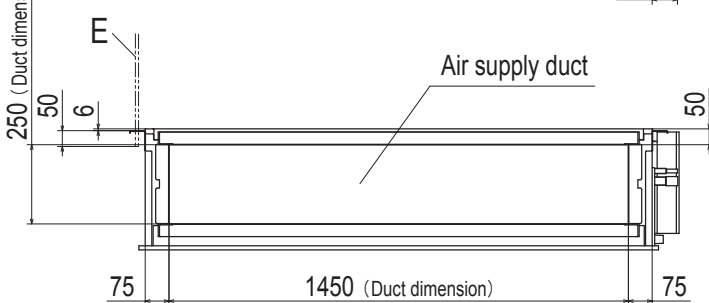
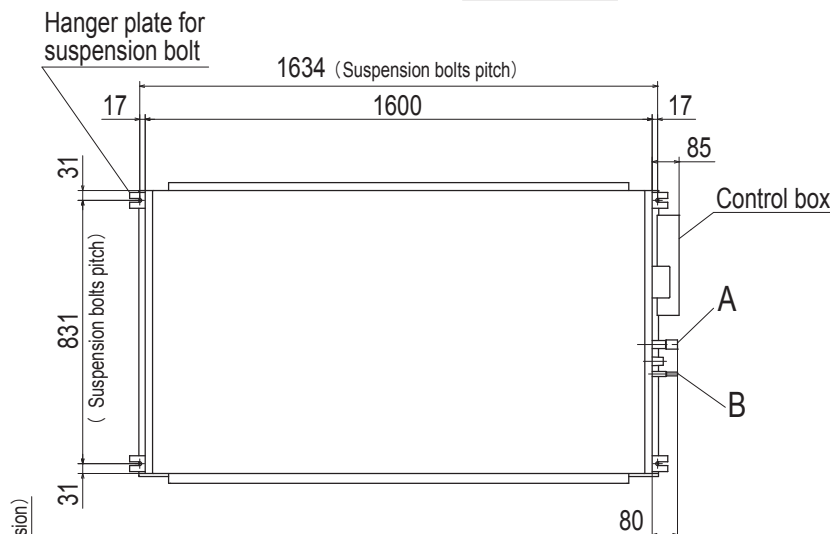
| Item | | Model | FDE250VSADVH | | | |
|--|---|--|---|---|------------|-----------|
| | | | Indoor unit FDE60VH (4 units) | Outdoor unit FDC250VSA | | |
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.)-28.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.)-31.5(Max.)] | | | |
| | Power consumption | Cooling | kW | 8.00 | | |
| | | Heating | | 7.02 | | |
| | Max power consumption | | 13.7 | | | |
| | Running current | Cooling | A | 12.2 / 12.8 | | |
| | | Heating | | 10.7 / 11.2 | | |
| | Inrush current, max current | | 5 , 21 | | | |
| | Power factor | Cooling | % | 95 | | |
| | | Heating | | 95 | | |
| | EER | Cooling | | 3.00 | | |
| | COP | Heating | | 3.85 | | |
| | Sound power level | Cooling | dB(A) | 60 | | |
| Heating | | 73 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | | |
| | Heating | | 75 | | | |
| Silent mode sound pressure level | | | 59 | | | |
| | | | 62 | | | |
| | | | 54 | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 210 × 1320 × 690 | | 1505×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | 33 | | 143 | | |
| Compressor type & Q'ty | | — | | GTC5150NC40KF (-T) (Scroll type) ×1 | | |
| Compressor motor (Starting method) | kW | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | — | | 1.45 (M-MA32R) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 7.2 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | Electronic expansion valve | | | | |
| Fan type & Q'ty | | Centrifugal fan ×4 | | Propeller fan ×2 | | |
| Fan motor (Starting method) | W | 50 < Direct line start > | | 86 × 2 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | |
| | Heating | | 143 | | | |
| Available external static pressure | Pa | 0 | | 151 | | |
| Outside air intake | | Not possible | | 0 | | |
| Air filter, Quality / Quantity | | Pocket plastic net ×2(Washable) | | — | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | — | | 20(Crank case heater) | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | Thermostat by electronics | | | | |
| | Operation display | — | | | | |
| Safety equipments | | Overload protection for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 6.35 (1/4") ③② φ 9.52(3/8")×0.8 ① φ 12.7(1/2")×0.8 O/U φ 12.7 (1/2") | | | |
| | | Gas line | I/U φ 12.7 (1/2") ③ φ 12.7×0.8 ② φ 15.88×1.0 ① φ 22.22(7/8")×1.0 or φ 25.4(1")×1.0 or φ 28.58(1 1/8")×1.0 O/U φ 22.22 (7/8") | | | |
| | Connecting method | | Flare piping Liquid : Flare / Gas : Brazing | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.70(Gas piping: φ 25.4 or φ 28.58), Max.35(Gas piping: φ 22.22) | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 × 3 pcs | | |
| Drain pump, max lift height | mm | — | | — | | |
| Recommended breaker size | A | — | | — | | |
| L.R.A. (Locked rotor ampere) | A | — | | 5.0 | | |
| Interconnecting wires | Size x Core number | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IP24 | | |
| Standard accessories | | Mounting kit, Drain hose | | Connecting pipe, Edging | | |
| Option parts | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |
| (6) Indoor unit specifications for one unit. Capacity and operation data are four indoor units combined and run together. | | | | | | |
| (7) Branching pipe set "DIS-WB1G"×1,"DIS-WA1G"×2 (Option). Pipe ① : O/U-Branch, ② : Branch-Branch, ③ : Branch-I/U | | | | | | |
| (8) Use 1/2H pipes having a 1.0mm or thicker wall for φ 19.05 or larger pipes. | | | | | | |

2.2 EXTERIOR DIMENSIONS

(1) Indoor units (Except FDU200VG, 250VG) See page 58.



| Symbol | Content | | |
|--------|---------------------------------|------------------------|------------------------|
| | MODEL | 200 | 250 |
| A | Gas piping | φ 25.4(1") (Brazing) | |
| B | Liquid piping | φ 9.52(3/8") (Brazing) | φ 12.7(1/2") (Brazing) |
| C | Drain piping (Gravity drainage) | VP25(I.D.25, O.D.32) | |
| D | Hole for wiring | | |
| E | Suspension bolts | M10 | |
| F | Inspection hole | (450×450) | |

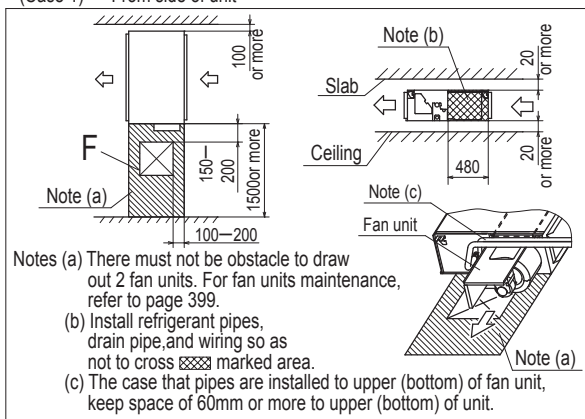


Unit:mm

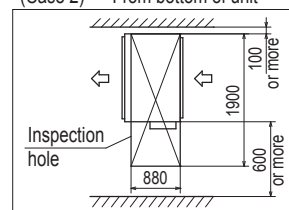
Space for installation and service

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



(Case 2) From bottom of unit



Note(1) The model name label is attached on the lid of the control box.

PJG000Z285

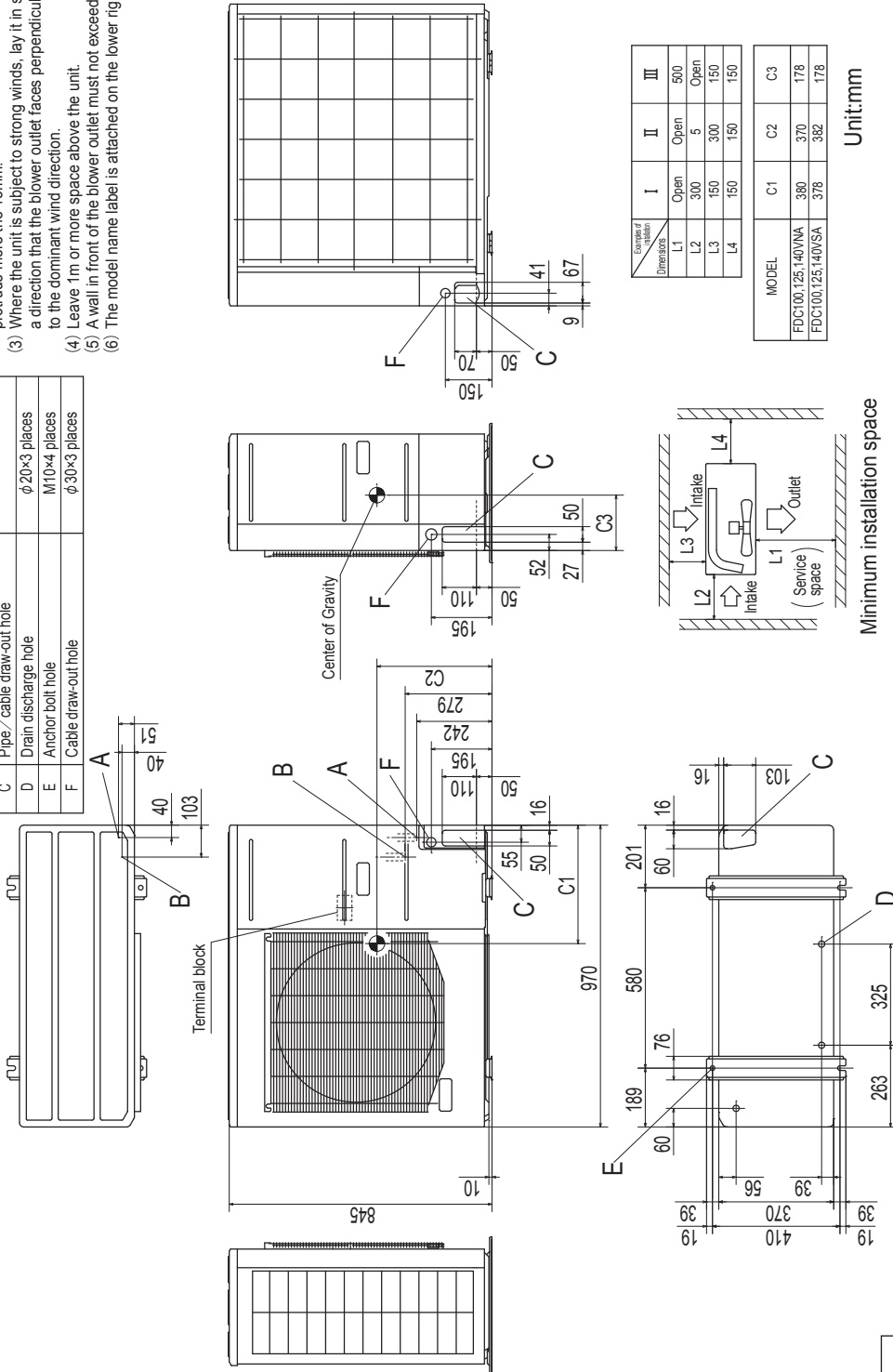
(2) Outdoor units

Models FDC100VNA, 125VNA, 140VNA
100VSA, 125VSA, 140VSA

Notes

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.

| Symbol | Content |
|--------|---|
| A | Service valve connection (gas side) $\phi 15.88$ (5/8") (Flare) |
| B | Service valve connection (liquid side) $\phi 9.52$ (3/8") (Flare) |
| C | Pipe./Cable draw-out hole $\phi 20 \times 3$ places |
| D | Drain discharge hole M10×4 places |
| E | Anchor bolt hole $\phi 30 \times 3$ places |
| F | Cable draw-out hole |



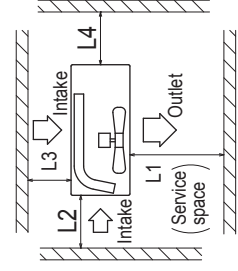
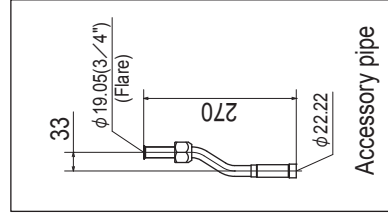
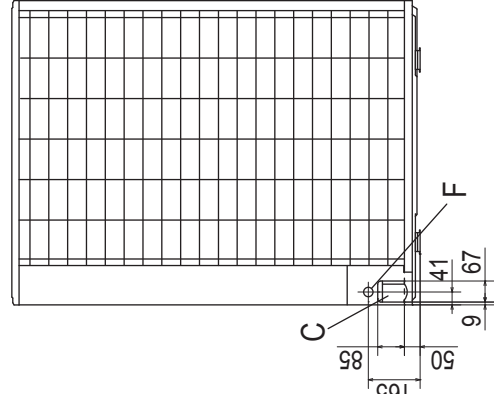
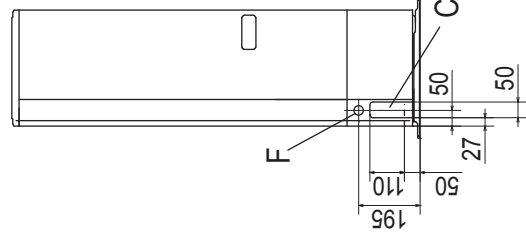
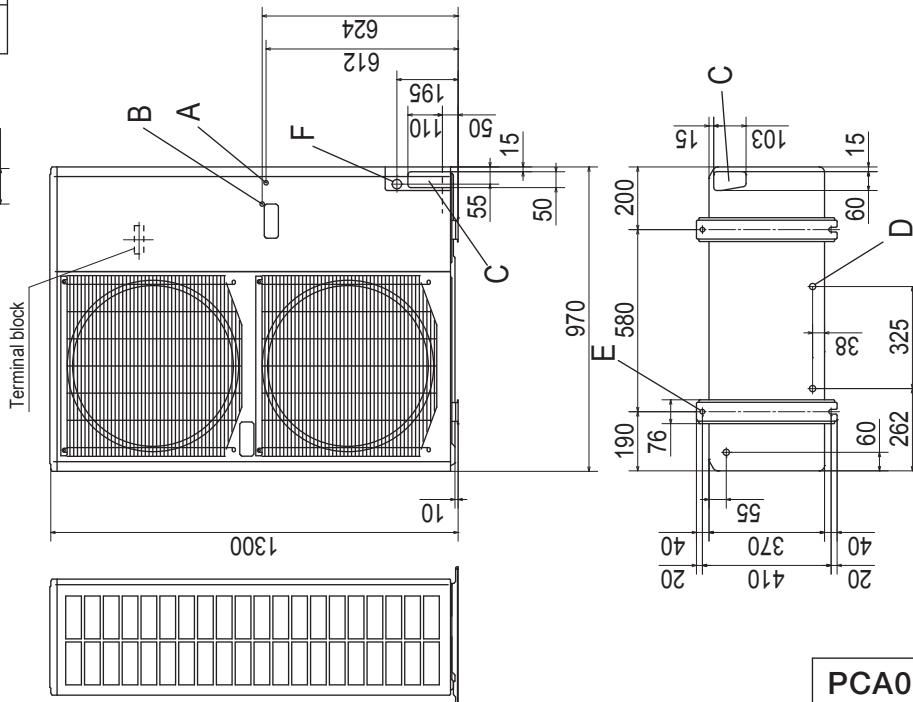
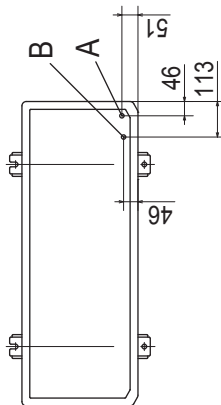
PCA001Z816

Model FDC200VSA

Notes

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with walls on the four sides.
An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.
- (7) Connect the service valve with local pipe by using the pipe of the attachment.
(Gas side only)
- (8) Regarding attaching the pipe of accessories, refer to service manual.

| Symbol | Content |
|--------|---|
| A | Service valve connection of the attached connecting pipe (gas side) $\phi 19.05(3/4)$ (Flare) |
| B | Service valve connection (liquid side) $\phi 9.52(3/8)$ (Flare) |
| C | Pipe/cable draw-out hole |
| D | Drain discharge hole |
| E | Anchor bolt hole |
| F | Cable draw-out hole |



Minimum installation space

Unit:mm

| Examples of installation | | |
|--------------------------|------|------|
| I | II | III |
| Open | Open | Open |
| L1 | 300 | 500 |
| L2 | 150 | 5 |
| L3 | 300 | 150 |
| L4 | 5 | 5 |

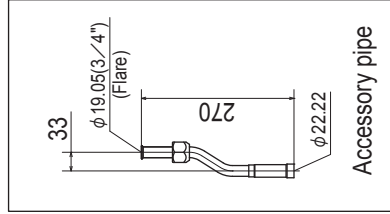
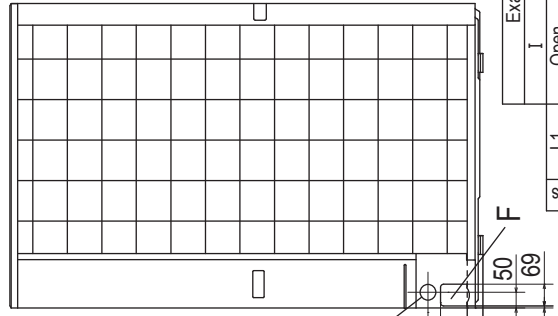
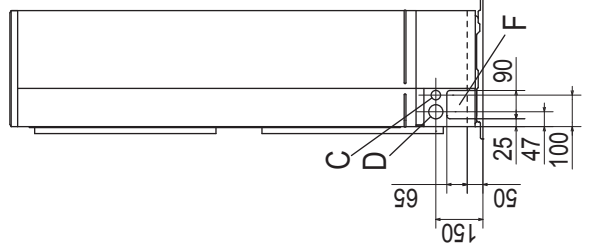
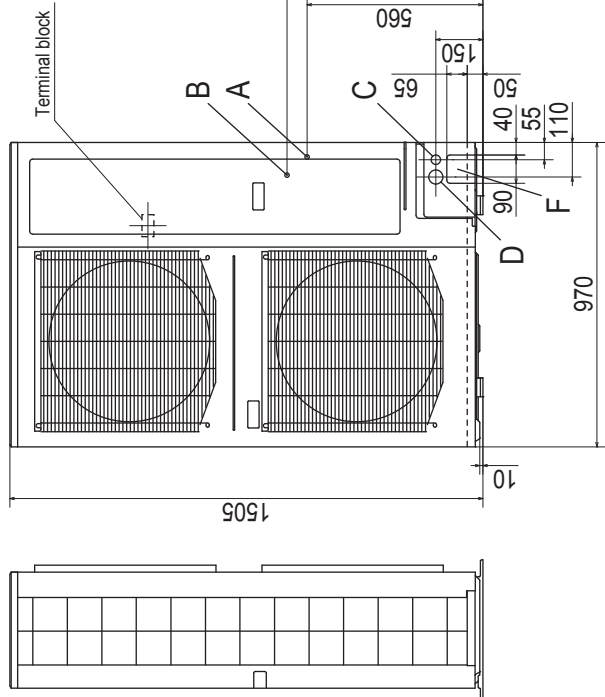
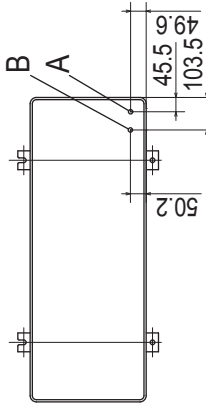
PCA001Z768

Model FDC250VSA

Notes

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts.
An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.
- (7) Connect the service valve with local pipe by using the pipe of the attachment. (Gas side only)
- (8) Regarding attaching the pipe of accessories, refer to service manual.

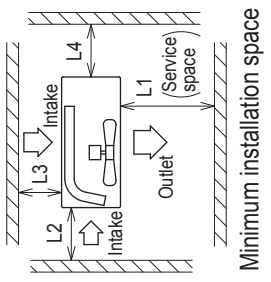
| Symbol | Content |
|--------|---|
| A | Service valve connection of the attached connecting pipe (liquid side) $\phi 19.05(3/4")$ (Flare) |
| B | Service valve connection (liquid side) $\phi 12.7(1/2")$ (Flare) |
| C | Cable draw-out hole (front-side) $\phi 30 \times 2$ places |
| D | Cable draw-out hole (front-side) $\phi 45 \times 2$ places |
| E | Cable draw-out hole (back) $\phi 50$ |
| F | Pipe/cable draw-out hole 4 places |
| G | Drain discharge hole $\phi 20 \times 3$ places |
| H | Anchor bolt hole M10 \times 4 places |



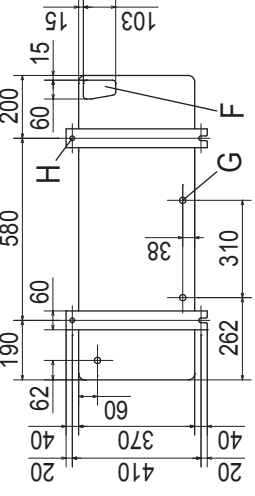
Unit:mm

| Dimensions | I | II | III |
|------------|----------------------|----------------------|----------------------|
| L1 | Open | Open | Open |
| L2 | 300 | 300 | 5 |
| L3 | 150 | 150 | 300 |
| L4 | 250(5) ^{※1} | 250(5) ^{※1} | 250(5) ^{※1} |

Examples of installation



Minimum installation space



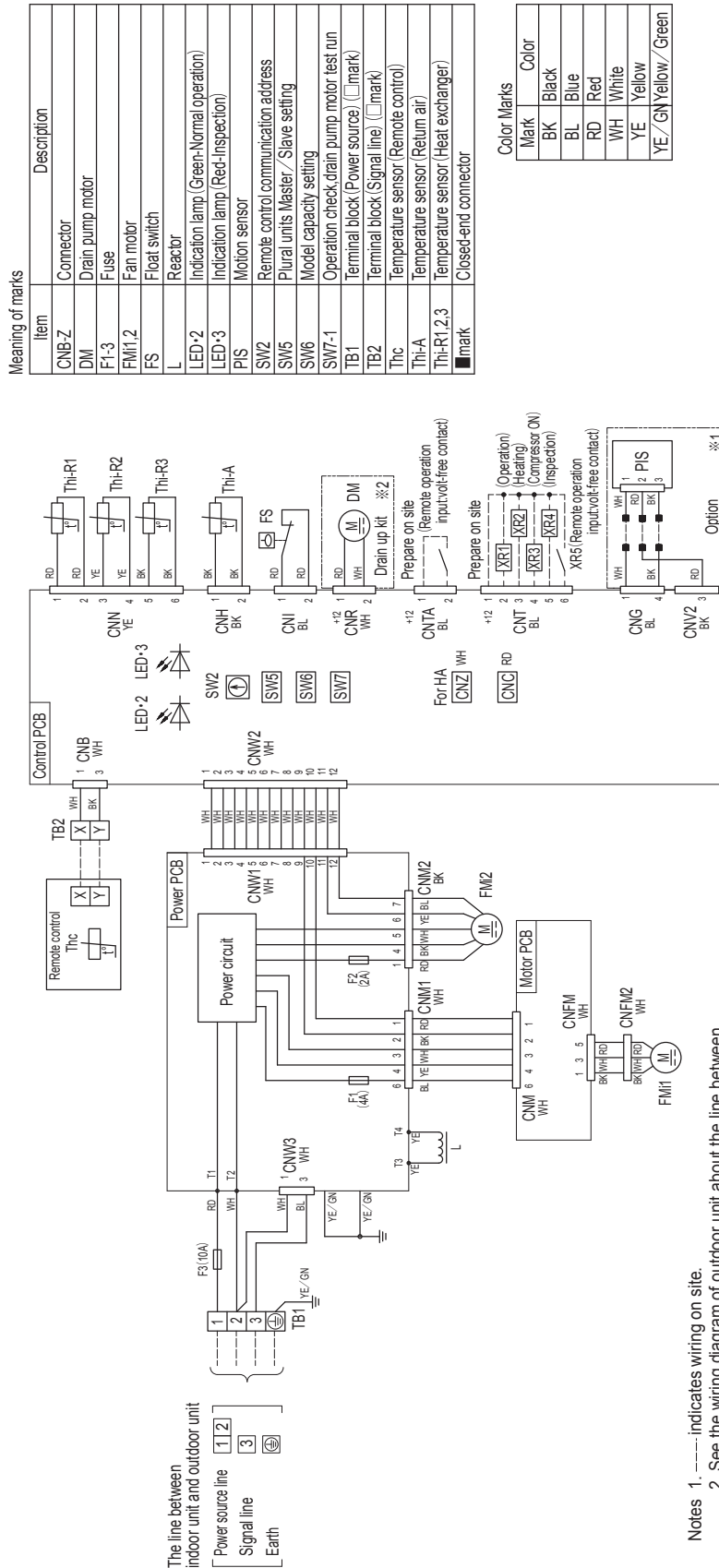
※1 At the time of the installation at () dimension, Secure space of 250mm in lateral (L4) by unit movement at the time of the exchange work of the compressor.

PCB003Z865

2.3 ELECTRICAL WIRING

(1) Indoor units (Except FDU200VG, 250VG)..... See page 73.

Models FDU200VG, 250VG



- Notes
1. --- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line. See spec sheet of remote control in case that the total length is more than 100m.
 4. Do not put remote control line alongside power source line.
 5. Section 1 (※1) shows electric circuit of motion sensor (Option).
 6. Section 2 (※2) is not included as standard from factory. This circuit is an option when using drain up kit.

PJG000Z465

(2) Outdoor units

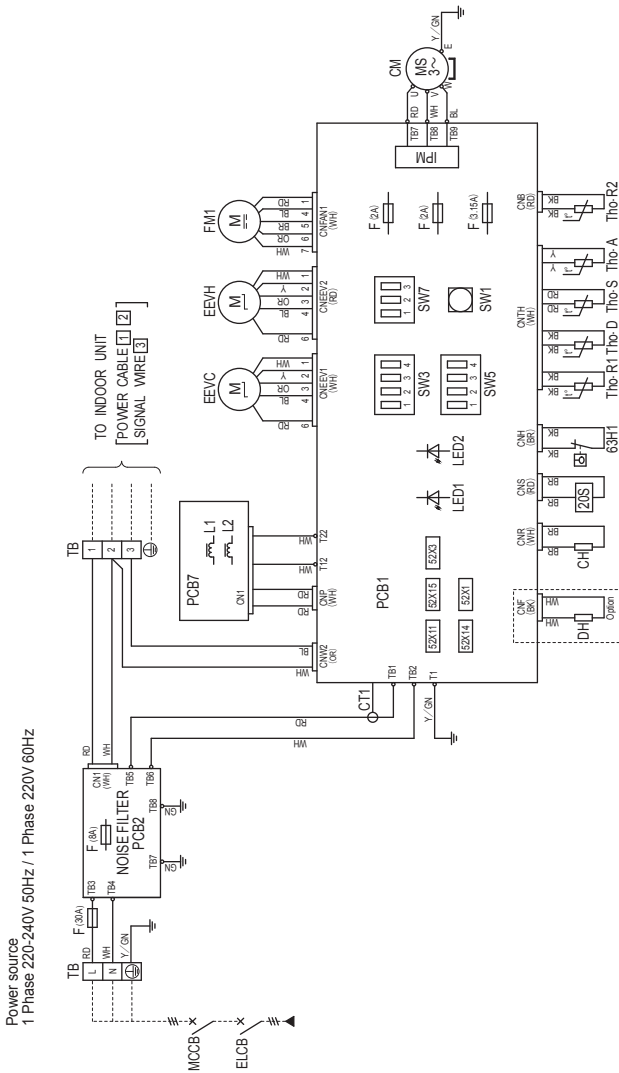
Models FDC100VNA, 125VNA, 140VNA

Meaning of marks

| ITEM | DESCRIPTION |
|-----------|-------------------------------------|
| CH | Crankcase heater |
| CM | Compressor motor |
| CN | Connector |
| CT1 | Current sensor |
| DH | Drain pan heater |
| EEVC | Expansion valve for cooling |
| EEVH | Expansion valve for heating |
| F | Fuse |
| FM1 | Fan motor |
| IPM | Intelligent power module |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| L1,2 | Reactor |
| SW1 | Switch |
| SW3,5,7 | Local setting switch |
| TB | Terminal block |
| Thb-A | Temperature sensor (Outdoor air) |
| Thb-D | Temperature sensor (Discharge pipe) |
| Thb-R1,R2 | Temperature sensor (Heat exchanger) |
| Thb-S | Temperature sensor (Suction pipe) |
| 20S | Solenoid valve for 4-way valve |
| 52X1 | Auxiliary relay |
| 52X3 | Auxiliary relay |
| 52X11 | Auxiliary relay (for 20S) |
| 52X14 | Auxiliary relay (for CH) |
| 52X15 | Auxiliary relay (for DH) |
| 63H1 | High pressure switch |

Color marks

| Mark | Color |
|--------|----------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GN | Green |
| OR | Orange |
| RD | Red |
| WH | White |
| Y | Yellow |
| Y / GN | Yellow / Green |



Local setting switch SW3,5,7 (Set up at shipment OFF)

| Item | Description |
|---------|---|
| SW3-1 | Defrost control change The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point. |
| SW3-2 | Snow guard fan control When this switch is turned ON, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3 °C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON. |
| SW3-3,4 | Trial operation Method of trial operation ① Trial operation can be performed by using SW3-3,4. ② Compressor will be in the operation when SW3-3 is ON. ③ Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON. ④ Be sure to turn OFF SW3-3 after the trial operation is finished. |
| SW5-2 | High height difference operation control Set this switch to ON when outdoor unit is installed at a position higher than indoor unit by 30m or more. |
| SW7-2 | Defrost control change Set this switch to ON when managing unit operation by remote control connected external equipment. |
| SW7-3 | Lower noise silent mode Upper limit of compressor speed and fan speed becomes lower in silent mode. |

Power cable, indoor-outdoor connecting wires

| Model | MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm) |
|--|----------------------|-------------------------------------|------------------------|-----------------------------------|----------------------|
| 100 | 24 | 5.5 | 22 | Ø1.6mm x 3 | Ø1.6 |
| 125 | | | | | |
| 140 | | | | | |
| ※At the connection with the duct type indoor unit. | | | | | |
| Model | MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm) |
| 100 | 26 | 5.5 | 20 | Ø1.6mm x 3 | Ø1.6 |
| 125 | | | | | |
| 140 | | | | | |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

PCA001Z817

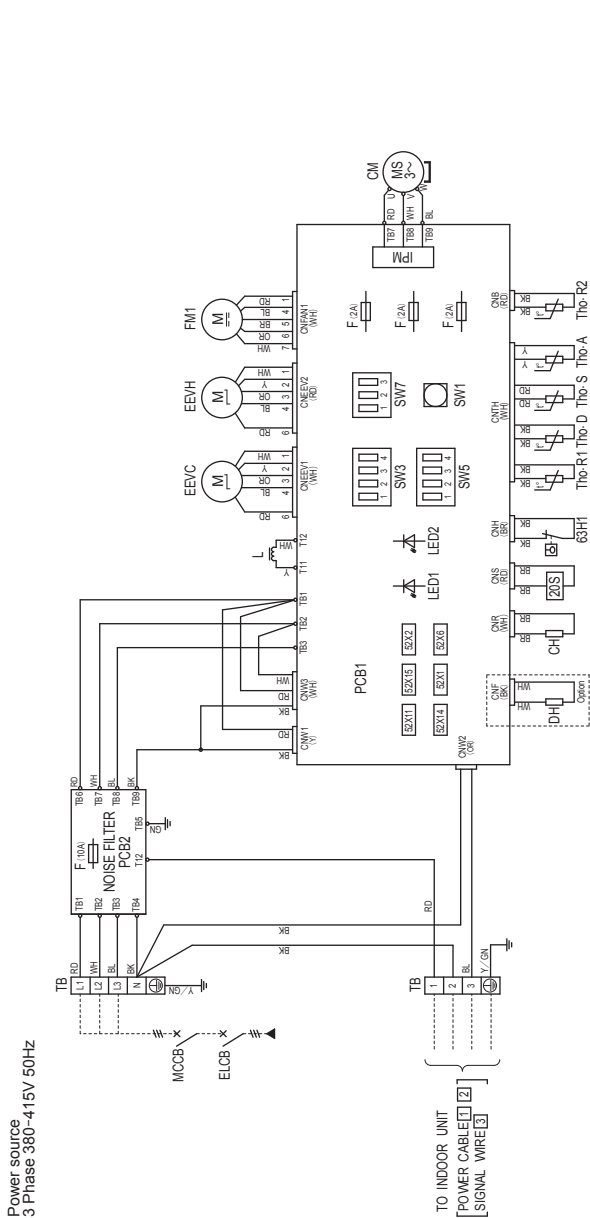
Models FDC100VSA, 125VSA, 140VSA

Meaning of marks

| ITEM | DESCRIPTION |
|-----------|-------------------------------------|
| CH | Crankcase heater |
| CM | Compressor motor |
| CN | Connector |
| DH | Drain pan heater |
| EEVC | Expansion valve for cooling |
| EEVH | Expansion valve for heating |
| F | Fuse |
| FM1 | Fan motor |
| IPM | Intelligent power module |
| L | Reactor |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| SW1 | Switch |
| SW3.5.7 | Local setting switch |
| TB | Terminal block |
| Th-A | Temperature sensor (Outdoor air) |
| Th-D | Temperature sensor (Discharge pipe) |
| Th-R1, R2 | Temperature sensor (Heat exchanger) |
| Th-S | Temperature sensor (Suction pipe) |
| ZOS | Solenoid valve for 4-way valve |
| 52X1 | Auxiliary relay |
| 52X2 | Auxiliary relay |
| 52X6 | Auxiliary relay (for FM1) |
| 52X11 | Auxiliary relay (for ZOS) |
| 52X14 | Auxiliary relay (for CH) |
| 52X15 | Auxiliary relay (for DH) |
| 63H1 | High pressure switch |

Color marks

| Mark | Color |
|------|----------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GN | Green |
| OR | Orange |
| RD | Red |
| WH | White |
| Y | Yellow |
| Y/GN | Yellow / Green |



Local setting switch SW3.5.7 (Set up at shipment OFF)

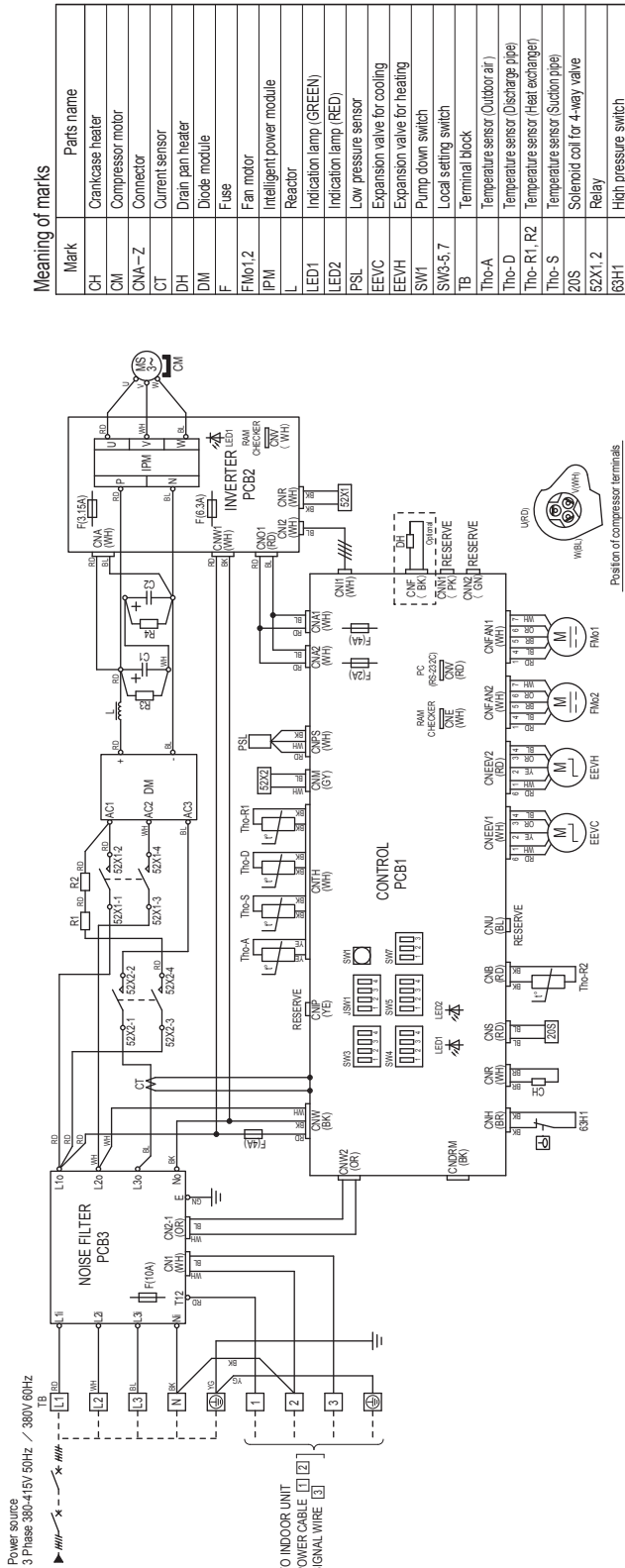
| SW3-1 | Defrost control change |
|---------|--|
| SW3-2 | Snow guard fan control |
| SW3-3,4 | Trial operation |
| SW5-2 | High height difference operation control |
| SW7-2 | Defrost control change |
| SW7-3 | Lower noise silent mode |

| Model | MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm) |
|-------|----------------------|-------------------------------------|------------------------|-----------------------------------|----------------------|
| 100 | 15 | 3.5 | 46 | Ø1.6mm x 3 | Ø1.6 |
| 125 | 17 | 3.5 | 40 | Ø1.6mm x 3 | Ø1.6 |
| 140 | 18 | 3.5 | 38 | Ø1.6mm x 3 | Ø1.6 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

PCA001Z818

Model FDC200VSA



Meaning of marks

| Mark | Parts name |
|----------------|-------------------------------------|
| CH | Crankcase heater |
| CM | Compressor motor |
| CNA-Z | Connector |
| CT | Current sensor |
| DH | Drain pan heater |
| DM | Diode module |
| F | Fuse |
| FMot1,2 | Fan motor |
| IPM | Intelligent power module |
| L | Reactor |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| PSL | Low pressure sensor |
| EEVH | Expansion valve for heating |
| SWT | Expansion valve for cooling |
| SW3-5,7 | Pump down switch |
| TB | Local setting switch |
| Terminal block | |
| Tho-A | Temperature sensor (Outdoor air) |
| Tho-D | Temperature sensor (Discharge pipe) |
| Tho-R1, R2 | Temperature sensor (Heat exchanger) |
| Tho-S | Temperature sensor (Suction pipe) |
| 20S | Solenoid coil for 4-way valve |
| 52X1, 2 | Relay |
| 63H1 | High pressure switch |

Color marks

| Mark | Color |
|------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GN | Green |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow/Green |
| GY | Gray |
| PK | Pink |

Local setting switch SW3 (Set up at shipment OFF)

| SW3-1 | Defrost control change | The defrosting interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point. |
|---------|------------------------|--|
| SW3-2 | Snow guard fan control | When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON. |
| SW3-3,4 | Trial operation | Method of trial operation ① Trial operation can be performed by using SW3-3,4. ② Compressor will be in the operation when SW3-3 is ON. ③ Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON. ④ Be sure to turn OFF SW3-3 after the trial operation is finished. |

Power cable : indoor-outdoor connecting wires

| MAX over current (A) | Power cable size (mm ²) | Indoor-outdoor wire size x number | Earth wire size |
|----------------------|-------------------------------------|-----------------------------------|-----------------|
| 25 | 5.5 | φ 1.6mm x 3 | φ 1.6mm |

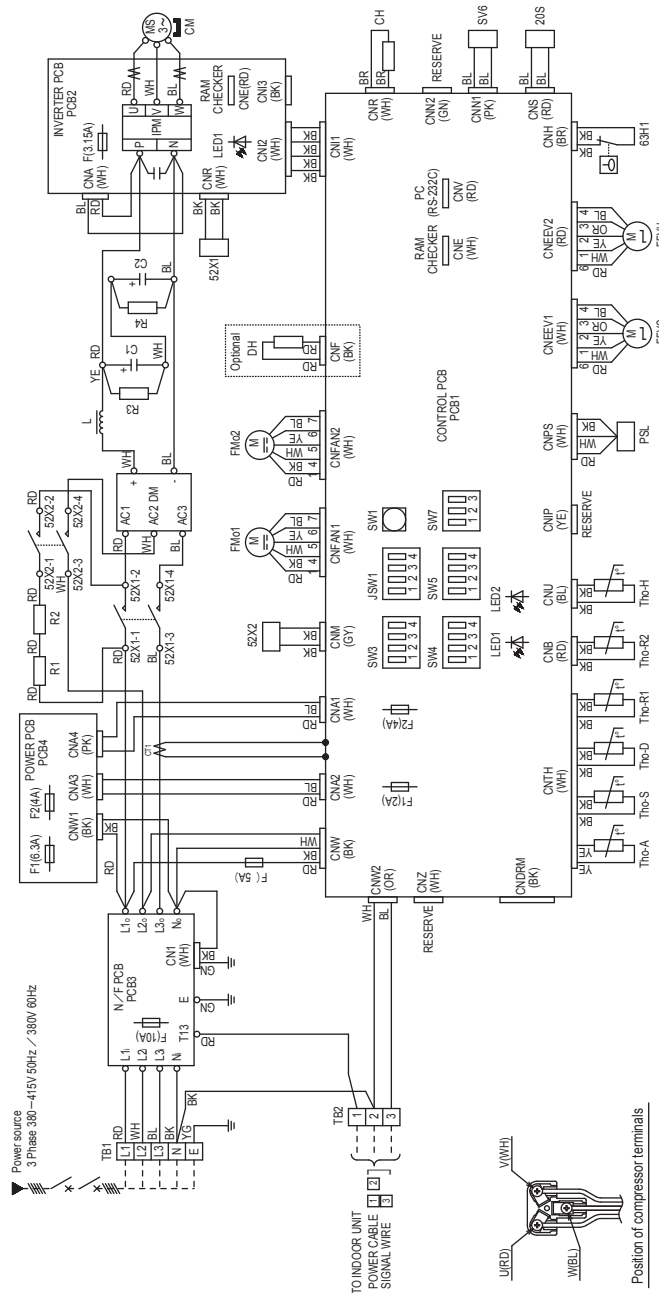
- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

PCA001Z769

Model FDC250VSA

Meaning of marks

| Mark | Parts name |
|------------|---------------------------------------|
| CH | Crankcase heater |
| CM | Compressor motor |
| CNA-Z | Connector |
| CT | Current sensor |
| DH | Drain pan heater |
| DM | Diode module |
| F | Fuse |
| FM01,2 | Fan motor |
| IPM | Intelligent power module |
| L | Reactor |
| LED1 | Indication lamp (GREEN) |
| LED2 | Indication lamp (RED) |
| PSL | Low pressure sensor |
| EEVC | Expansion valve for cooling |
| EEVH | Expansion valve for heating |
| SW1 | Pump down switch |
| SW3-5,7 | Local setting switch |
| TB | Terminal block |
| Tho-A | Temperature sensor (Outdoor air) |
| Tho-D | Temperature sensor (Discharge pipe) |
| Tho-R 1,R2 | Temperature sensor (Heat exchanger) |
| Tho-H | Temperature sensor (Comp. under dome) |
| Tho-S | Temperature sensor (Suction pipe) |
| 20S | Solenoid coil for 4-way valve |
| SV6 | Solenoid coil for 2 way valve |
| 52X1, 2 | Relay |
| 63H1 | High pressure switch |



Position of compressor terminals

Power cable, indoor-outdoor connecting wires

| MAX over current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size |
|----------------------|-------------------------------------|------------------------|-----------------------------------|-----------------|
| 27 | 5.5 | 40 | φ 1.6mm x 3 | φ 1.6mm |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation failing outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

Local setting switch SW3 (Set up at shipment OFF)

| | | |
|---------|------------------------|--|
| SW3-1 | Defrost control change | The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point. |
| SW3-2 | Snow guard fan control | When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON. |
| SW3-3,4 | Trial operation | Method of trial operation ① Trial operation can be performed by using SW3-3,4. ② Compressor will be in the operation when SW3-3 is ON. ③ Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON. ④ Be sure to turn OFF SW3-3 after the trial operation is finished. |

Color marks

| Mark | Color |
|------|--------------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GN | Green |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow/Green |
| GY | Gray |
| PK | Pink |

PCB003Z866

2.4 NOISE LEVEL

Notes(1) The data are based on the following conditions.

Ambient air temperature: Indoor unit 27°CWB. Outdoor unit 35°CDB.

(2) The data in the chart are measured in an anechoic room.

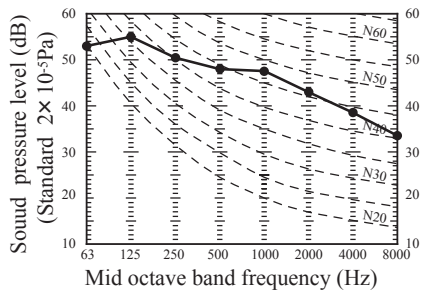
(3) The noise levels measured in the field are usually higher than the data because of reflection.

(1) Indoor units (Except FDU200VG, 250VG) See page 84.

Duct connected-High static pressure type (FDU)

Models FDU200VG, 250VG

Noise level 52dB (A) at P-Hi
 50dB (A) at Hi
 47dB (A) at Me
 45dB (A) at Lo



(2) Outdoor units

Measured based on JIS B 8616

Mike position: at highest noise level in position as mentioned below

Distance from front side 1m

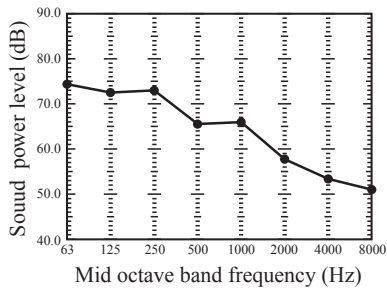
Height 1m

(a) FDC100-140

(i) Sound power level

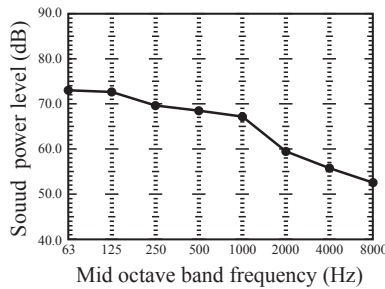
Models FDC100VNA,100VSA

Noise level 70 dB (A)



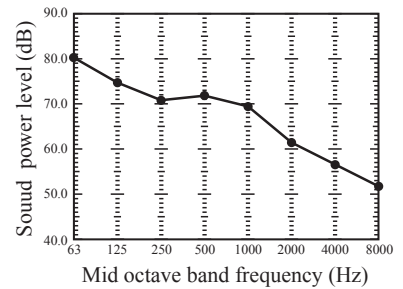
Models FDC125VNA,125VSA

Noise level 71 dB (A)



Models FDC140VNA,140VSA

Noise level 73 dB (A)



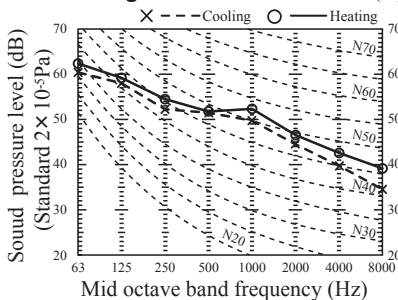
(ii) Sound pressure level

1) Rating mode

Models FDC100VNA,100VSA

Cooling noise level Hi : 54 dB (A)

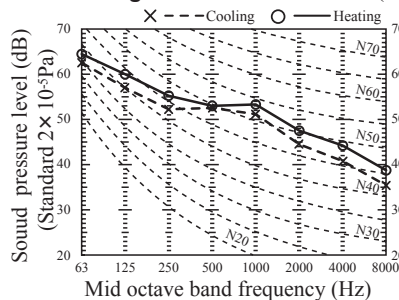
Heating noise level Hi : 56 dB (A)



Models FDC125VNA,125VSA

Cooling noise level Hi : 55 dB (A)

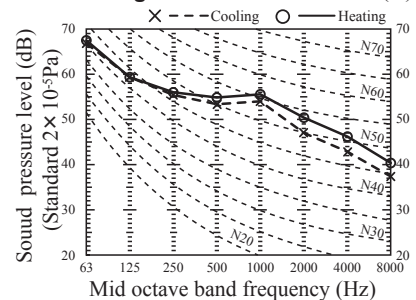
Heating noise level Hi : 57 dB (A)



Models FDC140VNA,140VSA

Cooling noise level Hi : 57 dB (A)

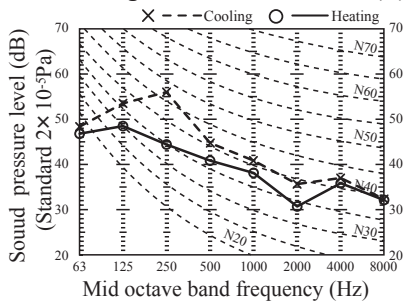
Heating noise level Hi : 59 dB (A)



2) Silent mode

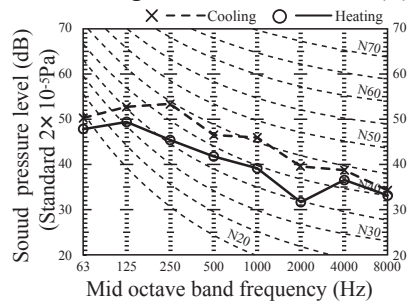
Models FDC100VNA,100VSA

Cooling noise level Hi : 50 dB (A)
 Heating noise level Hi : 44 dB (A)



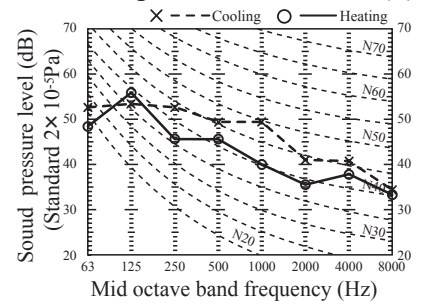
Models FDC125VNA,125VSA

Cooling noise level Hi : 51 dB (A)
 Heating noise level Hi : 45 dB (A)



Models FDC140VNA,140VSA

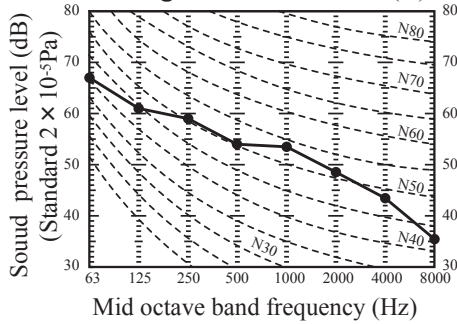
Cooling noise level Hi : 53 dB (A)
 Heating noise level Hi : 47 dB (A)



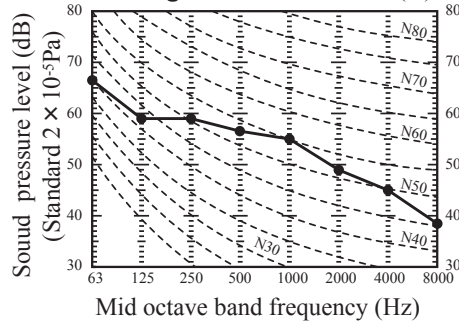
(b) FDC200, 250

Model FDC200VSA

Cooling noise level 58dB (A)

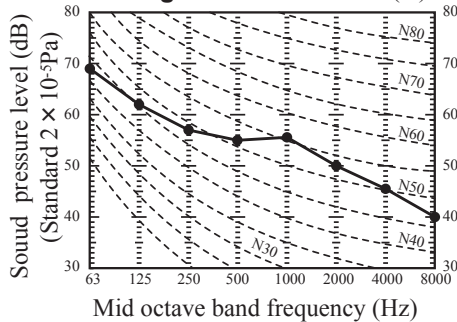


Heating noise level 59dB (A)

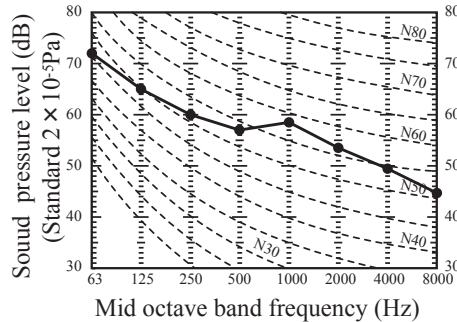


Model FDC250VSA

Cooling noise level 59dB (A)



Heating noise level 62dB (A)



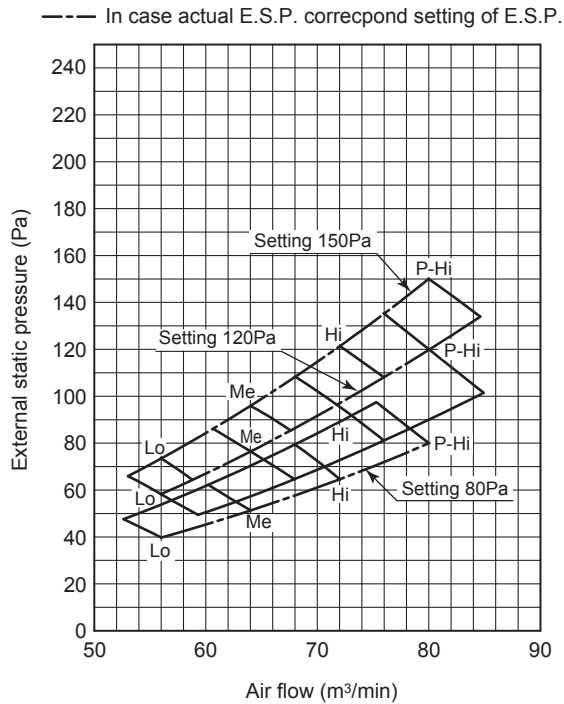
2.5 CHARACTERISTICS OF FAN

See page 88 of 1.5 chapter. (Except FDU200VG, 250VG)

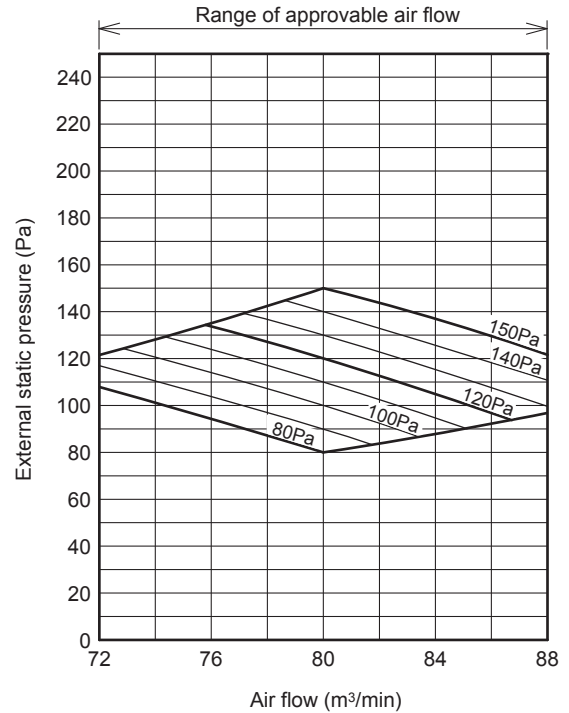
Models FDU200VG, 250VG

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

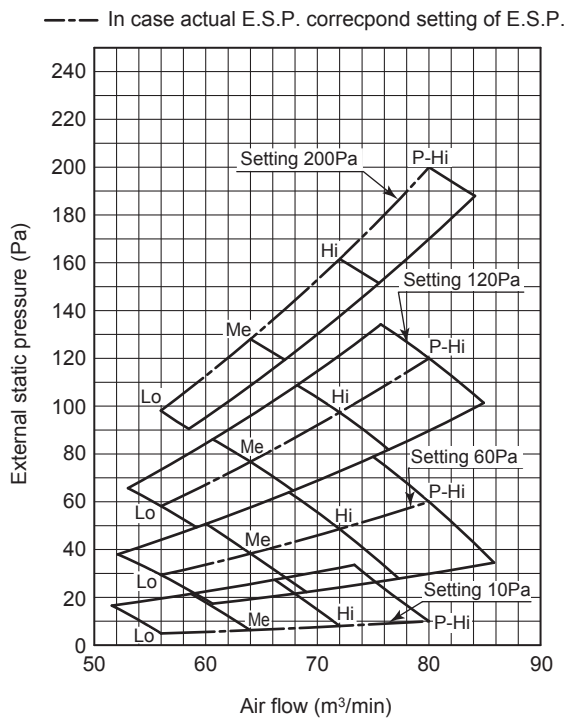


Characteristic FAN (2)

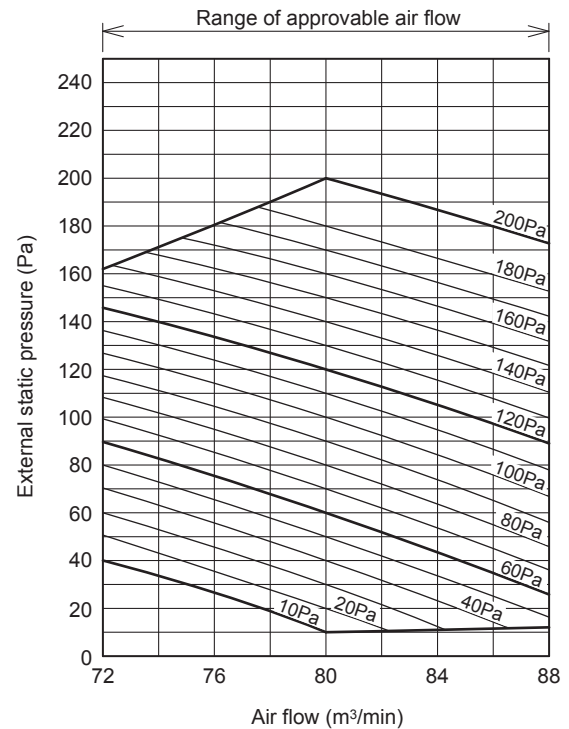


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



Characteristic FAN (2)



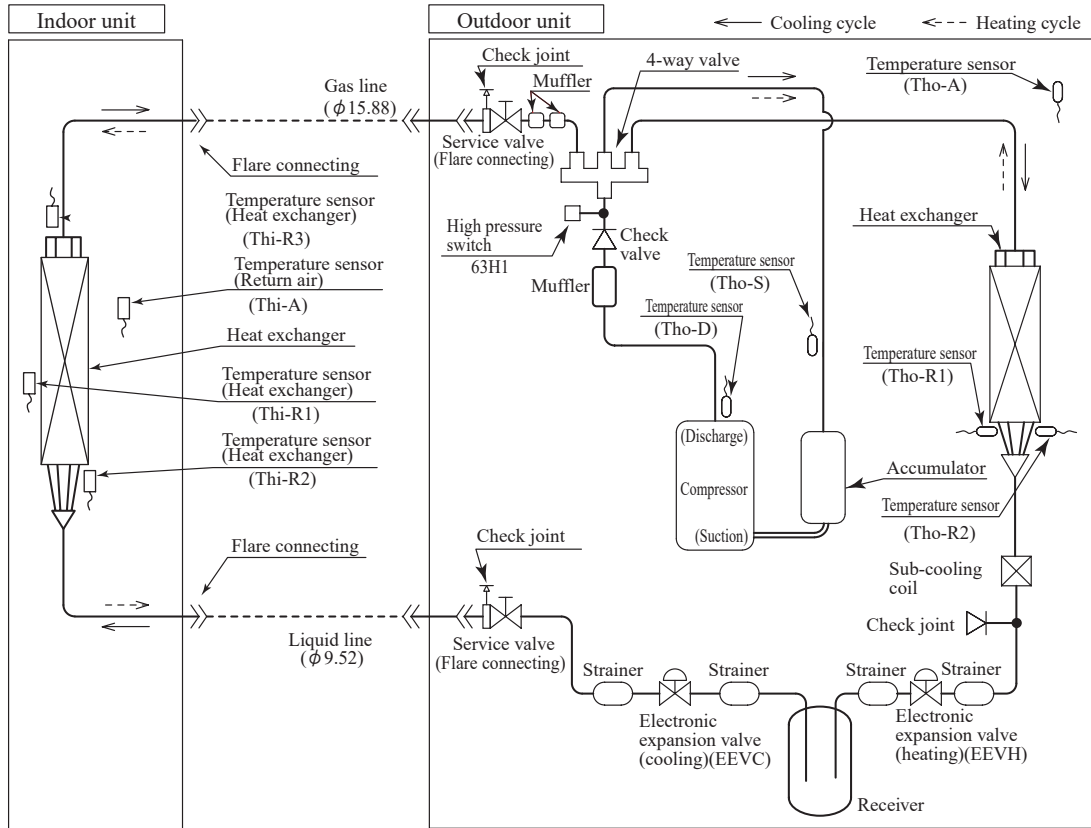
2.6 TEMPERATURE AND VELOCITY DISTRIBUTION

See page 95 of 1.6 chapter.

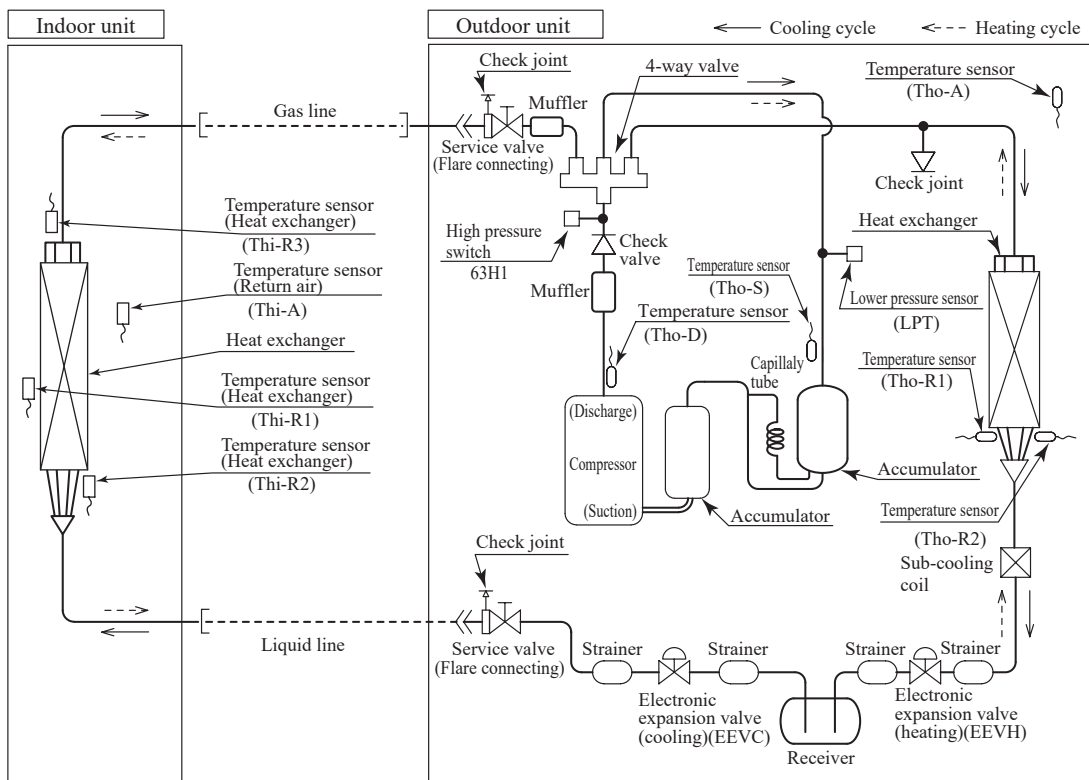
2.7 PIPING SYSTEM

(1) Single type

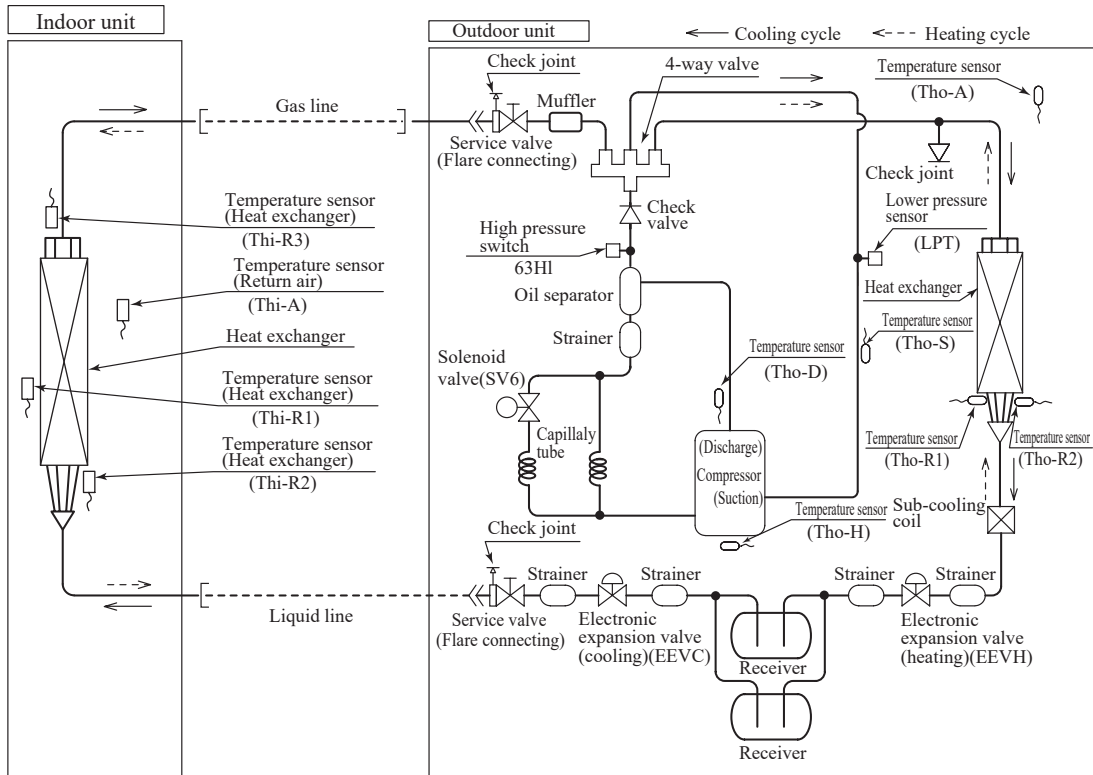
Models 100, 125, 140



Model 200



Model 250

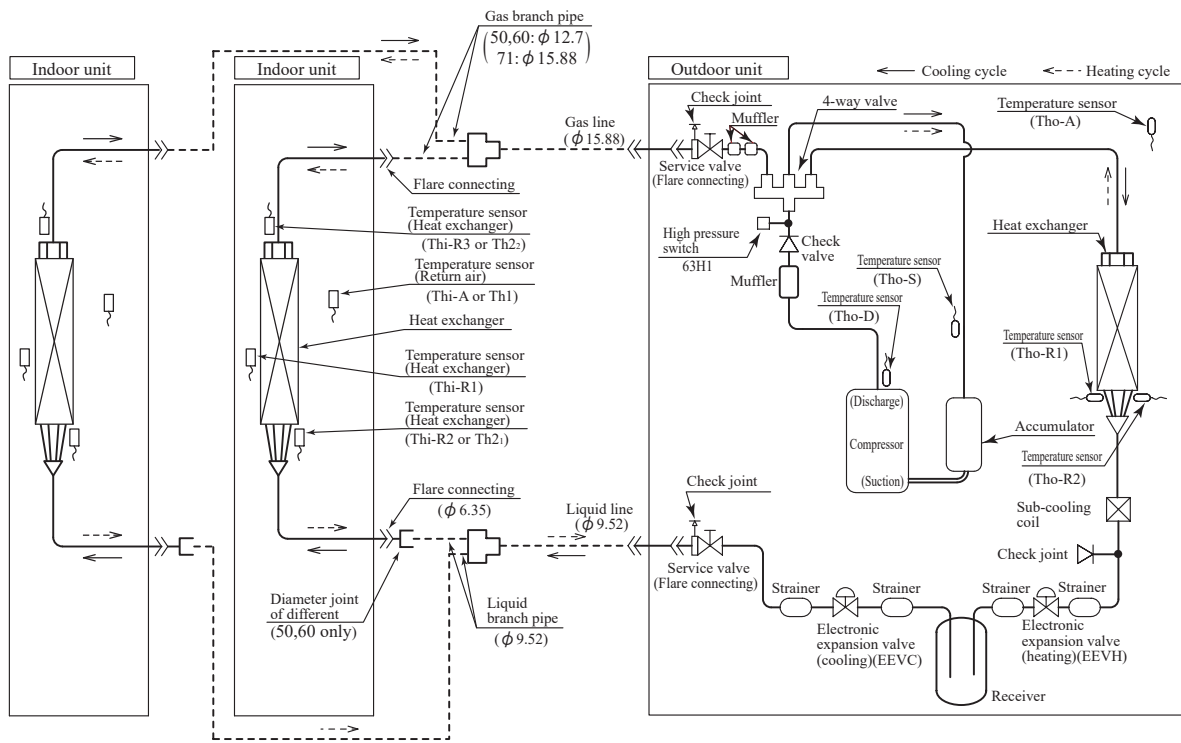


●Refrigerant line (one way) pipe size

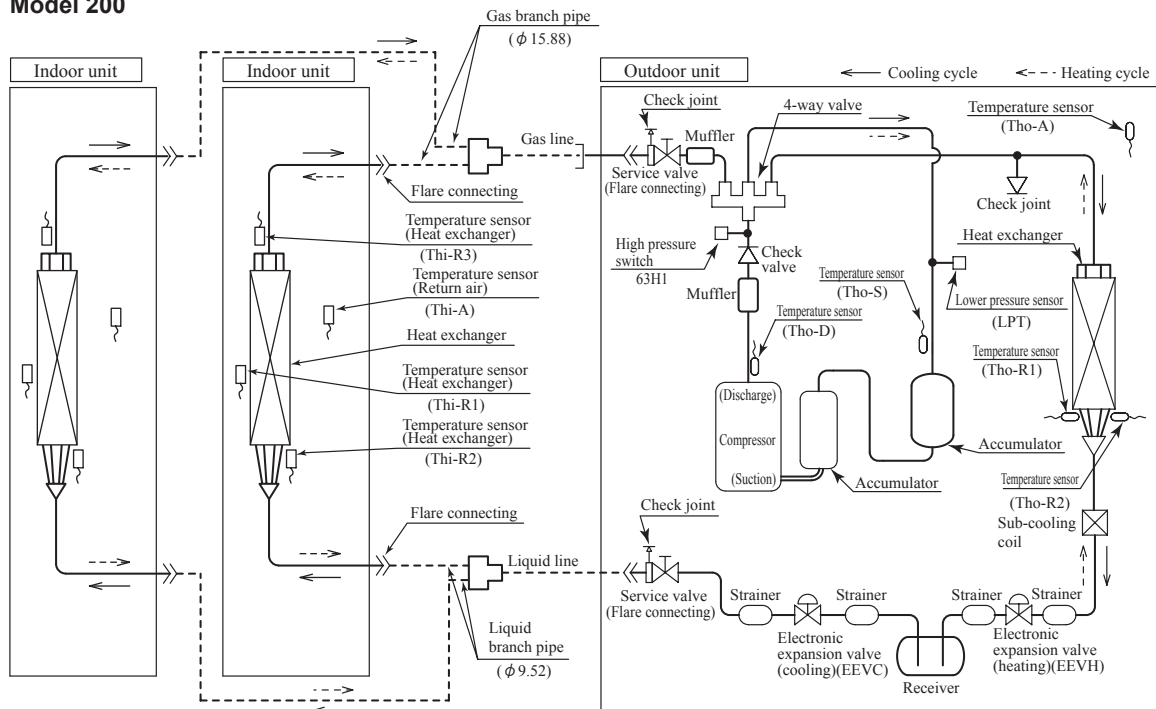
| Model | Gas line | Liquid line |
|-------|--|------------------------------|
| 200 | In case of ϕ 22.22 : 35m | In case of ϕ 9.52 : 40m |
| 250 | In case of ϕ 25.4 or ϕ 28.58 : 70m | In case of ϕ 12.7 : 70m |

(2) Twin type

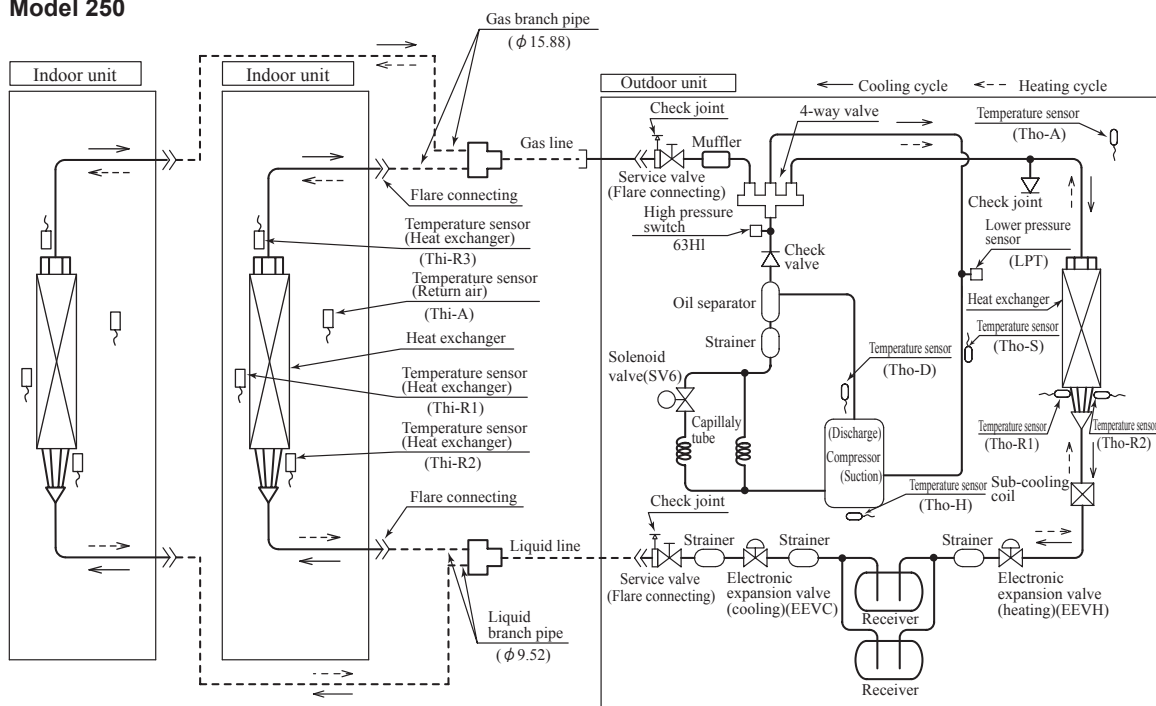
Models 100, 125, 140



Model 200



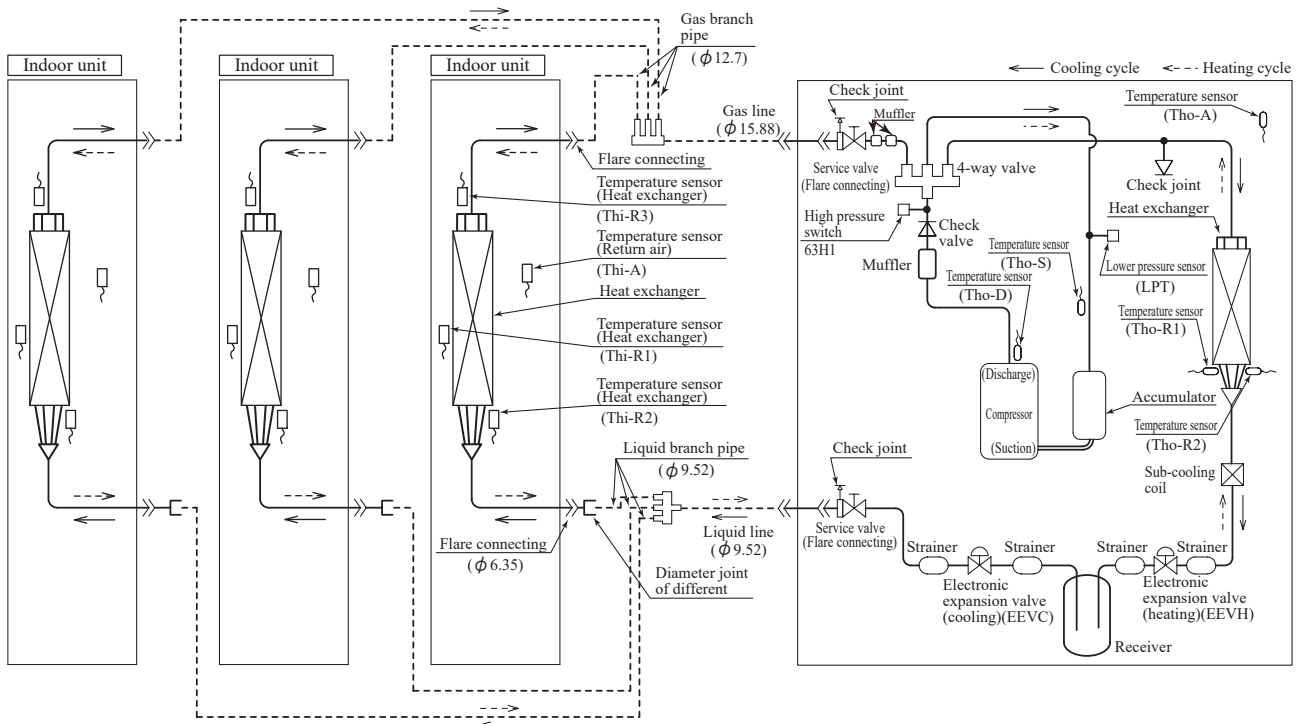
Model 250



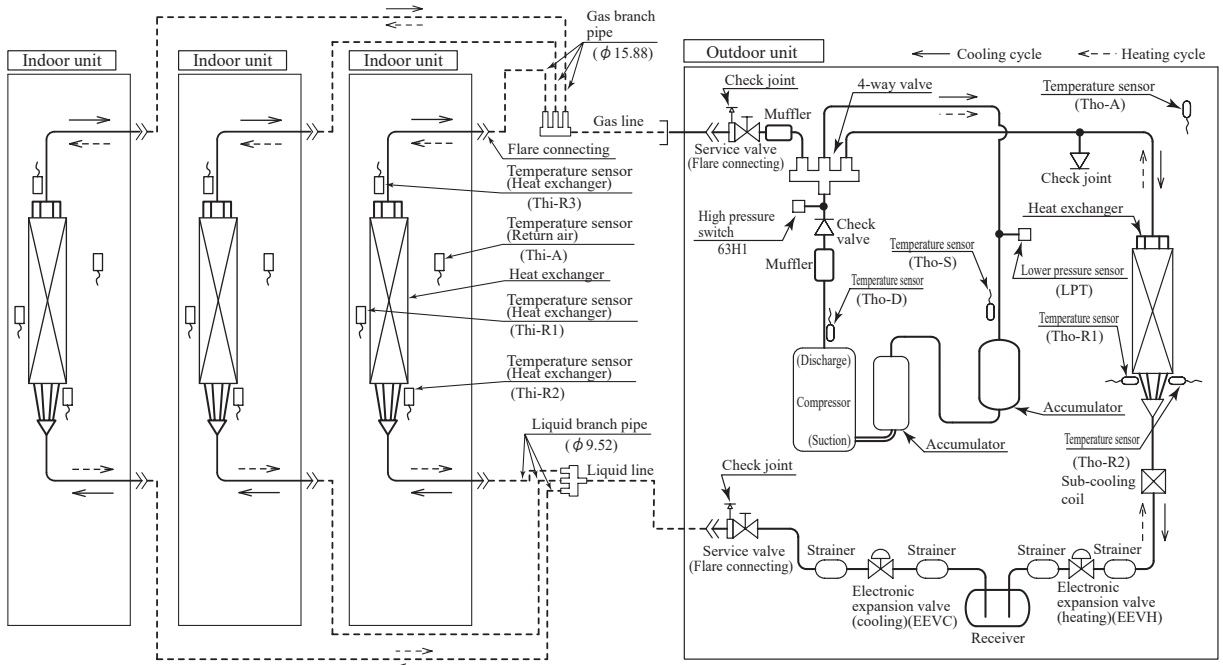
●Refrigerant line (one way) pipe size

| Model | Gas line | Liquid line |
|-------|--|--|
| 200 | In case of ϕ 22.22 : 35m | In case of ϕ 9.52 : 40m In case of ϕ 12.7 : 70m |
| 250 | In case of ϕ 25.4 or ϕ 28.58 : 70m | In case of ϕ 12.7 : 70m |

**(3) Triple type
Model 140**



Model 200

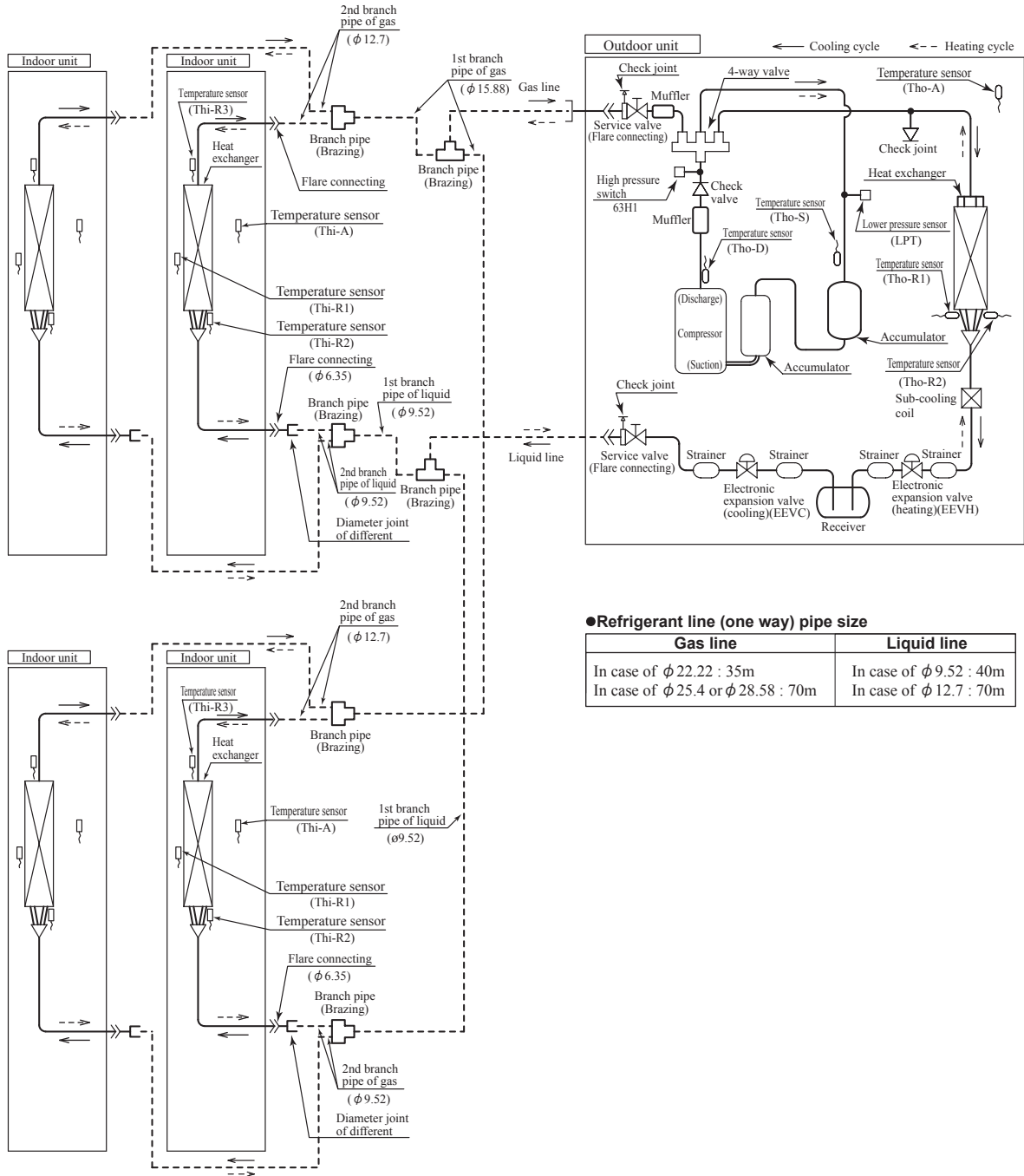


●Refrigerant line (one way) pipe size

| Gas line | Liquid line |
|------------------------------------|-------------------------|
| In case of φ 22.22 : 35m | In case of φ 9.52 : 40m |
| In case of φ 25.4 or φ 28.58 : 70m | In case of φ 12.7 : 70m |

(4) Double twin type

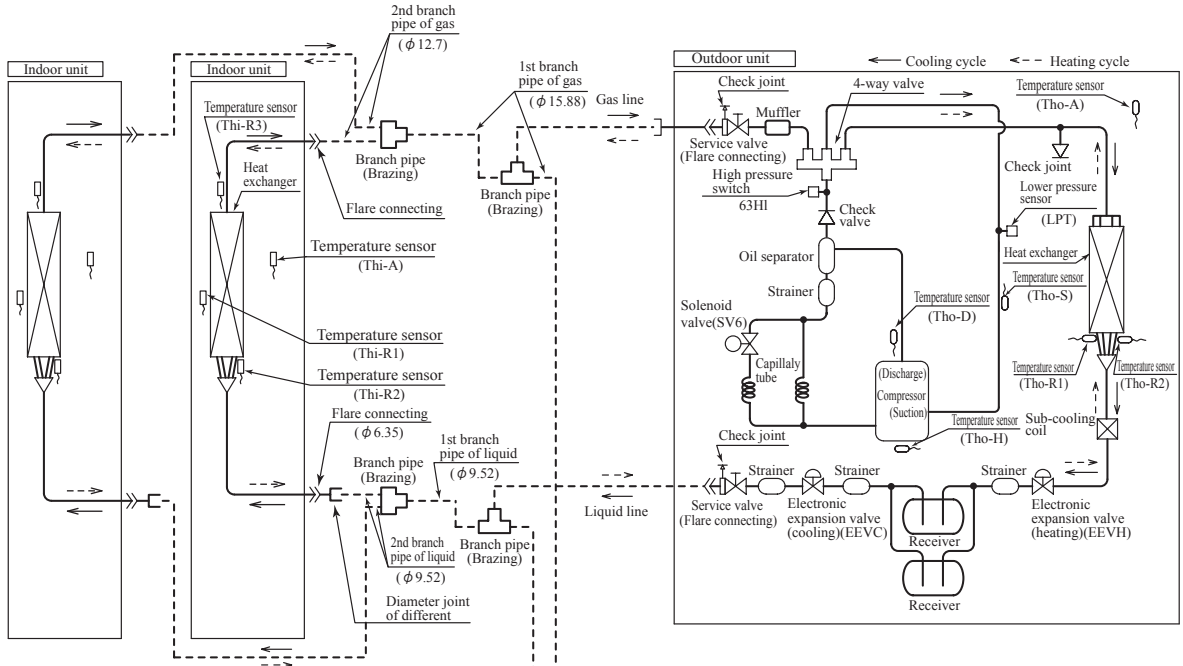
Model 200



●Refrigerant line (one way) pipe size

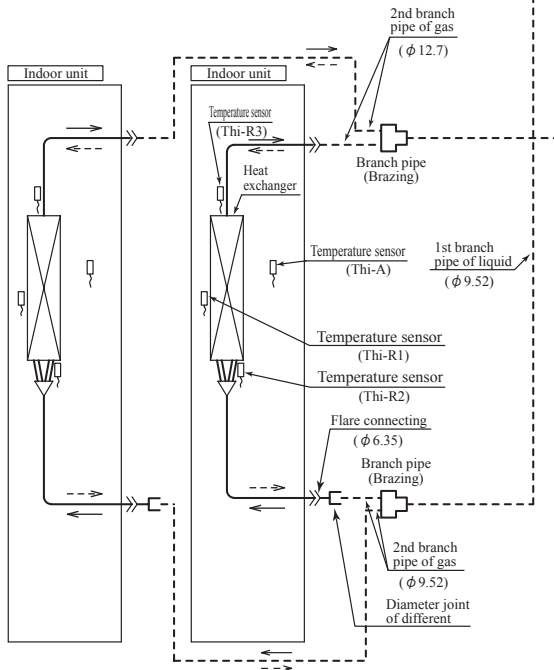
| Gas line | Liquid line |
|--|------------------------------|
| In case of $\phi 22.22$: 35m | In case of $\phi 9.52$: 40m |
| In case of $\phi 25.4$ or $\phi 28.58$: 70m | In case of $\phi 12.7$: 70m |

Model 250



●Refrigerant line (one way) pipe size

| Gas line | Liquid line |
|--|------------------------------|
| In case of $\phi 22.22 : 35m$ | In case of $\phi 12.7 : 70m$ |
| In case of $\phi 25.4$ or $\phi 28.58 : 70m$ | |



Preset point of the protective devices

| Parts name | Mark | Equipped unit | 100, 125, 140 model | 200, 250 model |
|---|-------|---------------|---------------------------|-----------------------------|
| Temperature sensor (for protection overloading in heating) | Thi-R | Indoor unit | OFF 63°C ON 56°C | |
| Temperature sensor (for frost prevention) | Thi-R | | OFF 1.0°C ON 10°C | |
| Temperature sensor (for protection high pressure in cooling.) | Tho-R | Outdoor unit | OFF 65°C ON 51°C | |
| Temperature sensor (for detecting discharge pipe temp.) | Tho-D | Outdoor unit | OFF 115°C ON 85°C | OFF 135°C ON 90°C |
| High pressure switch (for protection) | 63H1 | Outdoor unit | OFF 4.15MPa ON 3.15MPa | |
| Low pressure sensor (for protection) | LPT | Outdoor unit | — | OFF 0.079MPa ON 0.227MPa |

2.8 RANGE OF USAGE & LIMITATIONS

| | | |
|---|--------------------------|--|
| Operating temperature range | | See next page. |
| | | When used below -5°C, install a snow hood (FDC100-250 only). |
| Recommendable area to install | | Considering to get sufficient heating capacity, the area where the averaged lowest ambient air temperature in day time during winter is above 0°C, and it has no accumulation of snow. |
| Installation site | | The limitations of installation space are shown in the page for exterior dimensions. Install the indoor unit at least 2.5m higher than the floor surface. |
| Temperature and humidity conditions surrounding the indoor unit in the ceiling (Note 2) | | Dew point temperature : 28°C (FDE : 23°C) or less, relative humidity : 80% or less |
| Limitations on unit and piping installation | | See pages 364 and 365. |
| Compressor ON-OFF cycling | Cycle time | 7 minutes or more (from OFF to OFF) or (from ON to ON) |
| | Stop time | 3 minutes or more |
| Power source | Voltage range | Rating ±10% |
| | Voltage drop at start-up | Min.85% of rating |
| | Phase-to-phase unbalance | 3% or less |

Note 1. Do not install the unit in places which :

- 1) Flammable gas may leak.
- 2) Carbon fiber, metal particles, powder, etc. are floating.
- 3) Cosmetic or special sprays are used frequently.
- 4) Exposed to oil splashes or steam (e.g. kitchen and machine plant).
- 5) Exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent).
- 6) Exposed to ammonia substance (e.g. organic fertilizer).
- 7) Matters affecting devices, such as sulfuric gas, chlorine gas, acid, alkali, etc. may generate or accumulate.
- 8) Chimney smoke is hanging.
- 9) Sucking the exhaust gas from heat exchanger.
- 10) Adjacent to equipment generating electromagnetic waves or high frequency waves.
- 11) There is light beams that affect the receiving device of indoor unit in case of the wireless specification.
- 12) Snow falls heavily.
- 13) At an elevation of 1000 meters or higher.
- 14) On mobile machine (e.g. vehicle, ship, etc.)
- 15) Splashed with water to indoor unit (e.g. laundry room).
- 16) Indoor units of twin, triple and double-twin specifications separately in a room with partition.


Note 2. If ambient temperature and humidity exceed the above values, add polyurethane foam insulation on the outer plate (10mm or thicker) of indoor unit.


Both gas and liquid pipes need to be covered with 20mm or thicker heat insulation materials at the place where humidity exceeds 70%.

Note 3. When used below -5°C, install a snow hood on site.

Regarding outline of a snow hood, refer to our technical manual.

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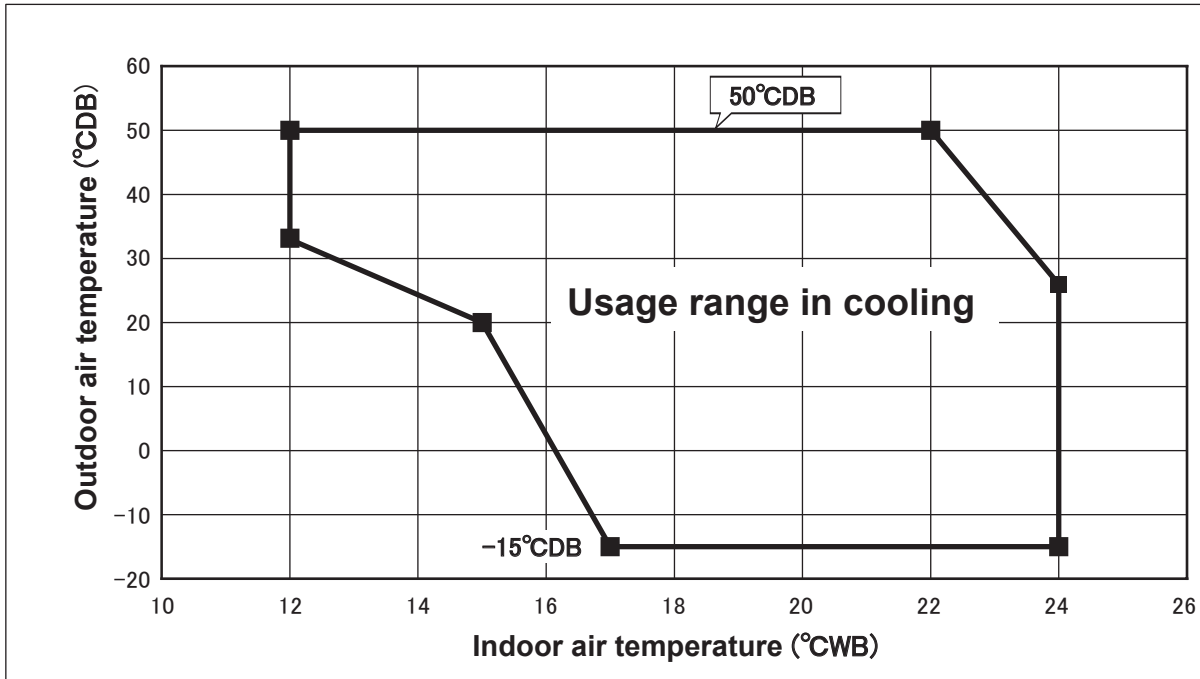
PJG000Z014 

PJG000Z055 

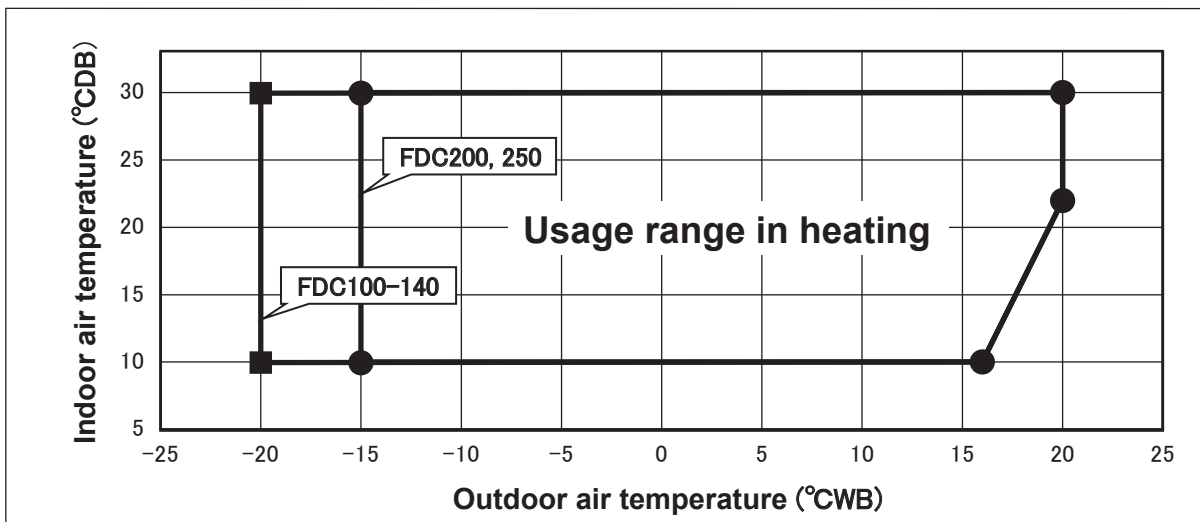
PCA001Z779

Operating temperature range

■ Cooling



■ Heating



Decline in cooling and heating capacity or operation stop may occur when the outdoor unit is installed in places where natural wind can increase or decrease its design air flow rate.

“CAUTION” Cooling operation under low outdoor air temperature conditions

PAC models can be operated in cooling mode at low outdoor air temperature condition within above temperature range. However in case of severely low temperature conditions if the following precaution is not observed, it may not be operated in spite of operable temperature range mentioned above and cooling capacity may not be established under certain conditions.

[Precaution]

In case of severely low temperature condition

- 1) Install the outdoor unit at the place where strong wind cannot blow directly into the outdoor unit.
- 2) If there is no installation place where can prevent strong wind from directly blowing into the outdoor unit, mount the flex flow adapter (prepared as optional part) or like such devices onto the outdoor unit in order to divert the strong wind.

[Reason]

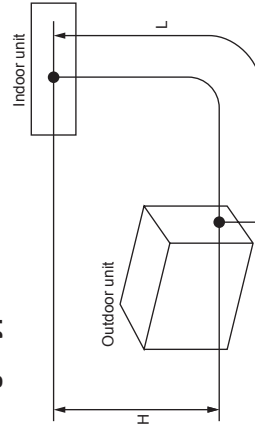
Under the low outdoor air temperature conditions of -5°C or lower, the outdoor fan is controlled at lower or lowest speed by outdoor fan control, but if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop more.

This makes high and low pressures to drop as well. This low pressure drop makes the indoor heat exchanger temperature to drop and will activate anti-frost control at indoor heat exchanger at frequent intervals, that cooling operation may not be established for any given time.

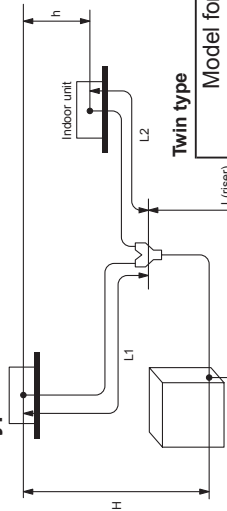
Limitation on unit and piping installation - single,twin,Double twin.

| Descriptions | Model for outdoor units | | Dimensional limitations | Marks appearing in the drawing | |
|---|--|---------------|-------------------------|--|--|
| | Single type | Twin type | | Single type | Twin type |
| One-way pipe length | FDC100 • 125 • 140 | Liquid piping | ≤ 50m | L | Double twin type |
| | FDC200 | | φ9.52 | L+L1+L2 | |
| | FDC250 | | φ12.7 | L+L1 L+L2 | |
| | FDC200 • 250 | Gas piping | ≤ 40m L ≤ 70m | L+La+L1 L+La+L2 L+Lb+L3 L+Lb+L4 | |
| | FDC100 • 125 • 140 | | φ22.22 | | |
| | FDC200 | | φ25.4 or φ28.58 | L | |
| Main pipe length | FDC200 | Liquid piping | ≤ 50m | | |
| | FDC250 | | φ9.52 | | |
| | FDC200 • 250 | Gas piping | ≤ 40m L ≤ 70m | | |
| | FDC100 • 125 • 140 | | φ12.7 | | |
| One-way pipe length after the first branching point | FDC200 • 250 | | ≤ 70m | L1, L2 | |
| | FDC100 • 125 • 140 | | ≤ 35m L ≤ 70m | | |
| Difference of pipe length after the first branching point | | | ≤ 30m | L1, L2 | La+L1, La+L2, Lb+L3, Lb+L4 |
| | | | ≤ 10m | L1-L2 L2-L1 | L1-L2, L2-L1, L3-L4, L4-L3 (L1+La)-(L3+Lb), (L1+La)-(L4+Lb) (L2+La)-(L3+Lb), (L2+La)-(L4+Lb) |
| Total pipe length after the second branching point | | | ≤ 15m | | L1+L2, L3+L4 |
| | | | ≤ 30m | H | H |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher | FDC100 - 250 | ≤ 15m | h | h1, h2, h3, h4, h5, h6 |
| | When the outdoor unit is positioned lower | FDC100 - 250 | ≤ 0.5m | | |

Single type

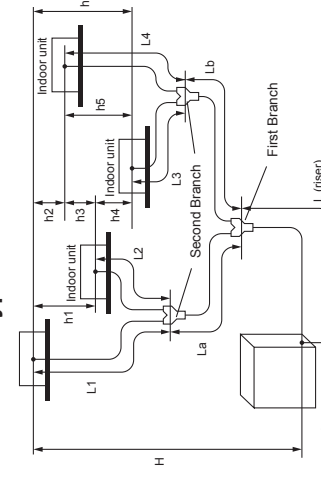


Twin type



| | |
|-------------------------|---------------------------|
| Model for outdoor units | Branch piping set(option) |
| FDC100 • 125 • 140 | DIS-WA1 |
| FDC200 • 250 | DIS-WB1 |

Double twin type



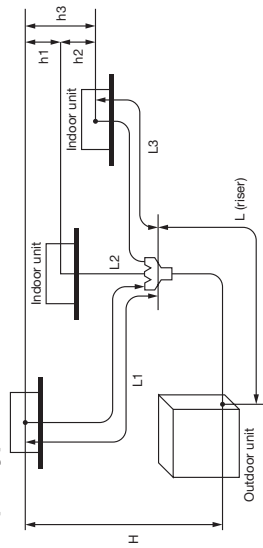
- (1) A riser pipe must be part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
- (2) Reduce refrigerant amount by according to table below when refrigerant piping is shorter than 3m.

| | |
|--------------------------------|---------------------------|
| Model for outdoor units | Refrigerant to be reduced |
| FDC100 • 125 • 140 • 200 • 250 | -1.0kg |

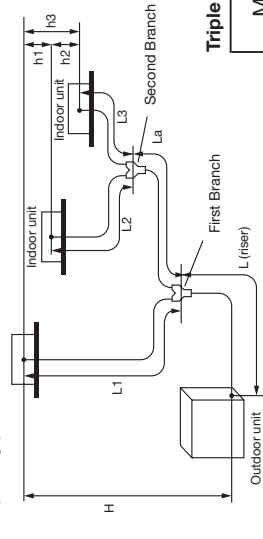
| | |
|-------------------------|---------------------------|
| Model for outdoor units | Branch piping set(option) |
| FDC200 • 250 | DIS-WB1 |
| | DIS-WA1x2 |

| Limitation on unit and piping installation - triple. | | | Marks appearing in the drawing | |
|---|---|---|---|--|
| Descriptions | One-way pipe length difference from the first branching point to the indoor unit Model for outdoor units | Dimensional limitations | < 3m | ≥ 3m |
| One-way pipe length | FDC140 | Liquid piping φ 9.52 φ 12.7 Gas piping φ 25.4 or φ 28.58 φ 22.22 | L+L1+L2+L3 | L+La+L1+L2+L3 ※ 1 |
| | FDC200 | Liquid piping φ 9.52 φ 12.7 Gas piping φ 25.4 or φ 28.58 φ 22.22 | L+L1, L+L2, L+L3 | L+L1 ※ 1 |
| Main pipe length | FDC140 | Liquid piping φ 9.52 φ 12.7 Gas piping φ 25.4 or φ 28.58 φ 22.22 | L | L |
| | FDC200 | Liquid piping φ 9.52 φ 12.7 Gas piping φ 25.4 or φ 28.58 φ 22.22 | L | L |
| Piping length between the first branching point and the second branching point | | | | |
| One-way pipe length between the first branching point and indoor units | | | | |
| One-way pipe length from the first branching point to indoor units through the second branching point | | | | |
| Piping length difference from the first branching point to indoor unit | | | | |
| One-way pipe length difference from the second branching point to indoor unit | | | | |
| Elevation difference between indoor and outdoor units | | | | |
| Elevation difference among indoor units | | | | |
| Triple type (in case of FDC250) | | | | |
| Restrictions | | | | |
| One-way pipe length | Gas piping φ 22.22 φ 25.4 or φ 28.58 | ≤ 50m ≤ 40m ≤ 70m ≤ 35m ≤ 50m ≤ 40m ≤ 70m ≤ 35m | Triple type A L+L1+L2+L3 | Triple type B L+La+L1+L2+L3 ※ 1 |
| Main pipe length | Gas piping φ 22.22 φ 25.4 or φ 28.58 | ≤ 50m ≤ 30m ≤ 27m 3m ≤ ≤ 10m ≤ 10m ≤ 30m ≤ 15m ≤ 0.5m | L | L |
| One-way pipe length between the first branching point from to the second branching point | | | L | L |
| One-way pipe length between the first branching point and indoor units | | | La | La |
| Piping length difference from the first branching point to indoor unit | | | L1, L2, L3 | L1 ※ 1 |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher When the outdoor unit is positioned lower | | L1-L2, L1-L3, L2-L3 | La+L2, La+L3 ※ 1 |
| Elevation difference among indoor units | | | h1, h2, h3 | L1-(La+L2), L1-(La+L3) L2-L3, L3-L2 ※ 1 |
| Triple type (in case of FDC250) | | | | |
| Restrictions | | | | |
| One-way pipe length | Gas piping φ 22.22 φ 25.4 or φ 28.58 | ≤ 50m ≤ 35m ≤ 70m ≤ 35m ≤ 50m ≤ 40m ≤ 70m ≤ 35m | Triple type B L+L1, L+La+L2, L+La+L3 | ≥ 3m |
| Main pipe length | Gas piping φ 22.22 φ 25.4 or φ 28.58 | ≤ 50m ≤ 30m ≤ 27m 3m ≤ ≤ 10m ≤ 10m ≤ 30m ≤ 15m ≤ 0.5m | L | L |
| One-way pipe length between the first branching point from to the second branching point | | | L | L |
| One-way pipe length between the first branching point and indoor units | | | La | La |
| Piping length difference from the first branching point to indoor unit | | | L1, La+L2, La+L3 | L1-(La+L2), L1-(La+L3) L2-L3, L3-L2 ※ 2 |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher When the outdoor unit is positioned lower | | H | H |
| Elevation difference among indoor units | | | h1, h2, h3 | h1, h2, h3 |

Triple type A



Triple type B



Triple type

| Model for outdoor units | Branch piping set(option) | |
|-------------------------|---------------------------|--------------------------|
| | Type A | Type B |
| FDC140 | Branch pipe DIS-TA1 | Second branch DIS-WA1 |
| FDC200 | Branch pipe DIS-TB1 | Second branch DIS-WA1 |

- ※ 1 Install the indoor units so that L+L1 becomes the longest one-way pipe. Keep the pipe length difference between L1 and (La+L2) or (La+L3) within 10m.
- ※ 2 Connect the unit that is the maximum capacity with L1.

- (1) A riser pipe must be part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
- (2) Reduce refrigerant amount by 1.0kg from the factory charge when refrigerant piping is shorter than 3m.

2.9 SELECTION CHART

Correct the cooling and heating capacity in accordance with the operating conditions. The net cooling and heating capacity can be obtained in the following way.

Net capacity = Capacity shown in the capacity tables (2.9.1) × Correction factors shown in the table (2.9.2) (2.9.3) (2.9.4).

Caution: In case that the cooling operation during low outdoor air temperature below -5°C is expected, install the outdoor unit where it is not influenced by natural wind. Otherwise protection control by low pressure will be activated much more frequently and it will cause insufficient capacity or breakdown of the compressor in worst case.

2.9.1 Capacity tables

(1) Ceiling cassette-4 way compact type (FDTC)

(a) Twin type

Model **FDTC100VNAPVH** Indoor unit **FDTC50VH (2 units)** Outdoor unit **FDC100VNA**

Cooling mode (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.72 | 8.59 | 7.24 | 8.82 | 7.19 | 9.07 | 7.14 | 9.56 | 7.53 | 10.06 | 7.40 |
| 13 | | | | | 8.50 | 6.89 | 9.00 | 7.41 | 9.26 | 7.36 | 9.52 | 7.31 | 10.06 | 7.70 | 10.60 | 7.57 |
| 15 | | | | | 8.88 | 7.05 | 9.42 | 7.58 | 9.69 | 7.53 | 9.98 | 7.48 | 10.56 | 7.87 | 11.14 | 7.74 |
| 17 | | | | | 9.26 | 7.22 | 9.84 | 7.75 | 10.12 | 7.70 | 10.43 | 7.65 | 11.05 | 8.04 | 11.67 | 7.91 |
| 19 | | | | | 9.46 | 7.31 | 10.05 | 7.84 | 10.34 | 7.79 | 10.65 | 7.74 | 11.29 | 8.13 | 11.92 | 7.99 |
| 21 | | | | | 9.65 | 7.40 | 10.25 | 7.93 | 10.56 | 7.88 | 10.88 | 7.83 | 11.52 | 8.21 | 12.16 | 8.07 |
| 23 | | | | | 9.65 | 7.40 | 10.28 | 7.94 | 10.59 | 7.89 | 10.91 | 7.84 | 11.56 | 8.23 | 12.21 | 8.09 |
| 25 | | | 8.93 | 7.49 | 9.64 | 7.39 | 10.31 | 7.95 | 10.62 | 7.90 | 10.95 | 7.85 | 11.61 | 8.25 | 12.27 | 8.11 |
| 27 | | | 8.86 | 7.46 | 9.64 | 7.39 | 10.34 | 7.96 | 10.65 | 7.91 | 10.96 | 7.86 | 11.57 | 8.23 | | |
| 29 | | | 8.80 | 7.43 | 9.50 | 7.33 | 10.17 | 7.89 | 10.49 | 7.85 | 10.81 | 7.80 | 11.45 | 8.19 | | |
| 31 | | | 8.73 | 7.39 | 9.35 | 7.26 | 9.99 | 7.82 | 10.32 | 7.78 | 10.66 | 7.74 | 11.32 | 8.14 | | |
| 33 | 8.22 | 6.93 | 8.58 | 7.32 | 9.21 | 7.20 | 9.82 | 7.75 | 10.16 | 7.72 | 10.51 | 7.68 | 11.19 | 8.09 | | |
| 35 | 8.05 | 6.84 | 8.44 | 7.26 | 9.06 | 7.13 | 9.64 | 7.67 | 10.00 | 7.65 | 10.36 | 7.63 | 11.07 | 8.05 | | |
| 37 | 7.92 | 6.78 | 8.30 | 7.19 | 8.91 | 7.07 | 9.46 | 7.60 | 9.79 | 7.57 | 10.13 | 7.54 | 10.80 | 7.96 | | |
| 39 | 7.78 | 6.70 | 8.16 | 7.12 | 8.75 | 6.99 | 9.28 | 7.52 | 9.59 | 7.49 | 9.90 | 7.45 | 10.53 | 7.86 | | |
| 41 | 7.64 | 6.63 | 8.02 | 7.06 | 8.60 | 6.93 | 9.09 | 7.45 | 9.38 | 7.41 | 9.68 | 7.37 | 10.26 | 7.77 | | |
| 43 | 7.50 | 6.56 | 7.88 | 6.99 | 8.45 | 6.86 | 8.91 | 7.37 | 9.18 | 7.33 | 9.45 | 7.28 | 9.99 | 7.67 | | |
| 46 | 7.33 | 6.48 | 7.67 | 6.90 | 8.22 | 6.76 | 8.58 | 7.24 | 8.83 | 7.19 | 9.07 | 7.14 | 9.57 | 7.53 | | |
| 50 | 7.09 | 6.36 | 7.39 | 6.77 | 7.91 | 6.63 | 8.19 | 7.08 | 8.35 | 7.01 | 8.51 | 6.93 | 8.83 | 7.28 | | |

(kW) Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PJF000Z512

Model **FDTC100VSAPVH** Indoor unit **FDTC50VH (2 units)** Outdoor unit **FDC100VSA**

Cooling mode (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.72 | 8.59 | 7.24 | 8.82 | 7.19 | 9.07 | 7.14 | 9.56 | 7.53 | 10.06 | 7.40 |
| 13 | | | | | 8.50 | 6.89 | 9.00 | 7.41 | 9.26 | 7.36 | 9.52 | 7.31 | 10.06 | 7.70 | 10.60 | 7.57 |
| 15 | | | | | 8.88 | 7.05 | 9.42 | 7.58 | 9.69 | 7.53 | 9.98 | 7.48 | 10.56 | 7.87 | 11.14 | 7.74 |
| 17 | | | | | 9.26 | 7.22 | 9.84 | 7.75 | 10.12 | 7.70 | 10.43 | 7.65 | 11.05 | 8.04 | 11.67 | 7.91 |
| 19 | | | | | 9.46 | 7.31 | 10.05 | 7.84 | 10.34 | 7.79 | 10.65 | 7.74 | 11.29 | 8.13 | 11.92 | 7.99 |
| 21 | | | | | 9.65 | 7.40 | 10.25 | 7.93 | 10.56 | 7.88 | 10.88 | 7.83 | 11.52 | 8.21 | 12.16 | 8.07 |
| 23 | | | | | 9.65 | 7.40 | 10.28 | 7.94 | 10.59 | 7.89 | 10.91 | 7.84 | 11.56 | 8.23 | 12.21 | 8.09 |
| 25 | | | 8.93 | 7.49 | 9.64 | 7.39 | 10.31 | 7.95 | 10.62 | 7.90 | 10.95 | 7.85 | 11.61 | 8.25 | 12.27 | 8.11 |
| 27 | | | 8.86 | 7.46 | 9.64 | 7.39 | 10.34 | 7.96 | 10.65 | 7.91 | 10.96 | 7.86 | 11.57 | 8.23 | | |
| 29 | | | 8.80 | 7.43 | 9.50 | 7.33 | 10.17 | 7.89 | 10.49 | 7.85 | 10.81 | 7.80 | 11.45 | 8.19 | | |
| 31 | | | 8.73 | 7.39 | 9.35 | 7.26 | 9.99 | 7.82 | 10.32 | 7.78 | 10.66 | 7.74 | 11.32 | 8.14 | | |
| 33 | 8.22 | 6.93 | 8.58 | 7.32 | 9.21 | 7.20 | 9.82 | 7.75 | 10.16 | 7.72 | 10.51 | 7.68 | 11.19 | 8.09 | | |
| 35 | 8.05 | 6.84 | 8.44 | 7.26 | 9.06 | 7.13 | 9.64 | 7.67 | 10.00 | 7.65 | 10.36 | 7.63 | 11.07 | 8.05 | | |
| 37 | 7.92 | 6.78 | 8.30 | 7.19 | 8.91 | 7.07 | 9.46 | 7.60 | 9.79 | 7.57 | 10.13 | 7.54 | 10.80 | 7.96 | | |
| 39 | 7.78 | 6.70 | 8.16 | 7.12 | 8.75 | 6.99 | 9.28 | 7.52 | 9.59 | 7.49 | 9.90 | 7.45 | 10.53 | 7.86 | | |
| 41 | 7.64 | 6.63 | 8.02 | 7.06 | 8.60 | 6.93 | 9.09 | 7.45 | 9.38 | 7.41 | 9.68 | 7.37 | 10.26 | 7.77 | | |
| 43 | 7.50 | 6.56 | 7.88 | 6.99 | 8.45 | 6.86 | 8.91 | 7.37 | 9.18 | 7.33 | 9.45 | 7.28 | 9.99 | 7.67 | | |
| 46 | 7.33 | 6.48 | 7.67 | 6.90 | 8.22 | 6.76 | 8.58 | 7.24 | 8.83 | 7.19 | 9.07 | 7.14 | 9.57 | 7.53 | | |
| 50 | 7.09 | 6.36 | 7.39 | 6.77 | 7.91 | 6.63 | 8.19 | 7.08 | 8.35 | 7.01 | 8.51 | 6.93 | 8.83 | 7.28 | | |

(kW) Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PJF000Z512

- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

Model **FDTC125VNAPVH** Indoor unit **FDTG60VH (2 units)** Outdoor unit **FDC125VNA**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | |
|-------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|---------|-------|--|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | 10.15 | 8.40 | 10.74 | 9.06 | 11.03 | 8.99 | 11.34 | 8.93 | 11.96 | 9.42 | 12.57 | 9.24 | | |
| 13 | | | | 10.63 | 8.61 | 11.26 | 9.27 | 11.57 | 9.20 | 11.91 | 9.14 | 12.58 | 9.63 | 13.25 | 9.46 | | |
| 15 | | | | 11.10 | 8.82 | 11.78 | 9.48 | 12.11 | 9.41 | 12.47 | 9.35 | 13.20 | 9.84 | 13.92 | 9.67 | | |
| 17 | | | | 11.58 | 9.03 | 12.29 | 9.68 | 12.65 | 9.63 | 13.04 | 9.57 | 13.82 | 10.06 | 14.59 | 9.89 | | |
| 19 | | | | 11.82 | 9.13 | 12.56 | 9.80 | 12.92 | 9.73 | 13.32 | 9.68 | 14.11 | 10.16 | 14.90 | 9.99 | | |
| 21 | | | | 12.06 | 9.24 | 12.82 | 9.91 | 13.19 | 9.84 | 13.60 | 9.78 | 14.40 | 10.27 | 15.20 | 10.09 | | |
| 23 | | | | 12.06 | 9.24 | 12.85 | 9.92 | 13.23 | 9.86 | 13.64 | 9.80 | 14.45 | 10.28 | 15.27 | 10.12 | | |
| 25 | | | 11.16 | 9.36 | 12.06 | 9.25 | 12.89 | 9.94 | 13.27 | 9.87 | 13.68 | 9.81 | 14.51 | 10.30 | 15.34 | 10.14 | |
| 27 | | | 11.08 | 9.32 | 12.05 | 9.24 | 12.92 | 9.95 | 13.31 | 9.89 | 13.69 | 9.82 | 14.47 | 10.29 | | | |
| 29 | | | 11.00 | 9.28 | 11.87 | 9.16 | 12.71 | 9.86 | 13.11 | 9.81 | 13.51 | 9.75 | 14.31 | 10.23 | | | |
| 31 | | | 10.92 | 9.25 | 11.69 | 9.08 | 12.49 | 9.77 | 12.90 | 9.73 | 13.32 | 9.67 | 14.15 | 10.18 | | | |
| 33 | 10.27 | 8.66 | 10.72 | 9.15 | 11.51 | 9.00 | 12.27 | 9.68 | 12.70 | 9.65 | 13.13 | 9.60 | 13.99 | 10.12 | | | |
| 35 | 10.07 | 8.56 | 10.55 | 9.07 | 11.33 | 8.92 | 12.06 | 9.60 | 12.50 | 9.57 | 12.94 | 9.53 | 13.83 | 10.06 | | | |
| 37 | 9.90 | 8.47 | 10.38 | 8.99 | 11.13 | 8.83 | 11.83 | 9.50 | 12.24 | 9.46 | 12.66 | 9.42 | 13.50 | 9.95 | | | |
| 39 | 9.72 | 8.38 | 10.20 | 8.91 | 10.94 | 8.75 | 11.60 | 9.40 | 11.99 | 9.36 | 12.38 | 9.32 | 13.16 | 9.83 | | | |
| 41 | 9.55 | 8.29 | 10.02 | 8.82 | 10.75 | 8.66 | 11.37 | 9.31 | 11.73 | 9.26 | 12.09 | 9.20 | 12.82 | 9.71 | | | |
| 43 | 9.38 | 8.21 | 9.85 | 8.74 | 10.56 | 8.58 | 11.14 | 9.22 | 11.47 | 9.16 | 11.81 | 9.10 | 12.48 | 9.59 | | | |
| 46 | 9.21 | 8.14 | 9.53 | 8.57 | 10.28 | 8.46 | 10.88 | 9.18 | 11.12 | 9.06 | 11.28 | 8.88 | 11.96 | 9.41 | | | |
| 50 | 7.43 | 6.67 | 7.63 | 6.99 | 8.25 | 6.92 | 8.67 | 7.50 | 8.78 | 7.37 | 8.80 | 7.17 | 9.05 | 7.46 | | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

PJF000Z512

Model **FDTC125VSAPVH** Indoor unit **FDTG60VH (2 units)** Outdoor unit **FDC125VSA**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | |
|-------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|---------|-------|--|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | 10.15 | 8.40 | 10.74 | 9.06 | 11.03 | 8.99 | 11.34 | 8.93 | 11.96 | 9.42 | 12.57 | 9.24 | | |
| 13 | | | | 10.63 | 8.61 | 11.26 | 9.27 | 11.57 | 9.20 | 11.91 | 9.14 | 12.58 | 9.63 | 13.25 | 9.46 | | |
| 15 | | | | 11.10 | 8.82 | 11.78 | 9.48 | 12.11 | 9.41 | 12.47 | 9.35 | 13.20 | 9.84 | 13.92 | 9.67 | | |
| 17 | | | | 11.58 | 9.03 | 12.29 | 9.68 | 12.65 | 9.63 | 13.04 | 9.57 | 13.82 | 10.06 | 14.59 | 9.89 | | |
| 19 | | | | 11.82 | 9.13 | 12.56 | 9.80 | 12.92 | 9.73 | 13.32 | 9.68 | 14.11 | 10.16 | 14.90 | 9.99 | | |
| 21 | | | | 12.06 | 9.24 | 12.82 | 9.91 | 13.19 | 9.84 | 13.60 | 9.78 | 14.40 | 10.27 | 15.20 | 10.09 | | |
| 23 | | | | 12.06 | 9.24 | 12.85 | 9.92 | 13.23 | 9.86 | 13.64 | 9.80 | 14.45 | 10.28 | 15.27 | 10.12 | | |
| 25 | | | 11.16 | 9.36 | 12.06 | 9.25 | 12.89 | 9.94 | 13.27 | 9.87 | 13.68 | 9.81 | 14.51 | 10.30 | 15.34 | 10.14 | |
| 27 | | | 11.08 | 9.32 | 12.05 | 9.24 | 12.92 | 9.95 | 13.31 | 9.89 | 13.69 | 9.82 | 14.47 | 10.29 | | | |
| 29 | | | 11.00 | 9.28 | 11.87 | 9.16 | 12.71 | 9.86 | 13.11 | 9.81 | 13.51 | 9.75 | 14.31 | 10.23 | | | |
| 31 | | | 10.92 | 9.25 | 11.69 | 9.08 | 12.49 | 9.77 | 12.90 | 9.73 | 13.32 | 9.67 | 14.15 | 10.18 | | | |
| 33 | 10.27 | 8.66 | 10.72 | 9.15 | 11.51 | 9.00 | 12.27 | 9.68 | 12.70 | 9.65 | 13.13 | 9.60 | 13.99 | 10.12 | | | |
| 35 | 10.07 | 8.56 | 10.55 | 9.07 | 11.33 | 8.92 | 12.06 | 9.60 | 12.50 | 9.57 | 12.94 | 9.53 | 13.83 | 10.06 | | | |
| 37 | 9.90 | 8.47 | 10.38 | 8.99 | 11.13 | 8.83 | 11.83 | 9.50 | 12.24 | 9.46 | 12.66 | 9.42 | 13.50 | 9.95 | | | |
| 39 | 9.72 | 8.38 | 10.20 | 8.91 | 10.94 | 8.75 | 11.60 | 9.40 | 11.99 | 9.36 | 12.38 | 9.32 | 13.16 | 9.83 | | | |
| 41 | 9.55 | 8.29 | 10.02 | 8.82 | 10.75 | 8.66 | 11.37 | 9.31 | 11.73 | 9.26 | 12.09 | 9.20 | 12.82 | 9.71 | | | |
| 43 | 9.38 | 8.21 | 9.85 | 8.74 | 10.56 | 8.58 | 11.14 | 9.22 | 11.47 | 9.16 | 11.81 | 9.10 | 12.48 | 9.59 | | | |
| 46 | 9.21 | 8.14 | 9.53 | 8.57 | 10.28 | 8.46 | 10.88 | 9.18 | 11.12 | 9.06 | 11.28 | 8.88 | 11.96 | 9.41 | | | |
| 50 | 7.43 | 6.67 | 7.63 | 6.99 | 8.25 | 6.92 | 8.67 | 7.50 | 8.78 | 7.37 | 8.80 | 7.17 | 9.05 | 7.46 | | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

PJF000Z512

- Notes (1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
- (2) In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
 Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference of Zero.
- (3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

(b) Triple type

Model **FDTTC140VNATVH** Indoor unit **FDTTC50VH (3 units)** Outdoor unit **FDC140VNA**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | | | 11.05 | 9.14 | 11.68 | 9.85 | 12.00 | 9.78 | 12.34 | 9.71 | 13.01 | 10.24 | 13.68 | 10.06 |
| 13 | | | | | | | | 11.56 | 9.36 | 12.25 | 10.08 | 12.59 | 10.01 | 12.95 | 9.94 | 13.69 | 10.47 | 14.42 | 10.29 |
| 15 | | | | | | | | 12.07 | 9.59 | 12.81 | 10.31 | 13.18 | 10.24 | 13.57 | 10.17 | 14.36 | 10.70 | 15.14 | 10.52 |
| 17 | | | | | | | | 12.59 | 9.82 | 13.38 | 10.54 | 13.77 | 10.47 | 14.19 | 10.41 | 15.04 | 10.95 | 15.87 | 10.76 |
| 19 | | | | | | | | 12.86 | 9.94 | 13.66 | 10.66 | 14.07 | 10.60 | 14.49 | 10.53 | 15.35 | 11.05 | 16.20 | 10.87 |
| 21 | | | | | | | | 13.12 | 10.06 | 13.95 | 10.79 | 14.36 | 10.71 | 14.79 | 10.64 | 15.66 | 11.16 | 16.53 | 10.98 |
| 23 | | | | | | | | 13.12 | 10.06 | 13.99 | 10.80 | 14.40 | 10.73 | 14.84 | 10.67 | 15.73 | 11.19 | 16.61 | 11.01 |
| 25 | | | | 12.14 | 10.19 | 13.11 | 10.06 | 14.02 | 10.81 | 14.44 | 10.74 | 14.89 | 10.68 | 15.79 | 11.21 | 16.69 | 11.21 | 16.69 | 11.03 |
| 27 | | | | 12.06 | 10.15 | 13.11 | 10.06 | 14.06 | 10.83 | 14.48 | 10.76 | 14.90 | 10.69 | 15.74 | 11.20 | | | | |
| 29 | | | | 11.97 | 10.10 | 12.91 | 9.96 | 13.82 | 10.73 | 14.26 | 10.67 | 14.70 | 10.61 | 15.56 | 11.13 | | | | |
| 31 | | | | 11.88 | 10.06 | 12.72 | 9.88 | 13.59 | 10.63 | 14.04 | 10.58 | 14.49 | 10.53 | 15.40 | 11.07 | | | | |
| 33 | 11.18 | 9.42 | 11.67 | 9.96 | 12.52 | 9.79 | 13.36 | 10.54 | 13.82 | 10.50 | 14.29 | 10.45 | 15.22 | 11.01 | | | | | |
| 35 | 10.96 | 9.31 | 11.48 | 9.87 | 12.32 | 9.70 | 13.11 | 10.44 | 13.60 | 10.41 | 14.09 | 10.37 | 15.05 | 10.95 | | | | | |
| 37 | 10.76 | 9.21 | 11.29 | 9.78 | 12.11 | 9.61 | 12.87 | 10.34 | 13.32 | 10.30 | 13.77 | 10.25 | 14.69 | 10.82 | | | | | |
| 39 | 10.58 | 9.12 | 11.10 | 9.69 | 11.91 | 9.52 | 12.62 | 10.23 | 13.05 | 10.19 | 13.46 | 10.13 | 14.32 | 10.69 | | | | | |
| 41 | 10.39 | 9.03 | 10.91 | 9.60 | 11.70 | 9.42 | 12.37 | 10.13 | 12.76 | 10.08 | 13.16 | 10.02 | 13.95 | 10.56 | | | | | |
| 43 | 10.21 | 8.94 | 10.71 | 9.51 | 11.49 | 9.33 | 12.11 | 10.02 | 12.48 | 9.97 | 12.85 | 9.90 | 13.58 | 10.43 | | | | | |
| 46 | 10.03 | 8.86 | 10.47 | 9.41 | 11.13 | 9.16 | 11.73 | 9.89 | 12.10 | 9.86 | 12.27 | 9.66 | 13.01 | 10.24 | | | | | |
| 50 | 7.61 | 6.82 | 7.88 | 7.21 | 8.35 | 7.00 | 8.75 | 7.57 | 8.97 | 7.53 | 8.98 | 7.31 | 9.33 | 7.69 | | | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |

PJF000Z512

Model **FDTTC140VSATVH** Indoor unit **FDTTC50VH (3 units)** Outdoor unit **FDC140VSA**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | | | 11.05 | 9.14 | 11.68 | 9.85 | 12.00 | 9.78 | 12.34 | 9.71 | 13.01 | 10.24 | 13.68 | 10.06 |
| 13 | | | | | | | | 11.56 | 9.36 | 12.25 | 10.08 | 12.59 | 10.01 | 12.95 | 9.94 | 13.69 | 10.47 | 14.42 | 10.29 |
| 15 | | | | | | | | 12.07 | 9.59 | 12.81 | 10.31 | 13.18 | 10.24 | 13.57 | 10.17 | 14.36 | 10.70 | 15.14 | 10.52 |
| 17 | | | | | | | | 12.59 | 9.82 | 13.38 | 10.54 | 13.77 | 10.47 | 14.19 | 10.41 | 15.04 | 10.95 | 15.87 | 10.76 |
| 19 | | | | | | | | 12.86 | 9.94 | 13.66 | 10.66 | 14.07 | 10.60 | 14.49 | 10.53 | 15.35 | 11.05 | 16.20 | 10.87 |
| 21 | | | | | | | | 13.12 | 10.06 | 13.95 | 10.79 | 14.36 | 10.71 | 14.79 | 10.64 | 15.66 | 11.16 | 16.53 | 10.98 |
| 23 | | | | | | | | 13.12 | 10.06 | 13.99 | 10.80 | 14.40 | 10.73 | 14.84 | 10.67 | 15.73 | 11.19 | 16.61 | 11.01 |
| 25 | | | | 12.14 | 10.19 | 13.11 | 10.06 | 14.02 | 10.81 | 14.44 | 10.74 | 14.89 | 10.68 | 15.79 | 11.21 | 16.69 | 11.21 | 16.69 | 11.03 |
| 27 | | | | 12.06 | 10.15 | 13.11 | 10.06 | 14.06 | 10.83 | 14.48 | 10.76 | 14.90 | 10.69 | 15.74 | 11.20 | | | | |
| 29 | | | | 11.97 | 10.10 | 12.91 | 9.96 | 13.82 | 10.73 | 14.26 | 10.67 | 14.70 | 10.61 | 15.56 | 11.13 | | | | |
| 31 | | | | 11.88 | 10.06 | 12.72 | 9.88 | 13.59 | 10.63 | 14.04 | 10.58 | 14.49 | 10.53 | 15.40 | 11.07 | | | | |
| 33 | 11.18 | 9.42 | 11.67 | 9.96 | 12.52 | 9.79 | 13.36 | 10.54 | 13.82 | 10.50 | 14.29 | 10.45 | 15.22 | 11.01 | | | | | |
| 35 | 10.96 | 9.31 | 11.48 | 9.87 | 12.32 | 9.70 | 13.11 | 10.44 | 13.60 | 10.41 | 14.09 | 10.37 | 15.05 | 10.95 | | | | | |
| 37 | 10.76 | 9.21 | 11.29 | 9.78 | 12.11 | 9.61 | 12.87 | 10.34 | 13.32 | 10.30 | 13.77 | 10.25 | 14.69 | 10.82 | | | | | |
| 39 | 10.58 | 9.12 | 11.10 | 9.69 | 11.91 | 9.52 | 12.62 | 10.23 | 13.05 | 10.19 | 13.46 | 10.13 | 14.32 | 10.69 | | | | | |
| 41 | 10.39 | 9.03 | 10.91 | 9.60 | 11.70 | 9.42 | 12.37 | 10.13 | 12.76 | 10.08 | 13.16 | 10.02 | 13.95 | 10.56 | | | | | |
| 43 | 10.21 | 8.94 | 10.71 | 9.51 | 11.49 | 9.33 | 12.11 | 10.02 | 12.48 | 9.97 | 12.85 | 9.90 | 13.58 | 10.43 | | | | | |
| 46 | 10.03 | 8.86 | 10.47 | 9.41 | 11.13 | 9.16 | 11.73 | 9.89 | 12.10 | 9.86 | 12.27 | 9.66 | 13.01 | 10.24 | | | | | |
| 50 | 7.61 | 6.82 | 7.88 | 7.21 | 8.35 | 7.00 | 8.75 | 7.57 | 8.97 | 7.53 | 8.98 | 7.31 | 9.33 | 7.69 | | | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |

PJF000Z512

- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(c) Double twin type

Model FDTC200VSADVH **Indoor unit** FDTC50VH (4 units) **Outdoor unit** FDC200VSA

Cooling mode (kW) **Heating mode:HC** (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 19.36 | 14.04 | 20.45 | 14.96 | 20.99 | 14.79 | 21.67 | 14.65 | 23.02 | 15.34 | 24.37 | 14.96 |
| 13 | | | | | | 19.46 | 14.08 | 20.57 | 15.01 | 21.13 | 14.84 | 21.78 | 14.69 | 23.09 | 15.36 | 24.40 | 14.97 |
| 15 | | | | | | 19.55 | 14.12 | 20.69 | 15.05 | 21.26 | 14.89 | 21.90 | 14.73 | 23.16 | 15.38 | 24.43 | 14.98 |
| 17 | | | | | | 19.56 | 14.13 | 20.77 | 15.08 | 21.37 | 14.93 | 21.99 | 14.76 | 23.23 | 15.40 | 24.47 | 14.99 |
| 19 | | | | | | 19.64 | 14.16 | 20.84 | 15.11 | 21.48 | 14.97 | 22.09 | 14.80 | 23.30 | 15.43 | 24.51 | 15.00 |
| 21 | | | | | | 19.34 | 14.03 | 20.50 | 14.98 | 21.11 | 14.83 | 21.72 | 14.67 | 22.92 | 15.31 | 24.13 | 14.90 |
| 23 | | | | | | 19.04 | 13.91 | 20.16 | 14.85 | 20.74 | 14.69 | 21.35 | 14.54 | 22.55 | 15.19 | 23.76 | 14.79 |
| 25 | | | 17.82 | 14.28 | 18.89 | 13.84 | 19.99 | 14.78 | 20.56 | 14.63 | 21.16 | 14.47 | 22.37 | 15.13 | 23.57 | 14.73 | |
| 27 | | | 17.88 | 14.22 | 18.74 | 13.78 | 19.82 | 14.72 | 20.38 | 14.56 | 21.25 | 14.50 | 22.13 | 15.05 | | | |
| 29 | | | 17.40 | 14.09 | 18.43 | 13.65 | 19.49 | 14.59 | 20.03 | 14.43 | 20.93 | 14.39 | 21.83 | 14.96 | | | |
| 31 | | | 17.11 | 13.96 | 18.11 | 13.52 | 19.15 | 14.46 | 19.69 | 14.31 | 20.60 | 14.28 | 21.52 | 14.86 | | | |
| 33 | 15.84 | 12.98 | 16.58 | 13.73 | 17.80 | 13.39 | 18.82 | 14.34 | 19.34 | 14.19 | 20.28 | 14.16 | 21.21 | 14.77 | | | |
| 35 | 15.73 | 12.92 | 16.37 | 13.64 | 17.49 | 13.27 | 18.49 | 14.21 | 19.00 | 14.06 | 19.95 | 14.05 | 20.91 | 14.67 | | | |
| 37 | 15.52 | 12.82 | 16.13 | 13.53 | 17.14 | 13.12 | 18.05 | 14.05 | 18.57 | 13.91 | 19.48 | 13.89 | 20.39 | 14.51 | | | |
| 39 | 15.31 | 12.73 | 15.89 | 13.43 | 16.78 | 12.98 | 17.61 | 13.89 | 18.13 | 13.76 | 19.00 | 13.73 | 19.87 | 14.35 | | | |
| 41 | 15.10 | 12.63 | 15.65 | 13.32 | 16.43 | 12.84 | 17.18 | 13.73 | 17.70 | 13.60 | 18.53 | 13.57 | 19.36 | 14.20 | | | |
| 43 | 14.89 | 12.53 | 15.41 | 13.22 | 16.07 | 12.70 | 16.74 | 13.57 | 17.26 | 13.45 | 18.05 | 13.41 | 18.84 | 14.04 | | | |
| 46 | 14.58 | 12.38 | 15.05 | 13.06 | 15.54 | 12.49 | 16.09 | 13.34 | 16.61 | 13.23 | 17.34 | 13.18 | 18.06 | 13.81 | | | |
| 50 | 11.25 | 10.87 | 11.78 | 11.54 | 12.39 | 11.29 | 12.68 | 12.16 | 12.88 | 12.00 | 13.08 | 11.84 | 13.28 | 12.47 | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 |

PJF000Z512

Model FDTC250VSADVH **Indoor unit** FDTC60VH (4 units) **Outdoor unit** FDC250VSA

Cooling mode (kW) **Heating mode:HC** (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 24.64 | 16.78 | 26.08 | 17.74 | 26.80 | 17.54 | 27.60 | 17.35 | 29.20 | 17.99 | 30.80 | 17.49 |
| 13 | | | | | | 24.67 | 16.79 | 26.11 | 17.76 | 26.83 | 17.55 | 27.63 | 17.36 | 29.23 | 18.00 | 30.83 | 17.50 |
| 15 | | | | | | 24.69 | 16.80 | 26.14 | 17.77 | 26.86 | 17.56 | 27.66 | 17.37 | 29.26 | 18.01 | 30.86 | 17.51 |
| 17 | | | | | | 24.70 | 16.81 | 26.23 | 17.81 | 26.99 | 17.61 | 27.78 | 17.41 | 29.34 | 18.04 | 30.91 | 17.53 |
| 19 | | | | | | 24.81 | 16.85 | 26.33 | 17.85 | 27.13 | 17.67 | 27.90 | 17.46 | 29.43 | 18.07 | 30.96 | 17.54 |
| 21 | | | | | | 24.43 | 16.68 | 25.90 | 17.67 | 26.67 | 17.48 | 27.43 | 17.28 | 28.96 | 17.91 | 30.48 | 17.39 |
| 23 | | | | | | 24.05 | 16.51 | 25.47 | 17.49 | 26.20 | 17.30 | 26.96 | 17.10 | 28.49 | 17.75 | 30.01 | 17.24 |
| 25 | | | 22.51 | 16.93 | 23.86 | 16.43 | 25.25 | 17.40 | 25.97 | 17.21 | 26.73 | 17.02 | 28.25 | 17.67 | 29.77 | 17.17 | |
| 27 | | | 22.33 | 16.85 | 23.67 | 16.34 | 25.04 | 17.31 | 25.74 | 17.12 | 26.85 | 17.06 | 27.96 | 17.56 | | | |
| 29 | | | 21.97 | 16.68 | 23.27 | 16.17 | 24.61 | 17.14 | 25.30 | 16.95 | 26.44 | 16.90 | 27.57 | 17.43 | | | |
| 31 | | | 21.61 | 16.50 | 22.88 | 16.00 | 24.19 | 16.97 | 24.87 | 16.78 | 26.03 | 16.75 | 27.18 | 17.30 | | | |
| 33 | 20.01 | 15.43 | 20.94 | 16.19 | 22.49 | 15.82 | 23.77 | 16.80 | 24.44 | 16.61 | 25.62 | 16.60 | 26.80 | 17.17 | | | |
| 35 | 19.87 | 15.35 | 20.68 | 16.07 | 22.10 | 15.65 | 23.35 | 16.63 | 24.00 | 16.45 | 25.21 | 16.45 | 26.41 | 17.05 | | | |
| 37 | 19.61 | 15.22 | 20.42 | 15.95 | 21.78 | 15.52 | 22.94 | 16.47 | 23.56 | 16.28 | 24.66 | 16.25 | 25.76 | 16.83 | | | |
| 39 | 19.51 | 15.17 | 20.33 | 15.90 | 21.65 | 15.46 | 22.72 | 16.38 | 23.30 | 16.18 | 24.30 | 16.12 | 25.30 | 16.68 | | | |
| 41 | 20.09 | 15.46 | 20.57 | 16.02 | 21.47 | 15.39 | 22.44 | 16.28 | 22.98 | 16.06 | 23.88 | 15.97 | 24.77 | 16.51 | | | |
| 43 | 19.02 | 14.93 | 19.85 | 15.68 | 21.05 | 15.21 | 21.92 | 16.07 | 22.41 | 15.85 | 23.19 | 15.72 | 23.96 | 16.25 | | | |
| 46 | 17.16 | 14.02 | 17.71 | 14.72 | 18.29 | 14.07 | 18.93 | 14.95 | 19.55 | 14.82 | 20.41 | 14.77 | 21.26 | 15.41 | | | |
| 50 | 11.31 | 11.08 | 11.84 | 11.60 | 12.45 | 11.83 | 12.74 | 12.49 | 12.94 | 12.63 | 13.14 | 12.47 | 13.35 | 13.08 | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 13.22 | 13.07 | 12.93 | 12.78 | 12.63 |
| -11.5 | -12 | 13.88 | 13.73 | 13.58 | 13.43 | 13.28 |
| -9.5 | -10 | 14.55 | 14.39 | 14.24 | 14.08 | 13.93 |
| -7.5 | -8 | 15.21 | 15.05 | 14.89 | 14.73 | 14.58 |
| -5.5 | -6 | 15.48 | 15.32 | 15.17 | 15.02 | 14.87 |
| -3.0 | -4 | 15.74 | 15.59 | 15.45 | 15.30 | 15.16 |
| -1.0 | -2 | 16.00 | 15.87 | 15.73 | 15.59 | 15.45 |
| 1.0 | 0 | 16.27 | 16.14 | 16.01 | 15.87 | 15.74 |
| 2.0 | 1 | 16.40 | 16.27 | 16.14 | 16.01 | 15.88 |
| 3.0 | 2 | 18.64 | 18.48 | 18.32 | 18.18 | 18.04 |
| 5.0 | 4 | 23.11 | 22.89 | 22.66 | 22.50 | 22.34 |
| 7.0 | 6 | 27.59 | 27.29 | 27.00 | 26.82 | 26.65 |
| 9.0 | 8 | 28.92 | 28.67 | 28.42 | 28.22 | 28.03 |
| 11.5 | 10 | 30.24 | 30.04 | 29.84 | 29.63 | 29.41 |
| 13.5 | 12 | 31.28 | 31.09 | 30.89 | 30.68 | 30.46 |
| 15.5 | 14 | 32.32 | 32.14 | 31.95 | 31.73 | 31.51 |
| 16.5 | 16 | 32.85 | 32.66 | 32.47 | 32.25 | 32.03 |

PJF000Z512

- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)


(2) Duct connected-High static pressure type (FDU)

Model **FDU100VNAVH** Indoor unit FDU100VH Outdoor unit FDC100VNA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
| | 18 °CDB 12 °CWB | | 21 °CDB 14 °CWB | | 23 °CDB 16 °CWB | | 26 °CDB 18 °CWB | | 27 °CDB 19 °CWB | | 28 °CDB 20 °CWB | | 31 °CDB 22 °CWB | | 33 °CDB 24 °CWB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.88 | 8.59 | 7.50 | 8.82 | 7.38 | 9.07 | 7.26 | 9.56 | 7.69 | 10.06 | 7.42 |
| 13 | | | | | 8.50 | 6.99 | 9.00 | 7.61 | 9.26 | 7.48 | 9.52 | 7.36 | 10.06 | 7.78 | 10.60 | 7.49 |
| 15 | | | | | 8.88 | 7.10 | 9.42 | 7.71 | 9.69 | 7.58 | 9.98 | 7.45 | 10.56 | 7.87 | 11.14 | 7.57 |
| 17 | | | | | 9.26 | 7.21 | 9.84 | 7.82 | 10.12 | 7.69 | 10.43 | 7.56 | 11.05 | 7.96 | 11.67 | 7.65 |
| 19 | | | | | 9.46 | 7.27 | 10.05 | 7.88 | 10.34 | 7.74 | 10.65 | 7.60 | 11.29 | 8.01 | 11.92 | 7.69 |
| 21 | | | | | 9.65 | 7.33 | 10.25 | 7.93 | 10.56 | 7.80 | 10.88 | 7.66 | 11.52 | 8.06 | 12.16 | 7.73 |
| 23 | | | | | 9.65 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.91 | 7.66 | 11.56 | 8.06 | 12.21 | 7.74 |
| 25 | | | 8.93 | 7.64 | 9.64 | 7.33 | 10.31 | 7.95 | 10.62 | 7.81 | 10.95 | 7.67 | 11.61 | 8.07 | 12.27 | 7.75 |
| 27 | | | 8.86 | 7.62 | 9.64 | 7.33 | 10.34 | 7.95 | 10.65 | 7.82 | 10.96 | 7.68 | 11.57 | 8.06 | | |
| 29 | | | 8.80 | 7.59 | 9.50 | 7.29 | 10.17 | 7.91 | 10.49 | 7.78 | 10.81 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.73 | 7.57 | 9.35 | 7.24 | 9.99 | 7.86 | 10.32 | 7.74 | 10.66 | 7.61 | 11.32 | 8.02 | | |
| 33 | 8.22 | 7.04 | 8.58 | 7.52 | 9.21 | 7.20 | 9.82 | 7.82 | 10.16 | 7.70 | 10.51 | 7.57 | 11.19 | 7.99 | | |
| 35 | 8.05 | 6.98 | 8.44 | 7.47 | 9.06 | 7.15 | 9.64 | 7.77 | 10.00 | 7.66 | 10.36 | 7.54 | 11.07 | 7.97 | | |
| 37 | 7.92 | 6.93 | 8.30 | 7.43 | 8.91 | 7.11 | 9.46 | 7.72 | 9.79 | 7.61 | 10.13 | 7.49 | 10.80 | 7.92 | | |
| 39 | 7.78 | 6.88 | 8.16 | 7.38 | 8.75 | 7.06 | 9.28 | 7.68 | 9.59 | 7.56 | 9.90 | 7.44 | 10.53 | 7.87 | | |
| 41 | 7.64 | 6.83 | 8.02 | 7.33 | 8.60 | 7.02 | 9.09 | 7.63 | 9.38 | 7.51 | 9.68 | 7.39 | 10.26 | 7.82 | | |
| 43 | 7.50 | 6.77 | 7.88 | 7.29 | 8.45 | 6.97 | 8.91 | 7.58 | 9.18 | 7.46 | 9.45 | 7.34 | 9.99 | 7.77 | | |
| 46 | 7.33 | 6.71 | 7.67 | 7.22 | 8.22 | 6.91 | 8.58 | 7.50 | 8.83 | 7.38 | 9.07 | 7.26 | 9.57 | 7.70 | | |
| 50 | 7.09 | 6.63 | 7.39 | 7.13 | 7.91 | 6.82 | 8.19 | 7.41 | 8.35 | 7.28 | 8.51 | 7.14 | 8.83 | 7.57 | | |

| Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | | | |
|---------------------------|--------------------------------|-------|-------|-------|-------|-------|----|--|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | | | | | | | | |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 | | |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 | | |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 | | |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 | | |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 | | |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 | | |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 | | |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 | | |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 | | |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 | | |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 | | |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 | | |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 | | |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 | | |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 | | |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 | | |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 | | |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 | | |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 | | |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 | | |


PJG000Z046 

Model **FDU100VSAVH** Indoor unit FDU100VH Outdoor unit FDC100VSA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
| | 18 °CDB 12 °CWB | | 21 °CDB 14 °CWB | | 23 °CDB 16 °CWB | | 26 °CDB 18 °CWB | | 27 °CDB 19 °CWB | | 28 °CDB 20 °CWB | | 31 °CDB 22 °CWB | | 33 °CDB 24 °CWB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.88 | 8.59 | 7.50 | 8.82 | 7.38 | 9.07 | 7.26 | 9.56 | 7.69 | 10.06 | 7.42 |
| 13 | | | | | 8.50 | 6.99 | 9.00 | 7.61 | 9.26 | 7.48 | 9.52 | 7.36 | 10.06 | 7.78 | 10.60 | 7.49 |
| 15 | | | | | 8.88 | 7.10 | 9.42 | 7.71 | 9.69 | 7.58 | 9.98 | 7.45 | 10.56 | 7.87 | 11.14 | 7.57 |
| 17 | | | | | 9.26 | 7.21 | 9.84 | 7.82 | 10.12 | 7.69 | 10.43 | 7.56 | 11.05 | 7.96 | 11.67 | 7.65 |
| 19 | | | | | 9.46 | 7.27 | 10.05 | 7.88 | 10.34 | 7.74 | 10.65 | 7.60 | 11.29 | 8.01 | 11.92 | 7.69 |
| 21 | | | | | 9.65 | 7.33 | 10.25 | 7.93 | 10.56 | 7.80 | 10.88 | 7.66 | 11.52 | 8.06 | 12.16 | 7.73 |
| 23 | | | | | 9.65 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.91 | 7.66 | 11.56 | 8.06 | 12.21 | 7.74 |
| 25 | | | 8.93 | 7.64 | 9.64 | 7.33 | 10.31 | 7.95 | 10.62 | 7.81 | 10.95 | 7.67 | 11.61 | 8.07 | 12.27 | 7.75 |
| 27 | | | 8.86 | 7.62 | 9.64 | 7.33 | 10.34 | 7.95 | 10.65 | 7.82 | 10.96 | 7.68 | 11.57 | 8.06 | | |
| 29 | | | 8.80 | 7.59 | 9.50 | 7.29 | 10.17 | 7.91 | 10.49 | 7.78 | 10.81 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.73 | 7.57 | 9.35 | 7.24 | 9.99 | 7.86 | 10.32 | 7.74 | 10.66 | 7.61 | 11.32 | 8.02 | | |
| 33 | 8.22 | 7.04 | 8.58 | 7.52 | 9.21 | 7.20 | 9.82 | 7.82 | 10.16 | 7.70 | 10.51 | 7.57 | 11.19 | 7.99 | | |
| 35 | 8.05 | 6.98 | 8.44 | 7.47 | 9.06 | 7.15 | 9.64 | 7.77 | 10.00 | 7.66 | 10.36 | 7.54 | 11.07 | 7.97 | | |
| 37 | 7.92 | 6.93 | 8.30 | 7.43 | 8.91 | 7.11 | 9.46 | 7.72 | 9.79 | 7.61 | 10.13 | 7.49 | 10.80 | 7.92 | | |
| 39 | 7.78 | 6.88 | 8.16 | 7.38 | 8.75 | 7.06 | 9.28 | 7.68 | 9.59 | 7.56 | 9.90 | 7.44 | 10.53 | 7.87 | | |
| 41 | 7.64 | 6.83 | 8.02 | 7.33 | 8.60 | 7.02 | 9.09 | 7.63 | 9.38 | 7.51 | 9.68 | 7.39 | 10.26 | 7.82 | | |
| 43 | 7.50 | 6.77 | 7.88 | 7.29 | 8.45 | 6.97 | 8.91 | 7.58 | 9.18 | 7.46 | 9.45 | 7.34 | 9.99 | 7.77 | | |
| 46 | 7.33 | 6.71 | 7.67 | 7.22 | 8.22 | 6.91 | 8.58 | 7.50 | 8.83 | 7.38 | 9.07 | 7.26 | 9.57 | 7.70 | | |
| 50 | 7.09 | 6.63 | 7.39 | 7.13 | 7.91 | 6.82 | 8.19 | 7.41 | 8.35 | 7.28 | 8.51 | 7.14 | 8.83 | 7.57 | | |

| Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | | | |
|---------------------------|--------------------------------|-------|-------|-------|-------|-------|----|--|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | | | | | | | | |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 | | |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 | | |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 | | |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 | | |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 | | |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 | | |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 | | |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 | | |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 | | |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 | | |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 | | |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 | | |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 | | |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 | | |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 | | |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 | | |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 | | |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 | | |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 | | |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 | | |

PJG000Z046 

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

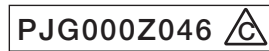
TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

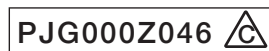
Model **FDU125VNAHV** Indoor unit **FDU125VH** Outdoor unit **FDC125VNA**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature °CDB | | | | | | |
|------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|-------------------|-------|-----------------------------|------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | |
| 11 | | | | | 10.15 | 9.23 | 10.74 | 10.04 | 11.03 | 9.97 | 11.34 | 9.90 | 11.96 | 10.51 | 12.57 | 10.34 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| 13 | | | | | 10.63 | 9.44 | 11.26 | 10.24 | 11.57 | 10.17 | 11.91 | 10.11 | 12.58 | 10.72 | 13.25 | 10.55 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| 15 | | | | | 11.10 | 9.63 | 11.78 | 10.44 | 12.11 | 10.37 | 12.47 | 10.31 | 13.20 | 10.92 | 13.92 | 10.75 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| 17 | | | | | 11.58 | 9.84 | 12.29 | 10.64 | 12.65 | 10.58 | 13.04 | 10.52 | 13.82 | 11.13 | 14.59 | 10.96 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| 19 | | | | | 11.82 | 9.94 | 12.56 | 10.75 | 12.92 | 10.68 | 13.32 | 10.62 | 14.11 | 11.23 | 14.90 | 11.06 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| 21 | | | | | 12.06 | 10.04 | 12.82 | 10.86 | 13.19 | 10.79 | 13.60 | 10.73 | 14.40 | 11.33 | 15.20 | 11.15 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| 23 | | | | | 12.06 | 10.04 | 12.85 | 10.87 | 13.23 | 10.80 | 13.64 | 10.74 | 14.45 | 11.35 | 15.27 | 11.17 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| 25 | | | 11.16 | 10.20 | 12.06 | 10.04 | 12.89 | 10.88 | 13.27 | 10.82 | 13.68 | 10.76 | 14.51 | 11.37 | 15.34 | 11.20 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| 27 | | | 11.08 | 10.16 | 12.05 | 10.04 | 12.92 | 10.90 | 13.31 | 10.83 | 13.69 | 10.76 | 14.47 | 11.35 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| 29 | | | 11.00 | 10.12 | 11.87 | 9.96 | 12.71 | 10.81 | 13.11 | 10.76 | 13.51 | 10.69 | 14.31 | 11.30 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 31 | | | 10.92 | 10.09 | 11.69 | 9.88 | 12.49 | 10.72 | 12.90 | 10.67 | 13.32 | 10.62 | 14.15 | 11.24 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 33 | 10.27 | 9.37 | 10.72 | 9.99 | 11.51 | 9.81 | 12.27 | 10.64 | 12.70 | 10.60 | 13.13 | 10.55 | 13.99 | 11.19 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 35 | 10.07 | 9.28 | 10.55 | 9.92 | 11.33 | 9.73 | 12.06 | 10.55 | 12.50 | 10.52 | 12.94 | 10.48 | 13.83 | 11.14 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 37 | 9.90 | 9.19 | 10.38 | 9.84 | 11.13 | 9.65 | 11.83 | 10.46 | 12.24 | 10.42 | 12.66 | 10.38 | 13.50 | 11.02 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 39 | 9.72 | 9.11 | 10.20 | 9.76 | 10.94 | 9.57 | 11.60 | 10.37 | 11.99 | 10.33 | 12.38 | 10.28 | 13.16 | 10.91 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 41 | 9.55 | 9.02 | 10.02 | 9.68 | 10.75 | 9.49 | 11.37 | 10.28 | 11.73 | 10.23 | 12.09 | 10.17 | 12.82 | 10.80 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 43 | 9.38 | 8.94 | 9.85 | 9.60 | 10.56 | 9.41 | 11.14 | 10.19 | 11.47 | 10.13 | 11.81 | 10.07 | 12.48 | 10.68 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 46 | 9.21 | 8.86 | 9.53 | 9.34 | 10.28 | 9.29 | 10.88 | 10.09 | 11.12 | 10.00 | 11.28 | 9.88 | 11.96 | 10.51 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |



Model **FDU125VSAHV** Indoor unit **FDU125VH** Outdoor unit **FDC125VSA**
Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature °CDB | | | | | | |
|------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|-------------------|-------|-----------------------------|------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | |
| 11 | | | | | 10.15 | 9.23 | 10.74 | 10.04 | 11.03 | 9.97 | 11.34 | 9.90 | 11.96 | 10.51 | 12.57 | 10.34 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| 13 | | | | | 10.63 | 9.44 | 11.26 | 10.24 | 11.57 | 10.17 | 11.91 | 10.11 | 12.58 | 10.72 | 13.25 | 10.55 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| 15 | | | | | 11.10 | 9.63 | 11.78 | 10.44 | 12.11 | 10.37 | 12.47 | 10.31 | 13.20 | 10.92 | 13.92 | 10.75 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| 17 | | | | | 11.58 | 9.84 | 12.29 | 10.64 | 12.65 | 10.58 | 13.04 | 10.52 | 13.82 | 11.13 | 14.59 | 10.96 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| 19 | | | | | 11.82 | 9.94 | 12.56 | 10.75 | 12.92 | 10.68 | 13.32 | 10.62 | 14.11 | 11.23 | 14.90 | 11.06 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| 21 | | | | | 12.06 | 10.04 | 12.82 | 10.86 | 13.19 | 10.79 | 13.60 | 10.73 | 14.40 | 11.33 | 15.20 | 11.15 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| 23 | | | | | 12.06 | 10.04 | 12.85 | 10.87 | 13.23 | 10.80 | 13.64 | 10.74 | 14.45 | 11.35 | 15.27 | 11.17 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| 25 | | | 11.16 | 10.20 | 12.06 | 10.04 | 12.89 | 10.88 | 13.27 | 10.82 | 13.68 | 10.76 | 14.51 | 11.37 | 15.34 | 11.20 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| 27 | | | 11.08 | 10.16 | 12.05 | 10.04 | 12.92 | 10.90 | 13.31 | 10.83 | 13.69 | 10.76 | 14.47 | 11.35 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| 29 | | | 11.00 | 10.12 | 11.87 | 9.96 | 12.71 | 10.81 | 13.11 | 10.76 | 13.51 | 10.69 | 14.31 | 11.30 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 31 | | | 10.92 | 10.09 | 11.69 | 9.88 | 12.49 | 10.72 | 12.90 | 10.67 | 13.32 | 10.62 | 14.15 | 11.24 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 33 | 10.27 | 9.37 | 10.72 | 9.99 | 11.51 | 9.81 | 12.27 | 10.64 | 12.70 | 10.60 | 13.13 | 10.55 | 13.99 | 11.19 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 35 | 10.07 | 9.28 | 10.55 | 9.92 | 11.33 | 9.73 | 12.06 | 10.55 | 12.50 | 10.52 | 12.94 | 10.48 | 13.83 | 11.14 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 37 | 9.90 | 9.19 | 10.38 | 9.84 | 11.13 | 9.65 | 11.83 | 10.46 | 12.24 | 10.42 | 12.66 | 10.38 | 13.50 | 11.02 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 39 | 9.72 | 9.11 | 10.20 | 9.76 | 10.94 | 9.57 | 11.60 | 10.37 | 11.99 | 10.33 | 12.38 | 10.28 | 13.16 | 10.91 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 41 | 9.55 | 9.02 | 10.02 | 9.68 | 10.75 | 9.49 | 11.37 | 10.28 | 11.73 | 10.23 | 12.09 | 10.17 | 12.82 | 10.80 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 43 | 9.38 | 8.94 | 9.85 | 9.60 | 10.56 | 9.41 | 11.14 | 10.19 | 11.47 | 10.13 | 11.81 | 10.07 | 12.48 | 10.68 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 46 | 9.21 | 8.86 | 9.53 | 9.34 | 10.28 | 9.29 | 10.88 | 10.09 | 11.12 | 10.00 | 11.28 | 9.88 | 11.96 | 10.51 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |



- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDU140VNAVH Indoor unit FDU140VH Outdoor unit FDC140VNA
Cooling mode

(kW) Heating mode:HC (kW)

Table with columns for Outdoor air temp, Indoor air temperature (18 to 33 °CDB), and sub-columns for TC and SHC. Rows 11-50.

Table with columns for Outdoor air temp, Indoor air temperature (16 to 24 °CDB), and sub-columns for °CDB and °CWB. Rows 11-50.



Model FDU140VSAVH Indoor unit FDU140VH Outdoor unit FDC140VSA
Cooling mode

(kW) Heating mode:HC (kW)

Table with columns for Outdoor air temp, Indoor air temperature (18 to 33 °CDB), and sub-columns for TC and SHC. Rows 11-50.

Table with columns for Outdoor air temp, Indoor air temperature (16 to 24 °CDB), and sub-columns for °CDB and °CWB. Rows 11-50.



Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

Model **FDU200VSAVG** Indoor unit FDU200VG Outdoor unit FDC200VSA

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-----|----|-----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | | | | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | |
| 25 | | | 17.82 | 14.37 | 18.89 | 13.96 | 19.99 | 14.91 | 20.56 | 14.77 | 21.16 | 14.63 | 22.37 | 15.30 | 23.57 | 14.94 | | | |
| 27 | | | 17.68 | 14.31 | 18.74 | 13.90 | 19.82 | 14.84 | 20.38 | 14.70 | 21.25 | 14.66 | 22.13 | 15.22 | | | | | |
| 29 | | | 17.40 | 14.18 | 18.43 | 13.76 | 19.49 | 14.71 | 20.03 | 14.57 | 20.93 | 14.54 | 21.83 | 15.12 | | | | | |
| 31 | | | 17.11 | 14.04 | 18.11 | 13.63 | 19.15 | 14.58 | 19.69 | 14.44 | 20.60 | 14.42 | 21.52 | 15.02 | | | | | |
| 33 | 15.84 | 13.05 | 16.58 | 13.80 | 17.80 | 13.50 | 18.82 | 14.45 | 19.34 | 14.31 | 20.28 | 14.31 | 21.21 | 14.92 | | | | | |
| 35 | 15.73 | 12.99 | 16.37 | 13.71 | 17.49 | 13.37 | 18.49 | 14.32 | 19.00 | 14.18 | 19.95 | 14.19 | 20.91 | 14.82 | | | | | |
| 37 | 15.52 | 12.89 | 16.13 | 13.60 | 17.14 | 13.22 | 18.05 | 14.15 | 18.57 | 14.02 | 19.48 | 14.02 | 20.39 | 14.65 | | | | | |
| 39 | 15.31 | 12.79 | 15.89 | 13.49 | 16.78 | 13.07 | 17.61 | 13.98 | 18.13 | 13.86 | 19.00 | 13.85 | 19.87 | 14.49 | | | | | |
| 41 | 15.10 | 12.69 | 15.65 | 13.38 | 16.43 | 12.93 | 17.18 | 13.82 | 17.70 | 13.71 | 18.53 | 13.69 | 19.36 | 14.32 | | | | | |
| 43 | 14.89 | 12.59 | 15.41 | 13.28 | 16.07 | 12.78 | 16.74 | 13.65 | 17.26 | 13.55 | 18.05 | 13.52 | 18.84 | 14.16 | | | | | |
| 46 | 14.58 | 12.44 | 15.05 | 13.12 | 15.54 | 12.56 | 16.09 | 13.41 | 16.61 | 13.32 | 17.34 | 13.28 | 18.06 | 13.92 | | | | | |
| 50 | 11.25 | 10.89 | 11.78 | 11.54 | 12.39 | 11.32 | 12.68 | 12.19 | 12.88 | 12.04 | 13.08 | 11.88 | 13.28 | 12.50 | | | | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 |



Model **FDU250VSAVG** Indoor unit FDU250VG Outdoor unit FDC250VSA

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-----|----|-----|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | | | | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | |
| 25 | | | 22.51 | 19.96 | 23.86 | 19.35 | 25.25 | 20.87 | 25.97 | 20.68 | 26.73 | 20.48 | 28.25 | 21.60 | 29.77 | 21.12 | | | |
| 27 | | | 22.33 | 19.88 | 23.67 | 19.27 | 25.04 | 20.79 | 25.74 | 20.60 | 26.85 | 20.52 | 27.96 | 21.51 | | | | | |
| 29 | | | 21.97 | 19.73 | 23.27 | 19.11 | 24.61 | 20.64 | 25.30 | 20.45 | 26.44 | 20.39 | 27.57 | 21.40 | | | | | |
| 31 | | | 21.61 | 19.57 | 22.88 | 18.96 | 24.19 | 20.49 | 24.87 | 20.30 | 26.03 | 20.25 | 27.18 | 21.28 | | | | | |
| 33 | 20.01 | 18.05 | 20.94 | 19.29 | 22.49 | 18.81 | 23.77 | 20.34 | 24.44 | 20.15 | 25.62 | 20.12 | 26.80 | 21.17 | | | | | |
| 35 | 19.87 | 17.99 | 20.68 | 19.18 | 22.10 | 18.65 | 23.35 | 20.19 | 24.00 | 20.00 | 25.21 | 19.98 | 26.41 | 21.05 | | | | | |
| 37 | 19.61 | 17.87 | 20.42 | 19.07 | 21.78 | 18.53 | 22.94 | 20.04 | 23.56 | 19.85 | 24.66 | 19.80 | 25.76 | 20.86 | | | | | |
| 39 | 19.51 | 17.82 | 20.33 | 19.03 | 21.65 | 18.48 | 22.72 | 19.96 | 23.30 | 19.76 | 24.30 | 19.69 | 25.30 | 20.73 | | | | | |
| 41 | 20.09 | 18.09 | 20.57 | 19.13 | 21.47 | 18.41 | 22.44 | 19.87 | 22.98 | 19.65 | 23.88 | 19.55 | 24.77 | 20.57 | | | | | |
| 43 | 19.02 | 17.60 | 19.85 | 18.83 | 21.05 | 18.25 | 21.92 | 19.68 | 22.41 | 19.46 | 23.19 | 19.33 | 23.96 | 20.34 | | | | | |
| 46 | 17.16 | 16.77 | 17.71 | 17.36 | 18.29 | 17.21 | 18.93 | 18.56 | 19.55 | 18.52 | 20.41 | 18.46 | 21.26 | 19.57 | | | | | |
| 50 | 11.31 | 11.08 | 11.84 | 11.60 | 12.45 | 12.20 | 12.74 | 12.49 | 12.94 | 12.69 | 13.14 | 12.88 | 13.35 | 13.08 | | | | | |

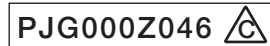
| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 13.22 | 13.07 | 12.93 | 12.78 | 12.63 |
| -11.5 | -12 | 13.88 | 13.73 | 13.58 | 13.43 | 13.28 |
| -9.5 | -10 | 14.55 | 14.39 | 14.24 | 14.08 | 13.93 |
| -7.5 | -8 | 15.21 | 15.05 | 14.89 | 14.73 | 14.58 |
| -5.5 | -6 | 15.48 | 15.32 | 15.17 | 15.02 | 14.87 |
| -3.0 | -4 | 15.74 | 15.59 | 15.45 | 15.30 | 15.16 |
| -1.0 | -2 | 16.00 | 15.87 | 15.73 | 15.59 | 15.45 |
| 1.0 | 0 | 16.27 | 16.14 | 16.01 | 15.87 | 15.74 |
| 2.0 | 1 | 16.40 | 16.27 | 16.14 | 16.01 | 15.88 |
| 3.0 | 2 | 18.64 | 18.48 | 18.32 | 18.18 | 18.04 |
| 5.0 | 4 | 23.11 | 22.89 | 22.66 | 22.50 | 22.34 |
| 7.0 | 6 | 27.59 | 27.29 | 27.00 | 26.82 | 26.65 |
| 9.0 | 8 | 28.92 | 28.67 | 28.42 | 28.22 | 28.03 |
| 11.5 | 10 | 30.24 | 30.04 | 29.84 | 29.63 | 29.41 |
| 13.5 | 12 | 31.28 | 31.09 | 30.89 | 30.68 | 30.46 |
| 15.5 | 14 | 32.32 | 32.14 | 31.95 | 31.73 | 31.51 |
| 16.5 | 16 | 32.85 | 32.66 | 32.47 | 32.25 | 32.03 |

Notes (1) These data show average statuses.

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.

(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)



(3) Duct connected-Low / Middle static pressure type (FDUM)

(a) Single type

Model **FDUM100VNAVH** Indoor unit **FDUM100VH** Outdoor unit **FDC100VNA**
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.88 | 8.59 | 7.50 | 8.82 | 7.38 | 9.07 | 7.26 | 9.56 | 7.69 | 10.06 | 7.42 |
| 13 | | | | | 8.50 | 6.99 | 9.00 | 7.61 | 9.26 | 7.48 | 9.52 | 7.36 | 10.06 | 7.78 | 10.60 | 7.49 |
| 15 | | | | | 8.88 | 7.10 | 9.42 | 7.71 | 9.69 | 7.58 | 9.98 | 7.45 | 10.56 | 7.87 | 11.14 | 7.57 |
| 17 | | | | | 9.26 | 7.21 | 9.84 | 7.82 | 10.12 | 7.69 | 10.43 | 7.56 | 11.05 | 7.96 | 11.67 | 7.65 |
| 19 | | | | | 9.46 | 7.27 | 10.05 | 7.88 | 10.34 | 7.74 | 10.65 | 7.60 | 11.29 | 8.01 | 11.92 | 7.69 |
| 21 | | | | | 9.65 | 7.33 | 10.25 | 7.93 | 10.56 | 7.80 | 10.88 | 7.66 | 11.52 | 8.06 | 12.16 | 7.73 |
| 23 | | | | | 9.65 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.91 | 7.66 | 11.56 | 8.06 | 12.21 | 7.74 |
| 25 | | | 8.93 | 7.64 | 9.64 | 7.33 | 10.31 | 7.95 | 10.62 | 7.81 | 10.95 | 7.67 | 11.61 | 8.07 | 12.27 | 7.75 |
| 27 | | | 8.86 | 7.62 | 9.64 | 7.33 | 10.34 | 7.95 | 10.65 | 7.82 | 10.96 | 7.68 | 11.57 | 8.06 | | |
| 29 | | | 8.80 | 7.59 | 9.50 | 7.29 | 10.17 | 7.91 | 10.49 | 7.78 | 10.81 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.73 | 7.57 | 9.35 | 7.24 | 9.99 | 7.86 | 10.32 | 7.74 | 10.66 | 7.61 | 11.32 | 8.02 | | |
| 33 | 8.22 | 7.04 | 8.58 | 7.52 | 9.21 | 7.20 | 9.82 | 7.82 | 10.16 | 7.70 | 10.51 | 7.57 | 11.19 | 7.99 | | |
| 35 | 8.05 | 6.98 | 8.44 | 7.47 | 9.06 | 7.15 | 9.64 | 7.77 | 10.00 | 7.66 | 10.36 | 7.54 | 11.07 | 7.97 | | |
| 37 | 7.92 | 6.93 | 8.30 | 7.43 | 8.91 | 7.11 | 9.46 | 7.72 | 9.79 | 7.61 | 10.13 | 7.49 | 10.80 | 7.92 | | |
| 39 | 7.78 | 6.88 | 8.16 | 7.38 | 8.75 | 7.06 | 9.28 | 7.68 | 9.59 | 7.56 | 9.90 | 7.44 | 10.53 | 7.87 | | |
| 41 | 7.64 | 6.83 | 8.02 | 7.33 | 8.60 | 7.02 | 9.09 | 7.63 | 9.38 | 7.51 | 9.68 | 7.39 | 10.26 | 7.82 | | |
| 43 | 7.50 | 6.77 | 7.88 | 7.29 | 8.45 | 6.97 | 8.91 | 7.58 | 9.18 | 7.46 | 9.45 | 7.34 | 9.99 | 7.77 | | |
| 46 | 7.33 | 6.71 | 7.67 | 7.22 | 8.22 | 6.91 | 8.58 | 7.50 | 8.83 | 7.38 | 9.07 | 7.26 | 9.57 | 7.70 | | |
| 50 | 7.09 | 6.63 | 7.39 | 7.13 | 7.91 | 6.82 | 8.19 | 7.41 | 8.35 | 7.28 | 8.51 | 7.14 | 8.83 | 7.57 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature | | | | |
|---------------------------|------|------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PJG000Z013 


Model **FDUM100VSAVH** Indoor unit **FDUM100VH** Outdoor unit **FDC100VSA**

Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------|---------|------|---------|------|---------|------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.12 | 6.88 | 8.59 | 7.50 | 8.82 | 7.38 | 9.07 | 7.26 | 9.56 | 7.69 | 10.06 | 7.42 |
| 13 | | | | | 8.50 | 6.99 | 9.00 | 7.61 | 9.26 | 7.48 | 9.52 | 7.36 | 10.06 | 7.78 | 10.60 | 7.49 |
| 15 | | | | | 8.88 | 7.10 | 9.42 | 7.71 | 9.69 | 7.58 | 9.98 | 7.45 | 10.56 | 7.87 | 11.14 | 7.57 |
| 17 | | | | | 9.26 | 7.21 | 9.84 | 7.82 | 10.12 | 7.69 | 10.43 | 7.56 | 11.05 | 7.96 | 11.67 | 7.65 |
| 19 | | | | | 9.46 | 7.27 | 10.05 | 7.88 | 10.34 | 7.74 | 10.65 | 7.60 | 11.29 | 8.01 | 11.92 | 7.69 |
| 21 | | | | | 9.65 | 7.33 | 10.25 | 7.93 | 10.56 | 7.80 | 10.88 | 7.66 | 11.52 | 8.06 | 12.16 | 7.73 |
| 23 | | | | | 9.65 | 7.33 | 10.28 | 7.94 | 10.59 | 7.80 | 10.91 | 7.66 | 11.56 | 8.06 | 12.21 | 7.74 |
| 25 | | | 8.93 | 7.64 | 9.64 | 7.33 | 10.31 | 7.95 | 10.62 | 7.81 | 10.95 | 7.67 | 11.61 | 8.07 | 12.27 | 7.75 |
| 27 | | | 8.86 | 7.62 | 9.64 | 7.33 | 10.34 | 7.95 | 10.65 | 7.82 | 10.96 | 7.68 | 11.57 | 8.06 | | |
| 29 | | | 8.80 | 7.59 | 9.50 | 7.29 | 10.17 | 7.91 | 10.49 | 7.78 | 10.81 | 7.64 | 11.45 | 8.04 | | |
| 31 | | | 8.73 | 7.57 | 9.35 | 7.24 | 9.99 | 7.86 | 10.32 | 7.74 | 10.66 | 7.61 | 11.32 | 8.02 | | |
| 33 | 8.22 | 7.04 | 8.58 | 7.52 | 9.21 | 7.20 | 9.82 | 7.82 | 10.16 | 7.70 | 10.51 | 7.57 | 11.19 | 7.99 | | |
| 35 | 8.05 | 6.98 | 8.44 | 7.47 | 9.06 | 7.15 | 9.64 | 7.77 | 10.00 | 7.66 | 10.36 | 7.54 | 11.07 | 7.97 | | |
| 37 | 7.92 | 6.93 | 8.30 | 7.43 | 8.91 | 7.11 | 9.46 | 7.72 | 9.79 | 7.61 | 10.13 | 7.49 | 10.80 | 7.92 | | |
| 39 | 7.78 | 6.88 | 8.16 | 7.38 | 8.75 | 7.06 | 9.28 | 7.68 | 9.59 | 7.56 | 9.90 | 7.44 | 10.53 | 7.87 | | |
| 41 | 7.64 | 6.83 | 8.02 | 7.33 | 8.60 | 7.02 | 9.09 | 7.63 | 9.38 | 7.51 | 9.68 | 7.39 | 10.26 | 7.82 | | |
| 43 | 7.50 | 6.77 | 7.88 | 7.29 | 8.45 | 6.97 | 8.91 | 7.58 | 9.18 | 7.46 | 9.45 | 7.34 | 9.99 | 7.77 | | |
| 46 | 7.33 | 6.71 | 7.67 | 7.22 | 8.22 | 6.91 | 8.58 | 7.50 | 8.83 | 7.38 | 9.07 | 7.26 | 9.57 | 7.70 | | |
| 50 | 7.09 | 6.63 | 7.39 | 7.13 | 7.91 | 6.82 | 8.19 | 7.41 | 8.35 | 7.28 | 8.51 | 7.14 | 8.83 | 7.57 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature | | | | |
|---------------------------|------|------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.07 |
| 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PJG000Z013 

- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

Model **FDUM125VNAVH** Indoor unit **FDUM125VH** Outdoor unit **FDC125VNA**
 Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.15 | 9.23 | 10.74 | 10.04 | 11.03 | 9.97 | 11.34 | 9.90 | 11.96 | 10.51 | 12.57 | 10.34 |
| 13 | | | | | 10.63 | 9.44 | 11.26 | 10.24 | 11.57 | 10.17 | 11.91 | 10.11 | 12.58 | 10.72 | 13.25 | 10.55 |
| 15 | | | | | 11.10 | 9.63 | 11.78 | 10.44 | 12.11 | 10.37 | 12.47 | 10.31 | 13.20 | 10.92 | 13.92 | 10.75 |
| 17 | | | | | 11.58 | 9.84 | 12.29 | 10.64 | 12.65 | 10.58 | 13.04 | 10.52 | 13.82 | 11.13 | 14.59 | 10.96 |
| 19 | | | | | 11.82 | 9.94 | 12.56 | 10.75 | 12.92 | 10.68 | 13.32 | 10.62 | 14.11 | 11.23 | 14.90 | 11.06 |
| 21 | | | | | 12.06 | 10.04 | 12.82 | 10.86 | 13.19 | 10.79 | 13.60 | 10.73 | 14.40 | 11.33 | 15.20 | 11.15 |
| 23 | | | | | 12.06 | 10.04 | 12.85 | 10.87 | 13.23 | 10.80 | 13.64 | 10.74 | 14.45 | 11.35 | 15.27 | 11.17 |
| 25 | | | 11.16 | 10.20 | 12.06 | 10.04 | 12.89 | 10.88 | 13.27 | 10.82 | 13.68 | 10.76 | 14.51 | 11.37 | 15.34 | 11.20 |
| 27 | | | 11.08 | 10.16 | 12.05 | 10.04 | 12.92 | 10.90 | 13.31 | 10.83 | 13.69 | 10.76 | 14.47 | 11.35 | | |
| 29 | | | 11.00 | 10.12 | 11.87 | 9.96 | 12.71 | 10.81 | 13.11 | 10.76 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.92 | 10.09 | 11.69 | 9.88 | 12.49 | 10.72 | 12.90 | 10.67 | 13.32 | 10.62 | 14.15 | 11.24 | | |
| 33 | 10.27 | 9.37 | 10.72 | 9.99 | 11.51 | 9.81 | 12.27 | 10.64 | 12.70 | 10.60 | 13.13 | 10.55 | 13.99 | 11.19 | | |
| 35 | 10.07 | 9.28 | 10.55 | 9.92 | 11.33 | 9.73 | 12.06 | 10.55 | 12.50 | 10.52 | 12.94 | 10.48 | 13.83 | 11.14 | | |
| 37 | 9.90 | 9.19 | 10.38 | 9.84 | 11.13 | 9.65 | 11.83 | 10.46 | 12.24 | 10.42 | 12.66 | 10.38 | 13.50 | 11.02 | | |
| 39 | 9.72 | 9.11 | 10.20 | 9.76 | 10.94 | 9.57 | 11.60 | 10.37 | 11.99 | 10.33 | 12.38 | 10.28 | 13.16 | 10.91 | | |
| 41 | 9.55 | 9.02 | 10.02 | 9.68 | 10.75 | 9.49 | 11.37 | 10.28 | 11.73 | 10.23 | 12.09 | 10.17 | 12.82 | 10.80 | | |
| 43 | 9.38 | 8.94 | 9.85 | 9.60 | 10.56 | 9.41 | 11.14 | 10.19 | 11.47 | 10.13 | 11.81 | 10.07 | 12.48 | 10.68 | | |
| 46 | 9.21 | 8.86 | 9.53 | 9.34 | 10.28 | 9.29 | 10.88 | 10.09 | 11.12 | 10.00 | 11.28 | 9.88 | 11.96 | 10.51 | | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

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Model **FDUM125VSAVH** Indoor unit **FDUM125VH** Outdoor unit **FDC125VSA**
 Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.15 | 9.23 | 10.74 | 10.04 | 11.03 | 9.97 | 11.34 | 9.90 | 11.96 | 10.51 | 12.57 | 10.34 |
| 13 | | | | | 10.63 | 9.44 | 11.26 | 10.24 | 11.57 | 10.17 | 11.91 | 10.11 | 12.58 | 10.72 | 13.25 | 10.55 |
| 15 | | | | | 11.10 | 9.63 | 11.78 | 10.44 | 12.11 | 10.37 | 12.47 | 10.31 | 13.20 | 10.92 | 13.92 | 10.75 |
| 17 | | | | | 11.58 | 9.84 | 12.29 | 10.64 | 12.65 | 10.58 | 13.04 | 10.52 | 13.82 | 11.13 | 14.59 | 10.96 |
| 19 | | | | | 11.82 | 9.94 | 12.56 | 10.75 | 12.92 | 10.68 | 13.32 | 10.62 | 14.11 | 11.23 | 14.90 | 11.06 |
| 21 | | | | | 12.06 | 10.04 | 12.82 | 10.86 | 13.19 | 10.79 | 13.60 | 10.73 | 14.40 | 11.33 | 15.20 | 11.15 |
| 23 | | | | | 12.06 | 10.04 | 12.85 | 10.87 | 13.23 | 10.80 | 13.64 | 10.74 | 14.45 | 11.35 | 15.27 | 11.17 |
| 25 | | | 11.16 | 10.20 | 12.06 | 10.04 | 12.89 | 10.88 | 13.27 | 10.82 | 13.68 | 10.76 | 14.51 | 11.37 | 15.34 | 11.20 |
| 27 | | | 11.08 | 10.16 | 12.05 | 10.04 | 12.92 | 10.90 | 13.31 | 10.83 | 13.69 | 10.76 | 14.47 | 11.35 | | |
| 29 | | | 11.00 | 10.12 | 11.87 | 9.96 | 12.71 | 10.81 | 13.11 | 10.76 | 13.51 | 10.69 | 14.31 | 11.30 | | |
| 31 | | | 10.92 | 10.09 | 11.69 | 9.88 | 12.49 | 10.72 | 12.90 | 10.67 | 13.32 | 10.62 | 14.15 | 11.24 | | |
| 33 | 10.27 | 9.37 | 10.72 | 9.99 | 11.51 | 9.81 | 12.27 | 10.64 | 12.70 | 10.60 | 13.13 | 10.55 | 13.99 | 11.19 | | |
| 35 | 10.07 | 9.28 | 10.55 | 9.92 | 11.33 | 9.73 | 12.06 | 10.55 | 12.50 | 10.52 | 12.94 | 10.48 | 13.83 | 11.14 | | |
| 37 | 9.90 | 9.19 | 10.38 | 9.84 | 11.13 | 9.65 | 11.83 | 10.46 | 12.24 | 10.42 | 12.66 | 10.38 | 13.50 | 11.02 | | |
| 39 | 9.72 | 9.11 | 10.20 | 9.76 | 10.94 | 9.57 | 11.60 | 10.37 | 11.99 | 10.33 | 12.38 | 10.28 | 13.16 | 10.91 | | |
| 41 | 9.55 | 9.02 | 10.02 | 9.68 | 10.75 | 9.49 | 11.37 | 10.28 | 11.73 | 10.23 | 12.09 | 10.17 | 12.82 | 10.80 | | |
| 43 | 9.38 | 8.94 | 9.85 | 9.60 | 10.56 | 9.41 | 11.14 | 10.19 | 11.47 | 10.13 | 11.81 | 10.07 | 12.48 | 10.68 | | |
| 46 | 9.21 | 8.86 | 9.53 | 9.34 | 10.28 | 9.29 | 10.88 | 10.09 | 11.12 | 10.00 | 11.28 | 9.88 | 11.96 | 10.51 | | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

PJG000Z013

- Notes (1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
 In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference of Zero.
- (3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model **FDUM140VNAVH** Indoor unit **FDUM140VH** Outdoor unit **FDC140VNA**

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | | | | | | | | | | | 13.68 | 10.85 |
| 13 | | | | | 11.05 | 9.86 | 11.68 | 10.75 | 12.00 | 10.63 | 12.34 | 10.50 | 13.01 | 11.15 | 14.42 | 11.00 |
| 15 | | | | | 11.56 | 10.03 | 12.25 | 10.93 | 12.59 | 10.79 | 12.95 | 10.66 | 13.69 | 11.31 | 15.14 | 11.15 |
| 17 | | | | | 12.07 | 10.21 | 12.81 | 11.10 | 13.18 | 10.97 | 13.57 | 10.83 | 14.36 | 11.47 | 16.20 | 11.38 |
| 19 | | | | | 12.59 | 10.38 | 13.38 | 11.27 | 13.77 | 11.14 | 14.19 | 11.00 | 15.04 | 11.64 | 16.61 | 11.47 |
| 21 | | | | | 12.86 | 10.48 | 13.66 | 11.36 | 14.07 | 11.23 | 14.49 | 11.09 | 15.35 | 11.71 | 17.14 | 11.68 |
| 23 | | | | | 13.12 | 10.57 | 13.95 | 11.45 | 14.36 | 11.31 | 14.79 | 11.17 | 15.66 | 11.79 | 17.58 | 11.81 |
| 25 | | | 12.14 | 10.90 | 13.11 | 10.57 | 14.02 | 11.48 | 14.44 | 11.34 | 14.89 | 11.20 | 15.79 | 11.82 | 18.06 | 12.00 |
| 27 | | | 12.06 | 10.86 | 13.11 | 10.57 | 14.06 | 11.49 | 14.48 | 11.35 | 14.90 | 11.20 | 15.74 | 11.81 | | |
| 29 | | | 11.97 | 10.83 | 12.91 | 10.50 | 13.82 | 11.41 | 14.26 | 11.29 | 14.70 | 11.15 | 15.56 | 11.77 | | |
| 31 | | | 11.88 | 10.80 | 12.72 | 10.43 | 13.59 | 11.34 | 14.04 | 11.22 | 14.49 | 11.09 | 15.40 | 11.73 | | |
| 33 | 11.18 | 10.02 | 11.67 | 10.71 | 12.52 | 10.36 | 13.36 | 11.27 | 13.82 | 11.15 | 14.29 | 11.03 | 15.22 | 11.68 | | |
| 35 | 10.96 | 9.93 | 11.48 | 10.64 | 12.32 | 10.29 | 13.11 | 11.19 | 13.60 | 11.09 | 14.09 | 10.97 | 15.05 | 11.64 | | |
| 37 | 10.76 | 9.85 | 11.29 | 10.57 | 12.11 | 10.22 | 12.87 | 11.12 | 13.32 | 11.01 | 13.77 | 10.89 | 14.69 | 11.55 | | |
| 39 | 10.58 | 9.77 | 11.10 | 10.50 | 11.91 | 10.15 | 12.62 | 11.04 | 13.05 | 10.93 | 13.46 | 10.80 | 14.32 | 11.46 | | |
| 41 | 10.39 | 9.70 | 10.91 | 10.43 | 11.70 | 10.08 | 12.37 | 10.96 | 12.76 | 10.85 | 13.16 | 10.72 | 13.95 | 11.37 | | |
| 43 | 10.21 | 9.62 | 10.71 | 10.36 | 11.49 | 10.01 | 12.11 | 10.89 | 12.48 | 10.76 | 12.85 | 10.64 | 13.58 | 11.29 | | |
| 46 | 10.03 | 9.54 | 10.47 | 10.26 | 11.13 | 9.89 | 11.73 | 10.77 | 12.10 | 10.66 | 12.27 | 10.48 | 13.01 | 11.15 | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | °CDB | | | | |
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Model **FDUM140VSAVH** Indoor unit **FDUM140VH** Outdoor unit **FDC140VSA**

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | | | | | | | | | | | 13.68 | 10.85 |
| 13 | | | | | 11.05 | 9.86 | 11.68 | 10.75 | 12.00 | 10.63 | 12.34 | 10.50 | 13.01 | 11.15 | 14.42 | 11.00 |
| 15 | | | | | 11.56 | 10.03 | 12.25 | 10.93 | 12.59 | 10.79 | 12.95 | 10.66 | 13.69 | 11.31 | 15.14 | 11.15 |
| 17 | | | | | 12.07 | 10.21 | 12.81 | 11.10 | 13.18 | 10.97 | 13.57 | 10.83 | 14.36 | 11.47 | 16.20 | 11.38 |
| 19 | | | | | 12.59 | 10.38 | 13.38 | 11.27 | 13.77 | 11.14 | 14.19 | 11.00 | 15.04 | 11.64 | 16.61 | 11.47 |
| 21 | | | | | 12.86 | 10.48 | 13.66 | 11.36 | 14.07 | 11.23 | 14.49 | 11.09 | 15.35 | 11.71 | 17.14 | 11.68 |
| 23 | | | | | 13.12 | 10.57 | 13.95 | 11.45 | 14.36 | 11.31 | 14.79 | 11.17 | 15.66 | 11.79 | 17.58 | 11.81 |
| 25 | | | 12.14 | 10.90 | 13.11 | 10.57 | 14.02 | 11.48 | 14.44 | 11.34 | 14.89 | 11.20 | 15.79 | 11.82 | 18.06 | 12.00 |
| 27 | | | 12.06 | 10.86 | 13.11 | 10.57 | 14.06 | 11.49 | 14.48 | 11.35 | 14.90 | 11.20 | 15.74 | 11.81 | | |
| 29 | | | 11.97 | 10.83 | 12.91 | 10.50 | 13.82 | 11.41 | 14.26 | 11.29 | 14.70 | 11.15 | 15.56 | 11.77 | | |
| 31 | | | 11.88 | 10.80 | 12.72 | 10.43 | 13.59 | 11.34 | 14.04 | 11.22 | 14.49 | 11.09 | 15.40 | 11.73 | | |
| 33 | 11.18 | 10.02 | 11.67 | 10.71 | 12.52 | 10.36 | 13.36 | 11.27 | 13.82 | 11.15 | 14.29 | 11.03 | 15.22 | 11.68 | | |
| 35 | 10.96 | 9.93 | 11.48 | 10.64 | 12.32 | 10.29 | 13.11 | 11.19 | 13.60 | 11.09 | 14.09 | 10.97 | 15.05 | 11.64 | | |
| 37 | 10.76 | 9.85 | 11.29 | 10.57 | 12.11 | 10.22 | 12.87 | 11.12 | 13.32 | 11.01 | 13.77 | 10.89 | 14.69 | 11.55 | | |
| 39 | 10.58 | 9.77 | 11.10 | 10.50 | 11.91 | 10.15 | 12.62 | 11.04 | 13.05 | 10.93 | 13.46 | 10.80 | 14.32 | 11.46 | | |
| 41 | 10.39 | 9.70 | 10.91 | 10.43 | 11.70 | 10.08 | 12.37 | 10.96 | 12.76 | 10.85 | 13.16 | 10.72 | 13.95 | 11.37 | | |
| 43 | 10.21 | 9.62 | 10.71 | 10.36 | 11.49 | 10.01 | 12.11 | 10.89 | 12.48 | 10.76 | 12.85 | 10.64 | 13.58 | 11.29 | | |
| 46 | 10.03 | 9.54 | 10.47 | 10.26 | 11.13 | 9.89 | 11.73 | 10.77 | 12.10 | 10.66 | 12.27 | 10.48 | 13.01 | 11.15 | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | |

| Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| °CDB | °CWB | °CDB | | | | |
| | | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length : 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

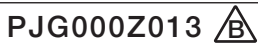
HC : Heating capacity (kW)

(b) Twin type

Model **FDUM100VNAPVH** Indoor unit **FDUM50VH (2 units)** Outdoor unit **FDC100VNA**
Cooling mode (kW)

Table with columns for Outdoor air temp. (18, 21, 23, 26, 27, 28, 31, 33 °CDB), Indoor air temperature (12 to 24 °CWB), and sub-columns for TC and SHC. Rows represent different indoor air temperatures from 11 to 50 °CDB.

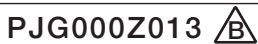
Table with columns for Outdoor air temp. (°CDB, °CWB, 16, 18, 20, 22, 24 °CDB), Indoor air temperature (°CDB), and rows for different indoor air temperatures from 11 to 50 °CDB.



Model **FDUM100VSAPVH** Indoor unit **FDUM50VH (2 units)** Outdoor unit **FDC100VSA**
Cooling mode (kW)

Table with columns for Outdoor air temp. (18, 21, 23, 26, 27, 28, 31, 33 °CDB), Indoor air temperature (12 to 24 °CWB), and sub-columns for TC and SHC. Rows represent different indoor air temperatures from 11 to 50 °CDB.

Table with columns for Outdoor air temp. (°CDB, °CWB, 16, 18, 20, 22, 24 °CDB), Indoor air temperature (°CDB), and rows for different indoor air temperatures from 11 to 50 °CDB.



- Notes (1) These data show average status. Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
(2) Capacities are based on the following conditions. Corresponding refrigerant piping length : 7.5m Level difference of Zero.
(3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDUM125VNAPVH** Indoor unit **FDUM60VH (2 units)** Outdoor unit **FDC125VNA** Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|---------------------------|------------------------|------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | °CDB | | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | | | 16 | 18 | 20 | 22 | 24 | |
| TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | 10.15 | 8.91 | 10.74 | 9.69 | 11.03 | 9.59 | 11.34 | 9.50 | 11.96 | 10.07 | 12.57 | 9.84 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| 13 | | | | | | 10.63 | 9.09 | 11.26 | 9.87 | 11.57 | 9.77 | 11.91 | 9.68 | 12.58 | 10.25 | 13.25 | 10.02 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| 15 | | | | | | 11.10 | 9.27 | 11.78 | 10.05 | 12.11 | 9.95 | 12.47 | 9.86 | 13.20 | 10.42 | 13.92 | 10.19 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| 17 | | | | | | 11.58 | 9.46 | 12.29 | 10.23 | 12.65 | 10.13 | 13.04 | 10.04 | 13.82 | 10.60 | 14.59 | 10.36 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| 19 | | | | | | 11.82 | 9.55 | 12.56 | 10.33 | 12.92 | 10.23 | 13.32 | 10.13 | 14.11 | 10.69 | 14.90 | 10.45 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| 21 | | | | | | 12.06 | 9.65 | 12.82 | 10.42 | 13.19 | 10.32 | 13.60 | 10.22 | 14.40 | 10.77 | 15.20 | 10.52 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| 23 | | | | | | 12.06 | 9.65 | 12.85 | 10.43 | 13.23 | 10.33 | 13.64 | 10.24 | 14.45 | 10.79 | 15.27 | 10.54 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| 25 | | | 11.16 | 9.87 | 12.06 | 9.65 | 12.89 | 10.44 | 13.27 | 10.35 | 13.68 | 10.25 | 14.51 | 10.81 | 15.34 | 10.56 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 | |
| 27 | | | 11.08 | 9.84 | 12.05 | 9.64 | 12.92 | 10.46 | 13.31 | 10.36 | 13.69 | 10.25 | 14.47 | 10.80 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 | |
| 29 | | | 11.00 | 9.80 | 11.87 | 9.57 | 12.71 | 10.38 | 13.11 | 10.29 | 13.51 | 10.19 | 14.31 | 10.75 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 | |
| 31 | | | 10.92 | 9.77 | 11.69 | 9.50 | 12.49 | 10.30 | 12.90 | 10.22 | 13.32 | 10.13 | 14.15 | 10.70 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 | |
| 33 | 10.27 | 9.09 | 10.72 | 9.68 | 11.51 | 9.43 | 12.27 | 10.22 | 12.70 | 10.15 | 13.13 | 10.07 | 13.99 | 10.65 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 | |
| 35 | 10.07 | 9.00 | 10.55 | 9.61 | 11.33 | 9.36 | 12.06 | 10.15 | 12.50 | 10.08 | 12.94 | 10.01 | 13.83 | 10.61 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 | |
| 37 | 9.90 | 8.92 | 10.38 | 9.54 | 11.13 | 9.29 | 11.83 | 10.07 | 12.24 | 9.99 | 12.66 | 9.92 | 13.50 | 10.51 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 | |
| 39 | 9.72 | 8.84 | 10.20 | 9.47 | 10.94 | 9.21 | 11.60 | 9.99 | 11.99 | 9.91 | 12.38 | 9.83 | 13.16 | 10.41 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 | |
| 41 | 9.55 | 8.76 | 10.02 | 9.39 | 10.75 | 9.14 | 11.37 | 9.91 | 11.73 | 9.82 | 12.09 | 9.74 | 12.82 | 10.31 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 | |
| 43 | 9.38 | 8.69 | 9.85 | 9.32 | 10.56 | 9.07 | 11.14 | 9.83 | 11.47 | 9.74 | 11.81 | 9.65 | 12.48 | 10.22 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 | |
| 46 | 9.21 | 8.61 | 9.53 | 9.19 | 10.28 | 8.96 | 10.88 | 9.74 | 11.12 | 9.62 | 11.28 | 9.48 | 11.96 | 10.07 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 | |
| | | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |



Model **FDUM125VSAPVH** Indoor unit **FDUM60VH (2 units)** Outdoor unit **FDC125VSA** Cooling mode (kW) Heating mode:HC (kW)

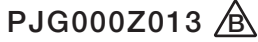
| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|---------------------------|------------------------|------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | °CDB | | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | | | 16 | 18 | 20 | 22 | 24 | |
| TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | 10.15 | 8.91 | 10.74 | 9.69 | 11.03 | 9.59 | 11.34 | 9.50 | 11.96 | 10.07 | 12.57 | 9.84 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| 13 | | | | | | 10.63 | 9.09 | 11.26 | 9.87 | 11.57 | 9.77 | 11.91 | 9.68 | 12.58 | 10.25 | 13.25 | 10.02 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| 15 | | | | | | 11.10 | 9.27 | 11.78 | 10.05 | 12.11 | 9.95 | 12.47 | 9.86 | 13.20 | 10.42 | 13.92 | 10.19 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| 17 | | | | | | 11.58 | 9.46 | 12.29 | 10.23 | 12.65 | 10.13 | 13.04 | 10.04 | 13.82 | 10.60 | 14.59 | 10.36 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| 19 | | | | | | 11.82 | 9.55 | 12.56 | 10.33 | 12.92 | 10.23 | 13.32 | 10.13 | 14.11 | 10.69 | 14.90 | 10.45 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| 21 | | | | | | 12.06 | 9.65 | 12.82 | 10.42 | 13.19 | 10.32 | 13.60 | 10.22 | 14.40 | 10.77 | 15.20 | 10.52 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| 23 | | | | | | 12.06 | 9.65 | 12.85 | 10.43 | 13.23 | 10.33 | 13.64 | 10.24 | 14.45 | 10.79 | 15.27 | 10.54 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| 25 | | | 11.16 | 9.87 | 12.06 | 9.65 | 12.89 | 10.44 | 13.27 | 10.35 | 13.68 | 10.25 | 14.51 | 10.81 | 15.34 | 10.56 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 | |
| 27 | | | 11.08 | 9.84 | 12.05 | 9.64 | 12.92 | 10.46 | 13.31 | 10.36 | 13.69 | 10.25 | 14.47 | 10.80 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 | |
| 29 | | | 11.00 | 9.80 | 11.87 | 9.57 | 12.71 | 10.38 | 13.11 | 10.29 | 13.51 | 10.19 | 14.31 | 10.75 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 | |
| 31 | | | 10.92 | 9.77 | 11.69 | 9.50 | 12.49 | 10.30 | 12.90 | 10.22 | 13.32 | 10.13 | 14.15 | 10.70 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 | |
| 33 | 10.27 | 9.09 | 10.72 | 9.68 | 11.51 | 9.43 | 12.27 | 10.22 | 12.70 | 10.15 | 13.13 | 10.07 | 13.99 | 10.65 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 | |
| 35 | 10.07 | 9.00 | 10.55 | 9.61 | 11.33 | 9.36 | 12.06 | 10.15 | 12.50 | 10.08 | 12.94 | 10.01 | 13.83 | 10.61 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 | |
| 37 | 9.90 | 8.92 | 10.38 | 9.54 | 11.13 | 9.29 | 11.83 | 10.07 | 12.24 | 9.99 | 12.66 | 9.92 | 13.50 | 10.51 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 | |
| 39 | 9.72 | 8.84 | 10.20 | 9.47 | 10.94 | 9.21 | 11.60 | 9.99 | 11.99 | 9.91 | 12.38 | 9.83 | 13.16 | 10.41 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 | |
| 41 | 9.55 | 8.76 | 10.02 | 9.39 | 10.75 | 9.14 | 11.37 | 9.91 | 11.73 | 9.82 | 12.09 | 9.74 | 12.82 | 10.31 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 | |
| 43 | 9.38 | 8.69 | 9.85 | 9.32 | 10.56 | 9.07 | 11.14 | 9.83 | 11.47 | 9.74 | 11.81 | 9.65 | 12.48 | 10.22 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 | |
| 46 | 9.21 | 8.61 | 9.53 | 9.19 | 10.28 | 8.96 | 10.88 | 9.74 | 11.12 | 9.62 | 11.28 | 9.48 | 11.96 | 10.07 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 | |
| | | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |



- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDUM140VNPVH** Indoor unit **FDUM71VH (2 units)** Outdoor unit **FDC140VNA**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|------|------------------------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | °CDB | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | |
| 11 | | | | | 11.05 | 10.16 | 11.68 | 11.08 | 12.00 | 10.97 | 12.34 | 10.86 | 13.01 | 11.55 | 13.68 | 11.29 | -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| 13 | | | | | 11.56 | 10.34 | 12.25 | 11.27 | 12.59 | 11.16 | 12.95 | 11.04 | 13.69 | 11.73 | 14.42 | 11.46 | -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| 15 | | | | | 12.07 | 10.53 | 12.81 | 11.46 | 13.18 | 11.34 | 13.57 | 11.23 | 14.36 | 11.91 | 15.14 | 11.64 | -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| 17 | | | | | 12.59 | 10.72 | 13.38 | 11.65 | 13.77 | 11.53 | 14.19 | 11.42 | 15.04 | 12.10 | 15.87 | 11.81 | -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| 19 | | | | | 12.86 | 10.82 | 13.66 | 11.74 | 14.07 | 11.63 | 14.49 | 11.51 | 15.35 | 12.18 | 16.20 | 11.89 | -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| 21 | | | | | 13.12 | 10.92 | 13.95 | 11.84 | 14.36 | 11.72 | 14.79 | 11.60 | 15.66 | 12.27 | 16.53 | 11.97 | -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| 23 | | | | | 13.12 | 10.92 | 13.99 | 11.85 | 14.40 | 11.73 | 14.84 | 11.62 | 15.73 | 12.29 | 16.61 | 11.99 | -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| 25 | | | 12.14 | 11.20 | 13.11 | 10.91 | 14.02 | 11.86 | 14.44 | 11.75 | 14.89 | 11.63 | 15.79 | 12.30 | 16.69 | 12.01 | -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| 27 | | | 12.06 | 11.16 | 13.11 | 10.91 | 14.06 | 11.88 | 14.48 | 11.76 | 14.90 | 11.64 | 15.74 | 12.29 | | | -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| 29 | | | 11.97 | 11.13 | 12.91 | 10.84 | 13.82 | 11.80 | 14.26 | 11.69 | 14.70 | 11.57 | 15.56 | 12.24 | | | -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 31 | | | 11.88 | 11.09 | 12.72 | 10.76 | 13.59 | 11.72 | 14.04 | 11.62 | 14.49 | 11.51 | 15.40 | 12.19 | | | 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 33 | 11.18 | 10.28 | 11.67 | 11.01 | 12.52 | 10.69 | 13.36 | 11.64 | 13.82 | 11.55 | 14.29 | 11.45 | 15.22 | 12.15 | | | 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 35 | 10.96 | 10.19 | 11.48 | 10.93 | 12.32 | 10.62 | 13.11 | 11.56 | 13.60 | 11.48 | 14.09 | 11.39 | 15.05 | 12.10 | | | 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 37 | 10.76 | 10.10 | 11.29 | 10.85 | 12.11 | 10.54 | 12.87 | 11.48 | 13.32 | 11.39 | 13.77 | 11.29 | 14.69 | 12.00 | | | 4.0 | 3 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 39 | 10.58 | 10.02 | 11.10 | 10.78 | 11.91 | 10.47 | 12.62 | 11.39 | 13.05 | 11.30 | 13.46 | 11.20 | 14.32 | 11.90 | | | 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 41 | 10.39 | 9.94 | 10.91 | 10.69 | 11.70 | 10.39 | 12.37 | 11.31 | 12.76 | 11.21 | 13.16 | 11.11 | 13.95 | 11.80 | | | 6.0 | 5 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 43 | 10.21 | 9.86 | 10.71 | 10.50 | 11.49 | 10.32 | 12.11 | 11.23 | 12.48 | 11.12 | 12.85 | 11.02 | 13.58 | 11.70 | | | 7.0 | 6 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 46 | 10.03 | 9.78 | 10.47 | 10.26 | 11.13 | 10.19 | 11.73 | 11.10 | 12.10 | 11.01 | 12.27 | 10.84 | 13.01 | 11.55 | | | 8.0 | 7 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | | 9.0 | 8 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Model **FDUM140VSAPVH** Indoor unit **FDUM71VH (2 units)** Outdoor unit **FDC140VSA**
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | |
|-------------------|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|------|------------------------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | °CDB | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | |
| 11 | | | | | 11.05 | 10.16 | 11.68 | 11.08 | 12.00 | 10.97 | 12.34 | 10.86 | 13.01 | 11.55 | 13.68 | 11.29 | -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| 13 | | | | | 11.56 | 10.34 | 12.25 | 11.27 | 12.59 | 11.16 | 12.95 | 11.04 | 13.69 | 11.73 | 14.42 | 11.46 | -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| 15 | | | | | 12.07 | 10.53 | 12.81 | 11.46 | 13.18 | 11.34 | 13.57 | 11.23 | 14.36 | 11.91 | 15.14 | 11.64 | -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| 17 | | | | | 12.59 | 10.72 | 13.38 | 11.65 | 13.77 | 11.53 | 14.19 | 11.42 | 15.04 | 12.10 | 15.87 | 11.81 | -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| 19 | | | | | 12.86 | 10.82 | 13.66 | 11.74 | 14.07 | 11.63 | 14.49 | 11.51 | 15.35 | 12.18 | 16.20 | 11.89 | -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| 21 | | | | | 13.12 | 10.92 | 13.95 | 11.84 | 14.36 | 11.72 | 14.79 | 11.60 | 15.66 | 12.27 | 16.53 | 11.97 | -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| 23 | | | | | 13.12 | 10.92 | 13.99 | 11.85 | 14.40 | 11.73 | 14.84 | 11.62 | 15.73 | 12.29 | 16.61 | 11.99 | -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| 25 | | | 12.14 | 11.20 | 13.11 | 10.91 | 14.02 | 11.86 | 14.44 | 11.75 | 14.89 | 11.63 | 15.79 | 12.30 | 16.69 | 12.01 | -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| 27 | | | 12.06 | 11.16 | 13.11 | 10.91 | 14.06 | 11.88 | 14.48 | 11.76 | 14.90 | 11.64 | 15.74 | 12.29 | | | -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| 29 | | | 11.97 | 11.13 | 12.91 | 10.84 | 13.82 | 11.80 | 14.26 | 11.69 | 14.70 | 11.57 | 15.56 | 12.24 | | | -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 31 | | | 11.88 | 11.09 | 12.72 | 10.76 | 13.59 | 11.72 | 14.04 | 11.62 | 14.49 | 11.51 | 15.40 | 12.19 | | | 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 33 | 11.18 | 10.28 | 11.67 | 11.01 | 12.52 | 10.69 | 13.36 | 11.64 | 13.82 | 11.55 | 14.29 | 11.45 | 15.22 | 12.15 | | | 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 35 | 10.96 | 10.19 | 11.48 | 10.93 | 12.32 | 10.62 | 13.11 | 11.56 | 13.60 | 11.48 | 14.09 | 11.39 | 15.05 | 12.10 | | | 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 37 | 10.76 | 10.10 | 11.29 | 10.85 | 12.11 | 10.54 | 12.87 | 11.48 | 13.32 | 11.39 | 13.77 | 11.29 | 14.69 | 12.00 | | | 4.0 | 3 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 39 | 10.58 | 10.02 | 11.10 | 10.78 | 11.91 | 10.47 | 12.62 | 11.39 | 13.05 | 11.30 | 13.46 | 11.20 | 14.32 | 11.90 | | | 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 41 | 10.39 | 9.94 | 10.91 | 10.69 | 11.70 | 10.39 | 12.37 | 11.31 | 12.76 | 11.21 | 13.16 | 11.11 | 13.95 | 11.80 | | | 6.0 | 5 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 43 | 10.21 | 9.86 | 10.71 | 10.50 | 11.49 | 10.32 | 12.11 | 11.23 | 12.48 | 11.12 | 12.85 | 11.02 | 13.58 | 11.70 | | | 7.0 | 6 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 46 | 10.03 | 9.78 | 10.47 | 10.26 | 11.13 | 10.19 | 11.73 | 11.10 | 12.10 | 11.01 | 12.27 | 10.84 | 13.01 | 11.55 | | | 8.0 | 7 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | | 9.0 | 8 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Notes (1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
 In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference of Zero.
 (3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

Model **FDUM200VSAPVH** Indoor unit **FDUM100VH (2 unit)** Outdoor unit **FDC200VSA**

Cooling mode (kW)

Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 19.36 | 14.68 | 20.45 | 15.85 | 20.99 | 15.56 | 21.67 | 15.29 | 23.02 | 16.10 | 24.37 | 15.47 |
| 13 | | | | | | 19.46 | 14.71 | 20.57 | 15.88 | 21.13 | 15.59 | 21.78 | 15.32 | 23.09 | 16.12 | 24.40 | 15.47 |
| 15 | | | | | | 19.55 | 14.74 | 20.69 | 15.91 | 21.26 | 15.63 | 21.90 | 15.35 | 23.16 | 16.13 | 24.43 | 15.48 |
| 17 | | | | | | 19.56 | 14.74 | 20.77 | 15.93 | 21.37 | 15.65 | 21.99 | 15.37 | 23.23 | 16.15 | 24.47 | 15.48 |
| 19 | | | | | | 19.64 | 14.76 | 20.84 | 15.95 | 21.48 | 15.68 | 22.09 | 15.39 | 23.30 | 16.16 | 24.51 | 15.49 |
| 21 | | | | | | 19.34 | 14.67 | 20.50 | 15.86 | 21.11 | 15.59 | 21.72 | 15.30 | 22.92 | 16.09 | 24.13 | 15.43 |
| 23 | | | | | | 19.04 | 14.58 | 20.16 | 15.77 | 20.74 | 15.50 | 21.35 | 15.22 | 22.55 | 16.01 | 23.76 | 15.37 |
| 25 | | | 17.82 | 15.26 | 18.89 | 14.54 | 19.99 | 15.72 | 20.56 | 15.45 | 21.16 | 15.18 | 22.37 | 15.98 | 23.57 | 15.34 | |
| 27 | | | 17.68 | 15.22 | 18.74 | 14.49 | 19.82 | 15.68 | 20.38 | 15.41 | 21.25 | 15.20 | 22.13 | 15.93 | | | |
| 29 | | | 17.40 | 15.12 | 18.43 | 14.40 | 19.49 | 15.59 | 20.03 | 15.32 | 20.93 | 15.12 | 21.83 | 15.88 | | | |
| 31 | | | 17.11 | 15.02 | 18.11 | 14.30 | 19.15 | 15.51 | 19.69 | 15.24 | 20.60 | 15.05 | 21.52 | 15.82 | | | |
| 33 | 15.84 | 13.86 | 16.58 | 14.85 | 17.80 | 14.21 | 18.82 | 15.42 | 19.34 | 15.16 | 20.28 | 14.98 | 21.21 | 15.76 | | | |
| 35 | 15.73 | 13.82 | 16.37 | 14.78 | 17.49 | 14.12 | 18.49 | 15.33 | 19.00 | 15.08 | 19.95 | 14.91 | 20.91 | 15.71 | | | |
| 37 | 15.52 | 13.74 | 16.13 | 14.70 | 17.14 | 14.02 | 18.05 | 15.22 | 18.57 | 14.98 | 19.48 | 14.80 | 20.39 | 15.61 | | | |
| 39 | 15.31 | 13.66 | 15.89 | 14.62 | 16.78 | 13.91 | 17.61 | 15.11 | 18.13 | 14.88 | 19.00 | 14.70 | 19.87 | 15.52 | | | |
| 41 | 15.10 | 13.58 | 15.65 | 14.54 | 16.43 | 13.81 | 17.18 | 15.01 | 17.70 | 14.78 | 18.53 | 14.60 | 19.36 | 15.43 | | | |
| 43 | 14.89 | 13.51 | 15.41 | 14.46 | 16.07 | 13.71 | 16.74 | 14.90 | 17.26 | 14.68 | 18.05 | 14.50 | 18.84 | 15.34 | | | |
| 46 | 14.58 | 13.39 | 15.05 | 14.35 | 15.54 | 13.56 | 16.09 | 14.74 | 16.61 | 14.53 | 17.34 | 14.35 | 18.06 | 15.21 | | | |
| 50 | 11.25 | 11.02 | 11.78 | 11.54 | 12.39 | 12.14 | 12.68 | 12.42 | 12.88 | 12.62 | 13.08 | 12.82 | 13.28 | 13.01 | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature | | | | | | | | | | | |
|---------------------------|------|------------------------|-------|-------|-------|-------|--|--|--|--|--|--|--|
| | | °CDB | | | | | | | | | | | |
| | | 16 | 18 | 20 | 22 | 24 | | | | | | | |
| -19.8 | -20 | | | | | | | | | | | | |
| -17.7 | -18 | | | | | | | | | | | | |
| -15.7 | -16 | | | | | | | | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 | | | | | | | |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 | | | | | | | |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 | | | | | | | |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 | | | | | | | |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 | | | | | | | |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 | | | | | | | |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 | | | | | | | |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 | | | | | | | |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 | | | | | | | |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 | | | | | | | |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 | | | | | | | |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 | | | | | | | |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 | | | | | | | |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 | | | | | | | |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 | | | | | | | |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 | | | | | | | |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 | | | | | | | |

PJG000Z013

Model **FDUM250VSAPVH** Indoor unit **FDUM125VH (2 unit)** Outdoor unit **FDC250VSA**

Cooling mode (kW)

Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 24.64 | 20.31 | 26.08 | 21.89 | 26.80 | 21.74 | 27.60 | 21.60 | 29.20 | 22.80 | 30.80 | 22.43 |
| 13 | | | | | | 24.67 | 20.32 | 26.11 | 21.90 | 26.83 | 21.75 | 27.63 | 21.61 | 29.23 | 22.81 | 30.83 | 22.44 |
| 15 | | | | | | 24.69 | 20.33 | 26.14 | 21.91 | 26.86 | 21.76 | 27.66 | 21.62 | 29.26 | 22.82 | 30.86 | 22.45 |
| 17 | | | | | | 24.70 | 20.34 | 26.23 | 21.95 | 26.99 | 21.81 | 27.78 | 21.67 | 29.34 | 22.84 | 30.91 | 22.47 |
| 19 | | | | | | 24.81 | 20.38 | 26.33 | 21.99 | 27.13 | 21.86 | 27.90 | 21.71 | 29.43 | 22.87 | 30.96 | 22.48 |
| 21 | | | | | | 24.43 | 20.22 | 25.90 | 21.81 | 26.67 | 21.68 | 27.43 | 21.54 | 28.96 | 22.71 | 30.48 | 22.33 |
| 23 | | | | | | 24.05 | 20.05 | 25.47 | 21.64 | 26.20 | 21.50 | 26.96 | 21.36 | 28.49 | 22.55 | 30.01 | 22.18 |
| 25 | | | 22.51 | 20.48 | 23.86 | 19.97 | 25.25 | 21.55 | 25.97 | 21.41 | 26.73 | 21.28 | 28.25 | 22.47 | 29.77 | 22.11 | |
| 27 | | | 22.33 | 20.40 | 23.67 | 19.89 | 25.04 | 21.47 | 25.74 | 21.33 | 26.85 | 21.32 | 27.96 | 22.37 | | | |
| 29 | | | 21.97 | 20.23 | 23.27 | 19.72 | 24.61 | 21.30 | 25.30 | 21.16 | 26.44 | 21.17 | 27.57 | 22.24 | | | |
| 31 | | | 21.61 | 20.07 | 22.88 | 19.55 | 24.19 | 21.13 | 24.87 | 20.99 | 26.03 | 21.02 | 27.18 | 22.11 | | | |
| 33 | 20.01 | 18.49 | 20.94 | 19.76 | 22.49 | 19.39 | 23.77 | 20.97 | 24.44 | 20.83 | 25.62 | 20.87 | 26.80 | 21.98 | | | |
| 35 | 19.87 | 18.42 | 20.68 | 19.64 | 22.10 | 19.22 | 23.35 | 20.80 | 24.00 | 20.66 | 25.21 | 20.72 | 26.41 | 21.85 | | | |
| 37 | 19.61 | 18.29 | 20.42 | 19.53 | 21.78 | 19.09 | 22.94 | 20.64 | 23.56 | 20.50 | 24.66 | 20.52 | 25.76 | 21.63 | | | |
| 39 | 19.51 | 18.24 | 20.33 | 19.48 | 21.65 | 19.03 | 22.72 | 20.56 | 23.30 | 20.40 | 24.30 | 20.39 | 25.30 | 21.48 | | | |
| 41 | 20.09 | 18.52 | 20.57 | 19.59 | 21.47 | 18.96 | 22.44 | 20.45 | 22.98 | 20.28 | 23.88 | 20.24 | 24.77 | 21.30 | | | |
| 43 | 19.02 | 18.01 | 19.85 | 19.27 | 21.05 | 18.78 | 21.92 | 20.24 | 22.41 | 20.07 | 23.19 | 19.99 | 23.96 | 21.04 | | | |
| 46 | 17.16 | 16.81 | 17.71 | 17.36 | 18.29 | 17.64 | 18.93 | 18.56 | 19.55 | 19.02 | 20.41 | 19.01 | 21.26 | 20.16 | | | |
| 50 | 11.31 | 11.08 | 11.84 | 11.60 | 12.45 | 12.20 | 12.74 | 12.49 | 12.94 | 12.69 | 13.14 | 12.88 | 13.35 | 13.08 | | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature | | | | | | | | | | | | | |
|---------------------------|------|------------------------|-------|-------|-------|-------|--|--|--|--|--|--|--|--|--|
| | | °CDB | | | | | | | | | | | | | |
| | | 16 | 18 | 20 | 22 | 24 | | | | | | | | | |
| -19.8 | -20 | | | | | | | | | | | | | | |
| -17.7 | -18 | | | | | | | | | | | | | | |
| -15.7 | -16 | | | | | | | | | | | | | | |
| -13.5 | -14 | 13.22 | 13.07 | 12.93 | 12.78 | 12.63 | | | | | | | | | |
| -11.5 | -12 | 13.88 | 13.73 | 13.58 | 13.43 | 13.28 | | | | | | | | | |
| -9.5 | -10 | 14.55 | 14.39 | 14.24 | 14.08 | 13.93 | | | | | | | | | |
| -7.5 | -8 | 15.21 | 15.05 | 14.89 | 14.73 | 14.58 | | | | | | | | | |
| -5.5 | -6 | 15.48 | 15.32 | 15.17 | 15.02 | 14.87 | | | | | | | | | |
| -3.0 | -4 | 15.74 | 15.59 | 15.45 | 15.30 | 15.16 | | | | | | | | | |
| -1.0 | -2 | 16.00 | 15.87 | 15.73 | 15.59 | 15.45 | | | | | | | | | |
| 1.0 | 0 | 16.27 | 16.14 | 16.01 | 15.87 | 15.74 | | | | | | | | | |
| 2.0 | 1 | 16.40 | 16.27 | 16.14 | 16.01 | 15.88 | | | | | | | | | |
| 3.0 | 2 | 18.64 | 18.48 | 18.32 | 18.18 | 18.04 | | | | | | | | | |
| 5.0 | 4 | 23.11 | 22.89 | 22.66 | 22.50 | 22.34 | | | | | | | | | |
| 7.0 | 6 | 27.59 | 27.29 | 27.00 | 26.82 | 26.65 | | | | | | | | | |
| 9.0 | 8 | 28.92 | 28.67 | 28.42 | 28.22 | 28.03 | | | | | | | | | |
| 11.5 | 10 | 30.24 | 30.04 | 29.84 | 29.63 | 29.41 | | | | | | | | | |
| 13.5 | 12 | 31.28 | 31.09 | 30.89 | 30.68 | 30.46 | | | | | | | | | |
| 15.5 | 14 | 32.32 | 32.14 | 31.95 | 31.73 | 31.51 | | | | | | | | | |
| 16.5 | 16 | 32.85 | 32.66 | 32.47 | 32.25 | 32.03 | | | | | | | | | |

- Notes (1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
 (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)


PJG000Z013

Model **FDUM200VSATVH** Indoor unit **FDUM71VH (3 unit)** Outdoor unit **FDC200VSA**
 Cooling mode (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 19.36 | 16.25 | 20.45 | 17.60 | 20.99 | 17.40 | 21.67 | 17.24 | 23.02 | 18.27 | 24.37 | 17.85 |
| 13 | | | | | 19.46 | 16.29 | 20.57 | 17.64 | 21.13 | 17.45 | 21.78 | 17.28 | 23.09 | 18.29 | 24.40 | 17.86 |
| 15 | | | | | 19.55 | 16.32 | 20.69 | 17.68 | 21.26 | 17.49 | 21.90 | 17.31 | 23.16 | 18.31 | 24.43 | 17.87 |
| 17 | | | | | 19.56 | 16.32 | 20.77 | 17.70 | 21.37 | 17.53 | 21.99 | 17.34 | 23.23 | 18.33 | 24.47 | 17.88 |
| 19 | | | | | 19.64 | 16.35 | 20.84 | 17.73 | 21.48 | 17.56 | 22.09 | 17.37 | 23.30 | 18.35 | 24.51 | 17.89 |
| 21 | | | | | 19.34 | 16.24 | 20.50 | 17.61 | 21.11 | 17.44 | 21.72 | 17.26 | 22.92 | 18.24 | 24.13 | 17.80 |
| 23 | | | | | 19.04 | 16.13 | 20.16 | 17.50 | 20.74 | 17.32 | 21.35 | 17.14 | 22.55 | 18.14 | 23.76 | 17.70 |
| 25 | | | 17.82 | 16.64 | 18.89 | 16.08 | 19.99 | 17.44 | 20.56 | 17.27 | 21.16 | 17.09 | 22.37 | 18.09 | 23.57 | 17.66 |
| 27 | | | 17.68 | 16.58 | 18.74 | 16.02 | 19.82 | 17.38 | 20.38 | 17.21 | 21.25 | 17.11 | 22.13 | 18.03 | | |
| 29 | | | 17.40 | 16.47 | 18.43 | 15.91 | 19.49 | 17.27 | 20.03 | 17.10 | 20.93 | 17.02 | 21.83 | 17.94 | | |
| 31 | | | 17.11 | 16.35 | 18.11 | 15.79 | 19.15 | 17.16 | 19.69 | 16.99 | 20.60 | 16.92 | 21.52 | 17.86 | | |
| 33 | 15.84 | 15.02 | 16.58 | 16.14 | 17.80 | 15.68 | 18.82 | 17.05 | 19.34 | 16.88 | 20.28 | 16.82 | 21.21 | 17.78 | | |
| 35 | 15.73 | 14.97 | 16.37 | 16.05 | 17.49 | 15.57 | 18.49 | 16.94 | 19.00 | 16.77 | 19.95 | 16.72 | 20.91 | 17.70 | | |
| 37 | 15.52 | 14.88 | 16.13 | 15.81 | 17.14 | 15.44 | 18.05 | 16.80 | 18.57 | 16.64 | 19.48 | 16.58 | 20.39 | 17.56 | | |
| 39 | 15.31 | 14.79 | 15.89 | 15.57 | 16.78 | 15.31 | 17.61 | 16.66 | 18.13 | 16.50 | 19.00 | 16.44 | 19.87 | 17.42 | | |
| 41 | 15.10 | 14.70 | 15.65 | 15.34 | 16.43 | 15.18 | 17.18 | 16.52 | 17.70 | 16.37 | 18.53 | 16.30 | 19.36 | 17.29 | | |
| 43 | 14.89 | 14.59 | 15.41 | 15.10 | 16.07 | 15.06 | 16.74 | 16.38 | 17.26 | 16.23 | 18.05 | 16.16 | 18.84 | 17.15 | | |
| 46 | 14.58 | 14.29 | 15.05 | 14.75 | 15.54 | 14.87 | 16.09 | 15.76 | 16.61 | 16.04 | 17.34 | 15.96 | 18.06 | 16.95 | | |
| 50 | 11.25 | 11.02 | 11.78 | 11.54 | 12.39 | 12.14 | 12.68 | 12.42 | 12.88 | 12.62 | 13.08 | 12.82 | 13.28 | 13.01 | | |

Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 |

PJG000Z013 

(4) Ceiling suspended type (FDE)

(a) Single type

Model **FDE100VNAVH** Indoor unit FDE100VH Outdoor unit FDC100VNA

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|-------------------|------------------------|----|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | °CDB | | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | | | 16 | 18 | 20 | 22 | 24 | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | 8.12 | 7.37 | 8.59 | 8.01 | 8.82 | 7.95 | 9.07 | 7.89 | 9.56 | 8.38 | 10.06 | 8.23 | | | -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | | | 8.50 | 7.52 | 9.00 | 8.17 | 9.26 | 8.11 | 9.52 | 8.05 | 10.06 | 8.53 | 10.60 | 8.38 | | | -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | | | 8.88 | 7.67 | 9.42 | 8.32 | 9.69 | 8.26 | 9.98 | 8.20 | 10.56 | 8.69 | 11.14 | 8.54 | | | -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | | | 9.26 | 7.83 | 9.84 | 8.48 | 10.12 | 8.42 | 10.43 | 8.36 | 11.05 | 8.85 | 11.67 | 8.69 | | | -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | | | 9.46 | 7.91 | 10.05 | 8.56 | 10.34 | 8.50 | 10.65 | 8.44 | 11.29 | 8.92 | 11.92 | 8.77 | | | -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | | | 9.65 | 7.99 | 10.25 | 8.64 | 10.56 | 8.58 | 10.88 | 8.52 | 11.52 | 9.00 | 12.16 | 8.84 | | | -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | | | 9.65 | 7.99 | 10.28 | 8.65 | 10.59 | 8.59 | 10.91 | 8.53 | 11.56 | 9.01 | 12.21 | 8.85 | | | -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | | | 8.93 | 8.14 | 9.64 | 7.99 | 10.31 | 8.66 | 10.62 | 8.60 | 10.95 | 8.54 | 11.61 | 9.03 | 12.27 | 8.87 | -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | | | 8.86 | 8.11 | 9.64 | 7.99 | 10.34 | 8.68 | 10.65 | 8.61 | 10.96 | 8.55 | 11.57 | 9.01 | | | -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | | | 8.80 | 8.08 | 9.50 | 7.93 | 10.17 | 8.61 | 10.49 | 8.56 | 10.81 | 8.49 | 11.45 | 8.98 | | | -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.09 |
| 1.0 | 0 | | | 8.73 | 8.05 | 9.35 | 7.87 | 9.99 | 8.54 | 10.32 | 8.49 | 10.66 | 8.44 | 11.32 | 8.93 | | | 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | | | 8.22 | 7.48 | 8.58 | 7.98 | 9.21 | 7.81 | 9.82 | 8.48 | 10.16 | 8.43 | 10.51 | 8.39 | 11.19 | 8.89 | 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | | | 8.05 | 7.40 | 8.44 | 7.92 | 9.06 | 7.75 | 9.64 | 8.41 | 10.00 | 8.38 | 10.36 | 8.34 | 11.07 | 8.85 | 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | | | 7.92 | 7.34 | 8.30 | 7.86 | 8.91 | 7.69 | 9.46 | 8.34 | 9.79 | 8.30 | 10.13 | 8.26 | 10.80 | 8.77 | 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | | | 7.78 | 7.27 | 8.16 | 7.80 | 8.75 | 7.62 | 9.28 | 8.27 | 9.59 | 8.23 | 9.90 | 8.18 | 10.53 | 8.68 | 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | | | 7.64 | 7.21 | 8.02 | 7.74 | 8.60 | 7.56 | 9.09 | 8.20 | 9.38 | 8.15 | 9.68 | 8.10 | 10.26 | 8.60 | 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | | | 7.50 | 7.14 | 7.88 | 7.67 | 8.45 | 7.50 | 8.91 | 8.13 | 9.18 | 8.08 | 9.45 | 8.02 | 9.99 | 8.51 | 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | | | 7.33 | 7.06 | 7.67 | 7.52 | 8.22 | 7.41 | 8.58 | 8.01 | 8.83 | 7.95 | 9.07 | 7.89 | 9.57 | 8.38 | 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | | | 7.09 | 6.95 | 7.39 | 7.24 | 7.91 | 7.28 | 8.19 | 7.87 | 8.35 | 7.79 | 8.51 | 7.70 | 8.83 | 8.15 | 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | | | | | | | | | | | | | | | | | 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PFA004Z048

Model **FDE100VSAVH** Indoor unit FDE100VH Outdoor unit FDC100VSA

Cooling mode

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|-------------------|------------------------|----|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | °CDB | °CWB | °CDB | | | | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | | | 16 | 18 | 20 | 22 | 24 | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | 8.12 | 7.37 | 8.59 | 8.01 | 8.82 | 7.95 | 9.07 | 7.89 | 9.56 | 8.38 | 10.06 | 8.23 | | | -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 |
| -17.7 | -18 | | | 8.50 | 7.52 | 9.00 | 8.17 | 9.26 | 8.11 | 9.52 | 8.05 | 10.06 | 8.53 | 10.60 | 8.38 | | | -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 |
| -15.7 | -16 | | | 8.88 | 7.67 | 9.42 | 8.32 | 9.69 | 8.26 | 9.98 | 8.20 | 10.56 | 8.69 | 11.14 | 8.54 | | | -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 |
| -13.5 | -14 | | | 9.26 | 7.83 | 9.84 | 8.48 | 10.12 | 8.42 | 10.43 | 8.36 | 11.05 | 8.85 | 11.67 | 8.69 | | | -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 |
| -11.5 | -12 | | | 9.46 | 7.91 | 10.05 | 8.56 | 10.34 | 8.50 | 10.65 | 8.44 | 11.29 | 8.92 | 11.92 | 8.77 | | | -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 |
| -9.5 | -10 | | | 9.65 | 7.99 | 10.25 | 8.64 | 10.56 | 8.58 | 10.88 | 8.52 | 11.52 | 9.00 | 12.16 | 8.84 | | | -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 |
| -7.5 | -8 | | | 9.65 | 7.99 | 10.28 | 8.65 | 10.59 | 8.59 | 10.91 | 8.53 | 11.56 | 9.01 | 12.21 | 8.85 | | | -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 |
| -5.5 | -6 | | | 8.93 | 8.14 | 9.64 | 7.99 | 10.31 | 8.66 | 10.62 | 8.60 | 10.95 | 8.54 | 11.61 | 9.03 | 12.27 | 8.87 | -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 |
| -3.0 | -4 | | | 8.86 | 8.11 | 9.64 | 7.99 | 10.34 | 8.68 | 10.65 | 8.61 | 10.96 | 8.55 | 11.57 | 9.01 | | | -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 |
| -1.0 | -2 | | | 8.80 | 8.08 | 9.50 | 7.93 | 10.17 | 8.61 | 10.49 | 8.56 | 10.81 | 8.49 | 11.45 | 8.98 | | | -1.0 | -2 | 9.29 | 9.23 | 9.19 | 9.13 | 9.09 |
| 1.0 | 0 | | | 8.73 | 8.05 | 9.35 | 7.87 | 9.99 | 8.54 | 10.32 | 8.49 | 10.66 | 8.44 | 11.32 | 8.93 | | | 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 |
| 2.0 | 1 | | | 8.22 | 7.48 | 8.58 | 7.98 | 9.21 | 7.81 | 9.82 | 8.48 | 10.16 | 8.43 | 10.51 | 8.39 | 11.19 | 8.89 | 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 |
| 3.0 | 2 | | | 8.05 | 7.40 | 8.44 | 7.92 | 9.06 | 7.75 | 9.64 | 8.41 | 10.00 | 8.38 | 10.36 | 8.34 | 11.07 | 8.85 | 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 |
| 5.0 | 4 | | | 7.92 | 7.34 | 8.30 | 7.86 | 8.91 | 7.69 | 9.46 | 8.34 | 9.79 | 8.30 | 10.13 | 8.26 | 10.80 | 8.77 | 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 |
| 7.0 | 6 | | | 7.78 | 7.27 | 8.16 | 7.80 | 8.75 | 7.62 | 9.28 | 8.27 | 9.59 | 8.23 | 9.90 | 8.18 | 10.53 | 8.68 | 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 |
| 9.0 | 8 | | | 7.64 | 7.21 | 8.02 | 7.74 | 8.60 | 7.56 | 9.09 | 8.20 | 9.38 | 8.15 | 9.68 | 8.10 | 10.26 | 8.60 | 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 |
| 11.5 | 10 | | | 7.50 | 7.14 | 7.88 | 7.67 | 8.45 | 7.50 | 8.91 | 8.13 | 9.18 | 8.08 | 9.45 | 8.02 | 9.99 | 8.51 | 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 |
| 13.5 | 12 | | | 7.33 | 7.06 | 7.67 | 7.52 | 8.22 | 7.41 | 8.58 | 8.01 | 8.83 | 7.95 | 9.07 | 7.89 | 9.57 | 8.38 | 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 |
| 15.5 | 14 | | | 7.09 | 6.95 | 7.39 | 7.24 | 7.91 | 7.28 | 8.19 | 7.87 | 8.35 | 7.79 | 8.51 | 7.70 | 8.83 | 8.15 | 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 |
| 16.5 | 16 | | | | | | | | | | | | | | | | | 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 |

PFA004Z048

Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.

(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

Model **FDE125VNAVH** Indoor unit FDE125VH Outdoor unit FDC125VNA
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|----------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|-------|---------|------|----------------------|------|------------------------|-------|-------|-------|-------|----|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | °CDB | | 16 | 18 | 20 | 22 |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 10.15 | 8.20 | 10.74 | 8.83 | 11.03 | 8.76 | 11.34 | 8.68 | 11.96 | 9.14 | 12.57 | 8.96 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 | |
| 13 | | | | | 10.63 | 8.41 | 11.26 | 9.03 | 11.57 | 8.96 | 11.91 | 8.89 | 12.58 | 9.35 | 13.25 | 9.16 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 | |
| 15 | | | | | 11.10 | 8.61 | 11.78 | 9.24 | 12.11 | 9.17 | 12.47 | 9.10 | 13.20 | 9.56 | 13.92 | 9.37 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 | |
| 17 | | | | | 11.58 | 8.82 | 12.29 | 9.45 | 12.65 | 9.38 | 13.04 | 9.31 | 13.82 | 9.77 | 14.59 | 9.58 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 | |
| 19 | | | | | 11.82 | 8.92 | 12.56 | 9.56 | 12.92 | 9.48 | 13.32 | 9.41 | 14.11 | 9.87 | 14.90 | 9.68 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 | |
| 21 | | | | | 12.06 | 9.03 | 12.82 | 9.66 | 13.19 | 9.59 | 13.60 | 9.52 | 14.40 | 9.97 | 15.20 | 9.77 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 | |
| 23 | | | | | 12.06 | 9.03 | 12.85 | 9.68 | 13.23 | 9.60 | 13.64 | 9.53 | 14.45 | 9.99 | 15.27 | 9.79 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 | |
| 25 | | | 11.16 | 9.16 | 12.06 | 9.03 | 12.89 | 9.69 | 13.27 | 9.62 | 13.68 | 9.55 | 14.51 | 10.01 | 15.34 | 9.82 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 | |
| 27 | | | 11.08 | 9.13 | 12.05 | 9.02 | 12.92 | 9.71 | 13.31 | 9.64 | 13.69 | 9.55 | 14.47 | 9.99 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 | |
| 29 | | | 11.00 | 9.09 | 11.87 | 8.94 | 12.71 | 9.62 | 13.11 | 9.56 | 13.51 | 9.48 | 14.31 | 9.94 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 | |
| 31 | | | 10.92 | 9.05 | 11.69 | 8.87 | 12.49 | 9.53 | 12.90 | 9.47 | 13.32 | 9.41 | 14.15 | 9.88 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 | |
| 33 | 10.27 | 8.49 | 10.72 | 8.96 | 11.51 | 8.79 | 12.27 | 9.44 | 12.70 | 9.40 | 13.13 | 9.34 | 13.99 | 9.83 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 | |
| 35 | 10.07 | 8.39 | 10.55 | 8.88 | 11.33 | 8.71 | 12.06 | 9.35 | 12.50 | 9.32 | 12.94 | 9.27 | 13.83 | 9.77 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 | |
| 37 | 9.90 | 8.30 | 10.38 | 8.80 | 11.13 | 8.62 | 11.83 | 9.26 | 12.24 | 9.22 | 12.66 | 9.17 | 13.50 | 9.66 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 | |
| 39 | 9.72 | 8.21 | 10.20 | 8.71 | 10.94 | 8.54 | 11.60 | 9.17 | 11.99 | 9.12 | 12.38 | 9.06 | 13.16 | 9.54 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 | |
| 41 | 9.55 | 8.13 | 10.02 | 8.63 | 10.75 | 8.46 | 11.37 | 9.08 | 11.73 | 9.02 | 12.09 | 8.96 | 12.82 | 9.43 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 | |
| 43 | 9.38 | 8.04 | 9.85 | 8.55 | 10.56 | 8.38 | 11.14 | 8.99 | 11.47 | 8.92 | 11.81 | 8.85 | 12.48 | 9.31 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 | |
| 46 | 9.21 | 7.96 | 9.53 | 8.41 | 10.28 | 8.26 | 10.88 | 8.89 | 11.12 | 8.79 | 11.28 | 8.66 | 11.96 | 9.14 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 | |
| 50 | 7.43 | 7.11 | 7.63 | 7.48 | 8.25 | 7.42 | 8.67 | 8.04 | 8.78 | 7.94 | 8.80 | 7.80 | 9.05 | 8.22 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 | |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 | |

PFA004Z048 

Model **FDE125VSAVH** Indoor unit FDE125VH Outdoor unit FDC125VSA
 Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | |
|----------------------|------------------------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|-------|---------|------|----------------------|------|------------------------|-------|-------|-------|-------|----|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | | | °CDB | | 16 | 18 | 20 | 22 |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 10.15 | 8.20 | 10.74 | 8.83 | 11.03 | 8.76 | 11.34 | 8.68 | 11.96 | 9.14 | 12.57 | 8.96 | -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 | |
| 13 | | | | | 10.63 | 8.41 | 11.26 | 9.03 | 11.57 | 8.96 | 11.91 | 8.89 | 12.58 | 9.35 | 13.25 | 9.16 | -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 | |
| 15 | | | | | 11.10 | 8.61 | 11.78 | 9.24 | 12.11 | 9.17 | 12.47 | 9.10 | 13.20 | 9.56 | 13.92 | 9.37 | -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 | |
| 17 | | | | | 11.58 | 8.82 | 12.29 | 9.45 | 12.65 | 9.38 | 13.04 | 9.31 | 13.82 | 9.77 | 14.59 | 9.58 | -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 | |
| 19 | | | | | 11.82 | 8.92 | 12.56 | 9.56 | 12.92 | 9.48 | 13.32 | 9.41 | 14.11 | 9.87 | 14.90 | 9.68 | -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 | |
| 21 | | | | | 12.06 | 9.03 | 12.82 | 9.66 | 13.19 | 9.59 | 13.60 | 9.52 | 14.40 | 9.97 | 15.20 | 9.77 | -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 | |
| 23 | | | | | 12.06 | 9.03 | 12.85 | 9.68 | 13.23 | 9.60 | 13.64 | 9.53 | 14.45 | 9.99 | 15.27 | 9.79 | -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 | |
| 25 | | | 11.16 | 9.16 | 12.06 | 9.03 | 12.89 | 9.69 | 13.27 | 9.62 | 13.68 | 9.55 | 14.51 | 10.01 | 15.34 | 9.82 | -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 | |
| 27 | | | 11.08 | 9.13 | 12.05 | 9.02 | 12.92 | 9.71 | 13.31 | 9.64 | 13.69 | 9.55 | 14.47 | 9.99 | | | -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 | |
| 29 | | | 11.00 | 9.09 | 11.87 | 8.94 | 12.71 | 9.62 | 13.11 | 9.56 | 13.51 | 9.48 | 14.31 | 9.94 | | | -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 | |
| 31 | | | 10.92 | 9.05 | 11.69 | 8.87 | 12.49 | 9.53 | 12.90 | 9.47 | 13.32 | 9.41 | 14.15 | 9.88 | | | 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 | |
| 33 | 10.27 | 8.49 | 10.72 | 8.96 | 11.51 | 8.79 | 12.27 | 9.44 | 12.70 | 9.40 | 13.13 | 9.34 | 13.99 | 9.83 | | | 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 | |
| 35 | 10.07 | 8.39 | 10.55 | 8.88 | 11.33 | 8.71 | 12.06 | 9.35 | 12.50 | 9.32 | 12.94 | 9.27 | 13.83 | 9.77 | | | 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 | |
| 37 | 9.90 | 8.30 | 10.38 | 8.80 | 11.13 | 8.62 | 11.83 | 9.26 | 12.24 | 9.22 | 12.66 | 9.17 | 13.50 | 9.66 | | | 4.0 | 3 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 | |
| 39 | 9.72 | 8.21 | 10.20 | 8.71 | 10.94 | 8.54 | 11.60 | 9.17 | 11.99 | 9.12 | 12.38 | 9.06 | 13.16 | 9.54 | | | 5.0 | 4 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 | |
| 41 | 9.55 | 8.13 | 10.02 | 8.63 | 10.75 | 8.46 | 11.37 | 9.08 | 11.73 | 9.02 | 12.09 | 8.96 | 12.82 | 9.43 | | | 6.0 | 5 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 | |
| 43 | 9.38 | 8.04 | 9.85 | 8.55 | 10.56 | 8.38 | 11.14 | 8.99 | 11.47 | 8.92 | 11.81 | 8.85 | 12.48 | 9.31 | | | 7.0 | 6 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 | |
| 46 | 9.21 | 7.96 | 9.53 | 8.41 | 10.28 | 8.26 | 10.88 | 8.89 | 11.12 | 8.79 | 11.28 | 8.66 | 11.96 | 9.14 | | | 8.0 | 7 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 | |
| 50 | 7.43 | 7.11 | 7.63 | 7.48 | 8.25 | 7.42 | 8.67 | 8.04 | 8.78 | 7.94 | 8.80 | 7.80 | 9.05 | 8.22 | | | 9.0 | 8 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 | |
| | | | | | | | | | | | | | | | | | 10.0 | 9 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 | |

Notes (1) These data show average status.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
 In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference of Zero.

(3) Symbols are as follows
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)


PFA004Z048 

Model FDE140VNAVH Indoor unit FDE140VH Outdoor unit FDC140VNA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.05 | 8.83 | 11.68 | 9.49 | 12.00 | 9.41 | 12.34 | 9.33 | 13.01 | 9.81 | 13.68 | 9.62 |
| 13 | | | | | 11.56 | 9.05 | 12.25 | 9.71 | 12.59 | 9.63 | 12.95 | 9.55 | 13.69 | 10.04 | 14.42 | 9.84 |
| 15 | | | | | 12.07 | 9.27 | 12.81 | 9.94 | 13.18 | 9.86 | 13.57 | 9.78 | 14.36 | 10.27 | 15.14 | 10.07 |
| 17 | | | | | 12.59 | 9.49 | 13.38 | 10.17 | 13.77 | 10.09 | 14.19 | 10.02 | 15.04 | 10.50 | 15.87 | 10.29 |
| 19 | | | | | 12.86 | 9.61 | 13.66 | 10.28 | 14.07 | 10.21 | 14.49 | 10.13 | 15.35 | 10.61 | 16.20 | 10.40 |
| 21 | | | | | 13.12 | 9.73 | 13.95 | 10.40 | 14.36 | 10.32 | 14.79 | 10.25 | 15.66 | 10.72 | 16.53 | 10.51 |
| 23 | | | | | 13.12 | 9.73 | 13.99 | 10.42 | 14.40 | 10.34 | 14.84 | 10.26 | 15.73 | 10.74 | 16.61 | 10.53 |
| 25 | | | 12.14 | 9.87 | 13.11 | 9.73 | 14.02 | 10.43 | 14.44 | 10.35 | 14.89 | 10.28 | 15.79 | 10.76 | 16.69 | 10.56 |
| 27 | | | 12.06 | 9.83 | 13.11 | 9.73 | 14.06 | 10.45 | 14.48 | 10.37 | 14.90 | 10.29 | 15.74 | 10.75 | | |
| 29 | | | 11.97 | 9.79 | 12.91 | 9.64 | 13.82 | 10.35 | 14.26 | 10.28 | 14.70 | 10.21 | 15.56 | 10.68 | | |
| 31 | | | 11.88 | 9.75 | 12.72 | 9.55 | 13.59 | 10.26 | 14.04 | 10.20 | 14.49 | 10.13 | 15.40 | 10.63 | | |
| 33 | 11.18 | 9.15 | 11.67 | 9.65 | 12.52 | 9.46 | 13.36 | 10.16 | 13.82 | 10.11 | 14.29 | 10.05 | 15.22 | 10.57 | | |
| 35 | 10.96 | 9.04 | 11.48 | 9.56 | 12.32 | 9.37 | 13.11 | 10.06 | 13.60 | 10.02 | 14.09 | 9.98 | 15.05 | 10.50 | | |
| 37 | 10.76 | 8.94 | 11.29 | 9.47 | 12.11 | 9.29 | 12.87 | 9.96 | 13.32 | 9.91 | 13.77 | 9.86 | 14.69 | 10.38 | | |
| 39 | 10.58 | 8.85 | 11.10 | 9.38 | 11.91 | 9.20 | 12.62 | 9.86 | 13.05 | 9.81 | 13.46 | 9.74 | 14.32 | 10.25 | | |
| 41 | 10.39 | 8.76 | 10.91 | 9.29 | 11.70 | 9.10 | 12.37 | 9.76 | 12.76 | 9.70 | 13.16 | 9.63 | 13.95 | 10.13 | | |
| 43 | 10.21 | 8.67 | 10.71 | 9.20 | 11.49 | 9.02 | 12.11 | 9.66 | 12.48 | 9.59 | 12.85 | 9.52 | 13.58 | 10.00 | | |
| 46 | 10.03 | 8.57 | 10.47 | 9.09 | 11.13 | 8.86 | 11.73 | 9.51 | 12.10 | 9.45 | 12.27 | 9.31 | 13.01 | 9.81 | | |
| 50 | 7.61 | 7.42 | 7.88 | 7.72 | 8.35 | 7.72 | 8.75 | 8.38 | 8.97 | 8.31 | 8.98 | 8.16 | 9.33 | 8.64 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|
| | °CDB | | 16 | | 18 | | 20 | | 22 | | 24 | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | 16 | 18 | 20 | 22 | 24 | |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 | -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 | -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 | -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 | -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 | -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 | 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 | 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 | 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 | 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 | 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 | | | | | | | |


PFA004Z048 

Model FDE140VSAVH Indoor unit FDE140VH Outdoor unit FDC140VSA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | 14 °CWB | 16 °CWB | 18 °CWB | 19 °CWB | 20 °CWB | 22 °CWB | 24 °CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 11.05 | 8.83 | 11.68 | 9.49 | 12.00 | 9.41 | 12.34 | 9.33 | 13.01 | 9.81 | 13.68 | 9.62 |
| 13 | | | | | 11.56 | 9.05 | 12.25 | 9.71 | 12.59 | 9.63 | 12.95 | 9.55 | 13.69 | 10.04 | 14.42 | 9.84 |
| 15 | | | | | 12.07 | 9.27 | 12.81 | 9.94 | 13.18 | 9.86 | 13.57 | 9.78 | 14.36 | 10.27 | 15.14 | 10.07 |
| 17 | | | | | 12.59 | 9.49 | 13.38 | 10.17 | 13.77 | 10.09 | 14.19 | 10.02 | 15.04 | 10.50 | 15.87 | 10.29 |
| 19 | | | | | 12.86 | 9.61 | 13.66 | 10.28 | 14.07 | 10.21 | 14.49 | 10.13 | 15.35 | 10.61 | 16.20 | 10.40 |
| 21 | | | | | 13.12 | 9.73 | 13.95 | 10.40 | 14.36 | 10.32 | 14.79 | 10.25 | 15.66 | 10.72 | 16.53 | 10.51 |
| 23 | | | | | 13.12 | 9.73 | 13.99 | 10.42 | 14.40 | 10.34 | 14.84 | 10.26 | 15.73 | 10.74 | 16.61 | 10.53 |
| 25 | | | 12.14 | 9.87 | 13.11 | 9.73 | 14.02 | 10.43 | 14.44 | 10.35 | 14.89 | 10.28 | 15.79 | 10.76 | 16.69 | 10.56 |
| 27 | | | 12.06 | 9.83 | 13.11 | 9.73 | 14.06 | 10.45 | 14.48 | 10.37 | 14.90 | 10.29 | 15.74 | 10.75 | | |
| 29 | | | 11.97 | 9.79 | 12.91 | 9.64 | 13.82 | 10.35 | 14.26 | 10.28 | 14.70 | 10.21 | 15.56 | 10.68 | | |
| 31 | | | 11.88 | 9.75 | 12.72 | 9.55 | 13.59 | 10.26 | 14.04 | 10.20 | 14.49 | 10.13 | 15.40 | 10.63 | | |
| 33 | 11.18 | 9.15 | 11.67 | 9.65 | 12.52 | 9.46 | 13.36 | 10.16 | 13.82 | 10.11 | 14.29 | 10.05 | 15.22 | 10.57 | | |
| 35 | 10.96 | 9.04 | 11.48 | 9.56 | 12.32 | 9.37 | 13.11 | 10.06 | 13.60 | 10.02 | 14.09 | 9.98 | 15.05 | 10.50 | | |
| 37 | 10.76 | 8.94 | 11.29 | 9.47 | 12.11 | 9.29 | 12.87 | 9.96 | 13.32 | 9.91 | 13.77 | 9.86 | 14.69 | 10.38 | | |
| 39 | 10.58 | 8.85 | 11.10 | 9.38 | 11.91 | 9.20 | 12.62 | 9.86 | 13.05 | 9.81 | 13.46 | 9.74 | 14.32 | 10.25 | | |
| 41 | 10.39 | 8.76 | 10.91 | 9.29 | 11.70 | 9.10 | 12.37 | 9.76 | 12.76 | 9.70 | 13.16 | 9.63 | 13.95 | 10.13 | | |
| 43 | 10.21 | 8.67 | 10.71 | 9.20 | 11.49 | 9.02 | 12.11 | 9.66 | 12.48 | 9.59 | 12.85 | 9.52 | 13.58 | 10.00 | | |
| 46 | 10.03 | 8.57 | 10.47 | 9.09 | 11.13 | 8.86 | 11.73 | 9.51 | 12.10 | 9.45 | 12.27 | 9.31 | 13.01 | 9.81 | | |
| 50 | 7.61 | 7.42 | 7.88 | 7.72 | 8.35 | 7.72 | 8.75 | 8.38 | 8.97 | 8.31 | 8.98 | 8.16 | 9.33 | 8.64 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|
| | °CDB | | 16 | | 18 | | 20 | | 22 | | 24 | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | 16 | 18 | 20 | 22 | 24 | |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 | -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 | -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 | -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 | -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 | -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 | 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 | 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 | 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 | 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 | 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 | | | | | | | |


PFA004Z048 

- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

(b) Twin type


Model **FDE100VNAPVH** Indoor unit FDE50VH (2 units) Outdoor unit FDC100VNA Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 18 °CDB | | | | 21 °CDB | | | | 23 °CDB | | | | 26 °CDB | | | | 27 °CDB | | | | °CDB | | 16 | | 18 | | 20 | | 22 | | 24 | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | | | | | | | | | | | | | | |
| TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | 8.12 | 6.61 | 8.59 | 7.12 | 8.82 | 7.06 | 9.07 | 7.00 | 9.56 | 7.38 | 10.06 | 7.23 | -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 | -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 | |
| 13 | | | | | | 8.50 | 6.77 | 9.00 | 7.28 | 9.26 | 7.23 | 9.52 | 7.17 | 10.06 | 7.54 | 10.60 | 7.40 | -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 | -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 | |
| 15 | | | | | | 8.88 | 6.93 | 9.42 | 7.45 | 9.69 | 7.39 | 9.98 | 7.33 | 10.56 | 7.71 | 11.14 | 7.56 | -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 | -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 | |
| 17 | | | | | | 9.26 | 7.10 | 9.84 | 7.62 | 10.12 | 7.56 | 10.43 | 7.50 | 11.05 | 7.88 | 11.67 | 7.73 | -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 | -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 | |
| 19 | | | | | | 9.46 | 7.19 | 10.05 | 7.70 | 10.34 | 7.64 | 10.65 | 7.58 | 11.29 | 7.96 | 11.92 | 7.80 | -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 | 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 | |
| 21 | | | | | | 9.65 | 7.27 | 10.25 | 7.78 | 10.56 | 7.73 | 10.88 | 7.67 | 11.52 | 8.04 | 12.16 | 7.88 | 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 | 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 | |
| 23 | | | | | | 9.65 | 7.27 | 10.28 | 7.80 | 10.59 | 7.74 | 10.91 | 7.68 | 11.56 | 8.05 | 12.21 | 7.90 | 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 | 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 | |
| 25 | | | 8.93 | 7.38 | 9.64 | 7.27 | 10.31 | 7.81 | 10.62 | 7.75 | 10.95 | 7.70 | 11.61 | 8.07 | 12.27 | 7.91 | 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 | 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 | | |
| 27 | | | 8.86 | 7.35 | 9.64 | 7.27 | 10.34 | 7.82 | 10.65 | 7.76 | 10.96 | 7.70 | 11.57 | 8.05 | | | 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 | 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 | | |
| 29 | | | 8.80 | 7.32 | 9.50 | 7.20 | 10.17 | 7.75 | 10.49 | 7.70 | 10.81 | 7.64 | 11.45 | 8.01 | | | 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 | | | | | | | | | |
| 31 | | | 8.73 | 7.29 | 9.35 | 7.14 | 9.99 | 7.68 | 10.32 | 7.63 | 10.66 | 7.59 | 11.32 | 7.97 | | | | | | | | | | | | | | | | | | |
| 33 | 8.22 | 6.83 | 8.58 | 7.22 | 9.21 | 7.08 | 9.82 | 7.61 | 10.16 | 7.57 | 10.51 | 7.53 | 11.19 | 7.92 | | | | | | | | | | | | | | | | | | |
| 35 | 8.05 | 6.75 | 8.44 | 7.15 | 9.06 | 7.01 | 9.64 | 7.54 | 10.00 | 7.51 | 10.36 | 7.47 | 11.07 | 7.88 | | | | | | | | | | | | | | | | | | |
| 37 | 7.92 | 6.68 | 8.30 | 7.09 | 8.91 | 6.95 | 9.46 | 7.46 | 9.79 | 7.43 | 10.13 | 7.39 | 10.80 | 7.79 | | | | | | | | | | | | | | | | | | |
| 39 | 7.78 | 6.61 | 8.16 | 7.02 | 8.75 | 6.88 | 9.28 | 7.39 | 9.59 | 7.35 | 9.90 | 7.30 | 10.53 | 7.70 | | | | | | | | | | | | | | | | | | |
| 41 | 7.64 | 6.54 | 8.02 | 6.96 | 8.60 | 6.81 | 9.09 | 7.32 | 9.38 | 7.27 | 9.68 | 7.22 | 10.26 | 7.61 | | | | | | | | | | | | | | | | | | |
| 43 | 7.50 | 6.48 | 7.88 | 6.89 | 8.45 | 6.75 | 8.91 | 7.25 | 9.18 | 7.20 | 9.45 | 7.14 | 9.99 | 7.52 | | | | | | | | | | | | | | | | | | |
| 46 | 7.33 | 6.39 | 7.67 | 6.80 | 8.22 | 6.65 | 8.58 | 7.12 | 8.83 | 7.07 | 9.07 | 7.00 | 9.57 | 7.38 | | | | | | | | | | | | | | | | | | |
| 50 | 7.09 | 6.28 | 7.39 | 6.67 | 7.91 | 6.52 | 8.19 | 6.97 | 8.35 | 6.89 | 8.51 | 6.81 | 8.83 | 7.14 | | | | | | | | | | | | | | | | | | |

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Model **FDE100VSAPVH** Indoor unit FDE50VH (2 units) Outdoor unit FDC100VSA Cooling mode (kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. | | Indoor air temperature | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------------------|-------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 18 °CDB | | | | 21 °CDB | | | | 23 °CDB | | | | 26 °CDB | | | | 27 °CDB | | | | °CDB | | 16 | | 18 | | 20 | | 22 | | 24 | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | °CDB | °CWB | | | | | | | | | | | | | | |
| TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | |
| 11 | | | | | | 8.12 | 6.61 | 8.59 | 7.12 | 8.82 | 7.06 | 9.07 | 7.00 | 9.56 | 7.38 | 10.06 | 7.23 | -19.8 | -20 | 6.82 | 6.79 | 6.77 | 6.75 | 6.72 | -17.7 | -18 | 7.16 | 7.14 | 7.10 | 7.08 | 7.04 | |
| 13 | | | | | | 8.50 | 6.77 | 9.00 | 7.28 | 9.26 | 7.23 | 9.52 | 7.17 | 10.06 | 7.54 | 10.60 | 7.40 | -15.7 | -16 | 7.50 | 7.46 | 7.44 | 7.40 | 7.37 | -13.5 | -14 | 7.86 | 7.83 | 7.79 | 7.76 | 7.72 | |
| 15 | | | | | | 8.88 | 6.93 | 9.42 | 7.45 | 9.69 | 7.39 | 9.98 | 7.33 | 10.56 | 7.71 | 11.14 | 7.56 | -11.5 | -12 | 8.23 | 8.19 | 8.15 | 8.12 | 8.08 | -9.5 | -10 | 8.58 | 8.55 | 8.50 | 8.47 | 8.42 | |
| 17 | | | | | | 9.26 | 7.10 | 9.84 | 7.62 | 10.12 | 7.56 | 10.43 | 7.50 | 11.05 | 7.88 | 11.67 | 7.73 | -7.5 | -8 | 8.93 | 8.89 | 8.85 | 8.80 | 8.75 | -5.5 | -6 | 9.05 | 9.00 | 8.97 | 8.91 | 8.86 | |
| 19 | | | | | | 9.46 | 7.19 | 10.05 | 7.70 | 10.34 | 7.64 | 10.65 | 7.58 | 11.29 | 7.96 | 11.92 | 7.80 | -3.0 | -4 | 9.17 | 9.12 | 9.07 | 9.03 | 8.97 | 1.0 | 0 | 9.40 | 9.34 | 9.29 | 9.23 | 9.18 | |
| 21 | | | | | | 9.65 | 7.27 | 10.25 | 7.78 | 10.56 | 7.73 | 10.88 | 7.67 | 11.52 | 8.04 | 12.16 | 7.88 | 2.0 | 1 | 9.45 | 9.39 | 9.34 | 9.28 | 9.22 | 3.0 | 2 | 9.82 | 9.77 | 9.71 | 9.67 | 9.63 | |
| 23 | | | | | | 9.65 | 7.27 | 10.28 | 7.80 | 10.59 | 7.74 | 10.91 | 7.68 | 11.56 | 8.05 | 12.21 | 7.90 | 5.0 | 4 | 10.21 | 10.15 | 10.09 | 10.08 | 10.07 | 7.0 | 6 | 11.33 | 11.27 | 11.20 | 11.22 | 11.23 | |
| 25 | | | 8.93 | 7.38 | 9.64 | 7.27 | 10.31 | 7.81 | 10.62 | 7.75 | 10.95 | 7.70 | 11.61 | 8.07 | 12.27 | 7.91 | 9.0 | 8 | 11.78 | 11.71 | 11.64 | 11.62 | 11.59 | 11.5 | 10 | 12.23 | 12.16 | 12.09 | 12.02 | 11.94 | | |
| 27 | | | 8.86 | 7.35 | 9.64 | 7.27 | 10.34 | 7.82 | 10.65 | 7.76 | 10.96 | 7.70 | 11.57 | 8.05 | | | 13.5 | 12 | 12.91 | 12.83 | 12.75 | 12.65 | 12.60 | 15.5 | 14 | 13.59 | 13.50 | 13.42 | 13.29 | 13.26 | | |
| 29 | | | 8.80 | 7.32 | 9.50 | 7.20 | 10.17 | 7.75 | 10.49 | 7.70 | 10.81 | 7.64 | 11.45 | 8.01 | | | 16.5 | 16 | 13.93 | 13.84 | 13.75 | 13.61 | 13.59 | | | | | | | | | |
| 31 | | | 8.73 | 7.29 | 9.35 | 7.14 | 9.99 | 7.68 | 10.32 | 7.63 | 10.66 | 7.59 | 11.32 | 7.97 | | | | | | | | | | | | | | | | | | |
| 33 | 8.22 | 6.83 | 8.58 | 7.22 | 9.21 | 7.08 | 9.82 | 7.61 | 10.16 | 7.57 | 10.51 | 7.53 | 11.19 | 7.92 | | | | | | | | | | | | | | | | | | |
| 35 | 8.05 | 6.75 | 8.44 | 7.15 | 9.06 | 7.01 | 9.64 | 7.54 | 10.00 | 7.51 | 10.36 | 7.47 | 11.07 | 7.88 | | | | | | | | | | | | | | | | | | |
| 37 | 7.92 | 6.68 | 8.30 | 7.09 | 8.91 | 6.95 | 9.46 | 7.46 | 9.79 | 7.43 | 10.13 | 7.39 | 10.80 | 7.79 | | | | | | | | | | | | | | | | | | |
| 39 | 7.78 | 6.61 | 8.16 | 7.02 | 8.75 | 6.88 | 9.28 | 7.39 | 9.59 | 7.35 | 9.90 | 7.30 | 10.53 | 7.70 | | | | | | | | | | | | | | | | | | |
| 41 | 7.64 | 6.54 | 8.02 | 6.96 | 8.60 | 6.81 | 9.09 | 7.32 | 9.38 | 7.27 | 9.68 | 7.22 | 10.26 | 7.61 | | | | | | | | | | | | | | | | | | |
| 43 | 7.50 | 6.48 | 7.88 | 6.89 | 8.45 | 6.75 | 8.91 | 7.25 | 9.18 | 7.20 | 9.45 | 7.14 | 9.99 | 7.52 | | | | | | | | | | | | | | | | | | |
| 46 | 7.33 | 6.39 | 7.67 | 6.80 | 8.22 | 6.65 | 8.58 | 7.12 | 8.83 | 7.07 | 9.07 | 7.00 | 9.57 | 7.38 | | | | | | | | | | | | | | | | | | |
| 50 | 7.09 | 6.28 | 7.39 | 6.67 | 7.91 | 6.52 | 8.19 | 6.97 | 8.35 | 6.89 | 8.51 | 6.81 | 8.83 | 7.14 | | | | | | | | | | | | | | | | | | |

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- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

Model **FDE125VNAPVH** Indoor unit **FDE60VH (2 units)** Outdoor unit **FDC125VNA**
 Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|-------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.15 | 9.21 | 10.74 | 10.02 | 11.03 | 9.94 | 11.34 | 9.87 | 11.96 | 10.47 | 12.57 | 10.29 |
| 13 | | | | | 10.63 | 9.40 | 11.26 | 10.21 | 11.57 | 10.13 | 11.91 | 10.06 | 12.58 | 10.67 | 13.25 | 10.48 |
| 15 | | | | | 11.10 | 9.59 | 11.78 | 10.41 | 12.11 | 10.33 | 12.47 | 10.25 | 13.20 | 10.86 | 13.92 | 10.67 |
| 17 | | | | | 11.58 | 9.79 | 12.29 | 10.60 | 12.65 | 10.52 | 13.04 | 10.45 | 13.82 | 11.06 | 14.59 | 10.87 |
| 19 | | | | | 11.82 | 9.89 | 12.56 | 10.70 | 12.92 | 10.62 | 13.32 | 10.55 | 14.11 | 11.15 | 14.90 | 10.96 |
| 21 | | | | | 12.06 | 9.99 | 12.82 | 10.80 | 13.19 | 10.72 | 13.60 | 10.65 | 14.40 | 11.25 | 15.20 | 11.05 |
| 23 | | | | | 12.06 | 9.99 | 12.85 | 10.81 | 13.23 | 10.74 | 13.64 | 10.66 | 14.45 | 11.26 | 15.27 | 11.07 |
| 25 | | | 11.16 | 10.17 | 12.06 | 9.99 | 12.89 | 10.83 | 13.27 | 10.75 | 13.68 | 10.68 | 14.51 | 11.28 | 15.34 | 11.09 |
| 27 | | | 11.08 | 10.13 | 12.05 | 9.99 | 12.92 | 10.84 | 13.31 | 10.77 | 13.69 | 10.68 | 14.47 | 11.27 | | |
| 29 | | | 11.00 | 10.10 | 11.87 | 9.91 | 12.71 | 10.76 | 13.11 | 10.69 | 13.51 | 10.62 | 14.31 | 11.22 | | |
| 31 | | | 10.92 | 10.06 | 11.69 | 9.84 | 12.49 | 10.68 | 12.90 | 10.62 | 13.32 | 10.55 | 14.15 | 11.17 | | |
| 33 | 10.27 | 9.35 | 10.72 | 9.97 | 11.51 | 9.76 | 12.27 | 10.59 | 12.70 | 10.54 | 13.13 | 10.48 | 13.99 | 11.12 | | |
| 35 | 10.07 | 9.25 | 10.55 | 9.90 | 11.33 | 9.69 | 12.06 | 10.51 | 12.50 | 10.47 | 12.94 | 10.42 | 13.83 | 11.06 | | |
| 37 | 9.90 | 9.17 | 10.38 | 9.82 | 11.13 | 9.61 | 11.83 | 10.43 | 12.24 | 10.37 | 12.66 | 10.32 | 13.50 | 10.96 | | |
| 39 | 9.72 | 9.09 | 10.20 | 9.75 | 10.94 | 9.53 | 11.60 | 10.34 | 11.99 | 10.28 | 12.38 | 10.22 | 13.16 | 10.85 | | |
| 41 | 9.55 | 9.01 | 10.02 | 9.67 | 10.75 | 9.45 | 11.37 | 10.25 | 11.73 | 10.19 | 12.09 | 10.12 | 12.82 | 10.74 | | |
| 43 | 9.38 | 8.93 | 9.85 | 9.59 | 10.56 | 9.37 | 11.14 | 10.17 | 11.47 | 10.10 | 11.81 | 10.03 | 12.48 | 10.64 | | |
| 46 | 9.21 | 8.85 | 9.53 | 9.34 | 10.28 | 9.26 | 10.88 | 10.07 | 11.12 | 9.97 | 11.28 | 9.85 | 11.96 | 10.47 | | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

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Model **FDE125VSAPVH** Indoor unit **FDE60VH (2 units)** Outdoor unit **FDC125VSA**
 Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|-------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 10.15 | 9.21 | 10.74 | 10.02 | 11.03 | 9.94 | 11.34 | 9.87 | 11.96 | 10.47 | 12.57 | 10.29 |
| 13 | | | | | 10.63 | 9.40 | 11.26 | 10.21 | 11.57 | 10.13 | 11.91 | 10.06 | 12.58 | 10.67 | 13.25 | 10.48 |
| 15 | | | | | 11.10 | 9.59 | 11.78 | 10.41 | 12.11 | 10.33 | 12.47 | 10.25 | 13.20 | 10.86 | 13.92 | 10.67 |
| 17 | | | | | 11.58 | 9.79 | 12.29 | 10.60 | 12.65 | 10.52 | 13.04 | 10.45 | 13.82 | 11.06 | 14.59 | 10.87 |
| 19 | | | | | 11.82 | 9.89 | 12.56 | 10.70 | 12.92 | 10.62 | 13.32 | 10.55 | 14.11 | 11.15 | 14.90 | 10.96 |
| 21 | | | | | 12.06 | 9.99 | 12.82 | 10.80 | 13.19 | 10.72 | 13.60 | 10.65 | 14.40 | 11.25 | 15.20 | 11.05 |
| 23 | | | | | 12.06 | 9.99 | 12.85 | 10.81 | 13.23 | 10.74 | 13.64 | 10.66 | 14.45 | 11.26 | 15.27 | 11.07 |
| 25 | | | 11.16 | 10.17 | 12.06 | 9.99 | 12.89 | 10.83 | 13.27 | 10.75 | 13.68 | 10.68 | 14.51 | 11.28 | 15.34 | 11.09 |
| 27 | | | 11.08 | 10.13 | 12.05 | 9.99 | 12.92 | 10.84 | 13.31 | 10.77 | 13.69 | 10.68 | 14.47 | 11.27 | | |
| 29 | | | 11.00 | 10.10 | 11.87 | 9.91 | 12.71 | 10.76 | 13.11 | 10.69 | 13.51 | 10.62 | 14.31 | 11.22 | | |
| 31 | | | 10.92 | 10.06 | 11.69 | 9.84 | 12.49 | 10.68 | 12.90 | 10.62 | 13.32 | 10.55 | 14.15 | 11.17 | | |
| 33 | 10.27 | 9.35 | 10.72 | 9.97 | 11.51 | 9.76 | 12.27 | 10.59 | 12.70 | 10.54 | 13.13 | 10.48 | 13.99 | 11.12 | | |
| 35 | 10.07 | 9.25 | 10.55 | 9.90 | 11.33 | 9.69 | 12.06 | 10.51 | 12.50 | 10.47 | 12.94 | 10.42 | 13.83 | 11.06 | | |
| 37 | 9.90 | 9.17 | 10.38 | 9.82 | 11.13 | 9.61 | 11.83 | 10.43 | 12.24 | 10.37 | 12.66 | 10.32 | 13.50 | 10.96 | | |
| 39 | 9.72 | 9.09 | 10.20 | 9.75 | 10.94 | 9.53 | 11.60 | 10.34 | 11.99 | 10.28 | 12.38 | 10.22 | 13.16 | 10.85 | | |
| 41 | 9.55 | 9.01 | 10.02 | 9.67 | 10.75 | 9.45 | 11.37 | 10.25 | 11.73 | 10.19 | 12.09 | 10.12 | 12.82 | 10.74 | | |
| 43 | 9.38 | 8.93 | 9.85 | 9.59 | 10.56 | 9.37 | 11.14 | 10.17 | 11.47 | 10.10 | 11.81 | 10.03 | 12.48 | 10.64 | | |
| 46 | 9.21 | 8.85 | 9.53 | 9.34 | 10.28 | 9.26 | 10.88 | 10.07 | 11.12 | 9.97 | 11.28 | 9.85 | 11.96 | 10.47 | | |
| 50 | 7.43 | 7.28 | 7.63 | 7.48 | 8.25 | 8.09 | 8.67 | 8.50 | 8.78 | 8.60 | 8.80 | 8.62 | 9.05 | 8.87 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 7.77 | 7.73 | 7.70 | 7.67 | 7.65 |
| -17.7 | -18 | 8.16 | 8.13 | 8.11 | 8.06 | 8.03 |
| -15.7 | -16 | 8.57 | 8.53 | 8.50 | 8.46 | 8.42 |
| -13.5 | -14 | 9.02 | 8.98 | 8.94 | 8.90 | 8.86 |
| -11.5 | -12 | 9.46 | 9.41 | 9.37 | 9.33 | 9.28 |
| -9.5 | -10 | 9.90 | 9.84 | 9.80 | 9.76 | 9.70 |
| -7.5 | -8 | 10.32 | 10.28 | 10.23 | 10.17 | 10.12 |
| -5.5 | -6 | 10.50 | 10.45 | 10.39 | 10.33 | 10.28 |
| -3.0 | -4 | 10.66 | 10.61 | 10.55 | 10.49 | 10.43 |
| -1.0 | -2 | 10.82 | 10.77 | 10.71 | 10.65 | 10.58 |
| 1.0 | 0 | 10.99 | 10.93 | 10.87 | 10.80 | 10.73 |
| 2.0 | 1 | 11.07 | 11.01 | 10.94 | 10.88 | 10.81 |
| 3.0 | 2 | 11.92 | 11.85 | 11.78 | 11.73 | 11.68 |
| 5.0 | 4 | 12.76 | 12.69 | 12.61 | 12.60 | 12.58 |
| 7.0 | 6 | 14.16 | 14.08 | 14.00 | 14.02 | 14.04 |
| 9.0 | 8 | 14.72 | 14.64 | 14.56 | 14.52 | 14.49 |
| 11.5 | 10 | 15.28 | 15.20 | 15.11 | 15.02 | 14.93 |
| 13.5 | 12 | 16.13 | 16.04 | 15.94 | 15.82 | 15.75 |
| 15.5 | 14 | 16.98 | 16.88 | 16.77 | 16.62 | 16.58 |
| 16.5 | 16 | 17.41 | 17.30 | 17.19 | 17.02 | 16.99 |

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Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length : 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

Model FDE140VNAPVH
Cooling mode

Indoor unit FDE71VH (2 units)

Outdoor unit FDC140VNA

(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 11.05 | 9.57 | 11.68 | 10.37 | 12.00 | 10.29 | 12.34 | 10.21 | 13.01 | 10.80 | 13.68 | 10.60 |
| 13 | | | | | 11.56 | 9.78 | 12.25 | 10.58 | 12.59 | 10.50 | 12.95 | 10.42 | 13.69 | 11.02 | 14.42 | 10.82 |
| 15 | | | | | 12.07 | 10.00 | 12.81 | 10.80 | 13.18 | 10.72 | 13.57 | 10.64 | 14.36 | 11.23 | 15.14 | 11.03 |
| 17 | | | | | 12.59 | 10.21 | 13.38 | 11.02 | 13.77 | 10.94 | 14.19 | 10.86 | 15.04 | 11.46 | 15.87 | 11.25 |
| 19 | | | | | 12.86 | 10.33 | 13.66 | 11.13 | 14.07 | 11.05 | 14.49 | 10.97 | 15.35 | 11.56 | 16.20 | 11.35 |
| 21 | | | | | 13.12 | 10.44 | 13.95 | 11.24 | 14.36 | 11.16 | 14.79 | 11.08 | 15.66 | 11.66 | 16.53 | 11.45 |
| 23 | | | | | 13.12 | 10.44 | 13.99 | 11.26 | 14.40 | 11.17 | 14.84 | 11.10 | 15.73 | 11.69 | 16.61 | 11.47 |
| 25 | | | 12.14 | 10.61 | 13.11 | 10.43 | 14.02 | 11.27 | 14.44 | 11.19 | 14.89 | 11.11 | 15.79 | 11.71 | 16.69 | 11.49 |
| 27 | | | 12.06 | 10.57 | 13.11 | 10.43 | 14.06 | 11.29 | 14.48 | 11.21 | 14.90 | 11.12 | 15.74 | 11.69 | | |
| 29 | | | 11.97 | 10.53 | 12.91 | 10.35 | 13.82 | 11.19 | 14.26 | 11.12 | 14.70 | 11.04 | 15.56 | 11.63 | | |
| 31 | | | 11.88 | 10.49 | 12.72 | 10.26 | 13.59 | 11.10 | 14.04 | 11.04 | 14.49 | 10.97 | 15.40 | 11.58 | | |
| 33 | 11.18 | 9.79 | 11.67 | 10.40 | 12.52 | 10.18 | 13.36 | 11.01 | 13.82 | 10.96 | 14.29 | 10.90 | 15.22 | 11.52 | | |
| 35 | 10.96 | 9.68 | 11.48 | 10.31 | 12.32 | 10.10 | 13.11 | 10.92 | 13.60 | 10.88 | 14.09 | 10.82 | 15.05 | 11.46 | | |
| 37 | 10.76 | 9.59 | 11.29 | 10.23 | 12.11 | 10.01 | 12.87 | 10.82 | 13.32 | 10.77 | 13.77 | 10.71 | 14.69 | 11.34 | | |
| 39 | 10.58 | 9.50 | 11.10 | 10.14 | 11.91 | 9.93 | 12.62 | 10.73 | 13.05 | 10.67 | 13.46 | 10.60 | 14.32 | 11.22 | | |
| 41 | 10.39 | 9.41 | 10.91 | 10.06 | 11.70 | 9.84 | 12.37 | 10.63 | 12.76 | 10.57 | 13.16 | 10.50 | 13.95 | 11.10 | | |
| 43 | 10.21 | 9.32 | 10.71 | 9.97 | 11.49 | 9.75 | 12.11 | 10.53 | 12.48 | 10.46 | 12.85 | 10.39 | 13.58 | 10.98 | | |
| 46 | 10.03 | 9.23 | 10.47 | 9.87 | 11.13 | 9.61 | 11.73 | 10.39 | 12.10 | 10.33 | 12.27 | 10.18 | 13.01 | 10.80 | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Model FDE140VSAPVH
Cooling mode

Indoor unit FDE71VH (2 units)

Outdoor unit FDC140VSA

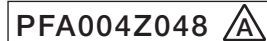
(kW)

Heating mode:HC

(kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | |
| | °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC |
| 11 | | | | | 11.05 | 9.57 | 11.68 | 10.37 | 12.00 | 10.29 | 12.34 | 10.21 | 13.01 | 10.80 | 13.68 | 10.60 |
| 13 | | | | | 11.56 | 9.78 | 12.25 | 10.58 | 12.59 | 10.50 | 12.95 | 10.42 | 13.69 | 11.02 | 14.42 | 10.82 |
| 15 | | | | | 12.07 | 10.00 | 12.81 | 10.80 | 13.18 | 10.72 | 13.57 | 10.64 | 14.36 | 11.23 | 15.14 | 11.03 |
| 17 | | | | | 12.59 | 10.21 | 13.38 | 11.02 | 13.77 | 10.94 | 14.19 | 10.86 | 15.04 | 11.46 | 15.87 | 11.25 |
| 19 | | | | | 12.86 | 10.33 | 13.66 | 11.13 | 14.07 | 11.05 | 14.49 | 10.97 | 15.35 | 11.56 | 16.20 | 11.35 |
| 21 | | | | | 13.12 | 10.44 | 13.95 | 11.24 | 14.36 | 11.16 | 14.79 | 11.08 | 15.66 | 11.66 | 16.53 | 11.45 |
| 23 | | | | | 13.12 | 10.44 | 13.99 | 11.26 | 14.40 | 11.17 | 14.84 | 11.10 | 15.73 | 11.69 | 16.61 | 11.47 |
| 25 | | | 12.14 | 10.61 | 13.11 | 10.43 | 14.02 | 11.27 | 14.44 | 11.19 | 14.89 | 11.11 | 15.79 | 11.71 | 16.69 | 11.49 |
| 27 | | | 12.06 | 10.57 | 13.11 | 10.43 | 14.06 | 11.29 | 14.48 | 11.21 | 14.90 | 11.12 | 15.74 | 11.69 | | |
| 29 | | | 11.97 | 10.53 | 12.91 | 10.35 | 13.82 | 11.19 | 14.26 | 11.12 | 14.70 | 11.04 | 15.56 | 11.63 | | |
| 31 | | | 11.88 | 10.49 | 12.72 | 10.26 | 13.59 | 11.10 | 14.04 | 11.04 | 14.49 | 10.97 | 15.40 | 11.58 | | |
| 33 | 11.18 | 9.79 | 11.67 | 10.40 | 12.52 | 10.18 | 13.36 | 11.01 | 13.82 | 10.96 | 14.29 | 10.90 | 15.22 | 11.52 | | |
| 35 | 10.96 | 9.68 | 11.48 | 10.31 | 12.32 | 10.10 | 13.11 | 10.92 | 13.60 | 10.88 | 14.09 | 10.82 | 15.05 | 11.46 | | |
| 37 | 10.76 | 9.59 | 11.29 | 10.23 | 12.11 | 10.01 | 12.87 | 10.82 | 13.32 | 10.77 | 13.77 | 10.71 | 14.69 | 11.34 | | |
| 39 | 10.58 | 9.50 | 11.10 | 10.14 | 11.91 | 9.93 | 12.62 | 10.73 | 13.05 | 10.67 | 13.46 | 10.60 | 14.32 | 11.22 | | |
| 41 | 10.39 | 9.41 | 10.91 | 10.06 | 11.70 | 9.84 | 12.37 | 10.63 | 12.76 | 10.57 | 13.16 | 10.50 | 13.95 | 11.10 | | |
| 43 | 10.21 | 9.32 | 10.71 | 9.97 | 11.49 | 9.75 | 12.11 | 10.53 | 12.48 | 10.46 | 12.85 | 10.39 | 13.58 | 10.98 | | |
| 46 | 10.03 | 9.23 | 10.47 | 9.87 | 11.13 | 9.61 | 11.73 | 10.39 | 12.10 | 10.33 | 12.27 | 10.18 | 13.01 | 10.80 | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | | | | |
| | °CDB | °CWB | 16 | 18 | 20 | 22 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 |



Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length : 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC : Total cooling capacity (kW)

SHC : Sensible heat capacity (kW)

HC : Heating capacity (kW)

Model FDE200VSAPVH Indoor unit FDE100VH (2 units) Outdoor unit FDC200VSA
Cooling mode

(kW) Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 19.36 | 14.50 | 20.45 | 15.58 | 20.99 | 15.34 | 21.67 | 15.13 | 23.02 | 15.91 | 24.37 | 15.39 |
| 13 | | | | | 19.46 | 14.54 | 20.57 | 15.62 | 21.13 | 15.38 | 21.78 | 15.17 | 23.09 | 15.93 | 24.40 | 15.40 |
| 15 | | | | | 19.55 | 14.57 | 20.69 | 15.66 | 21.26 | 15.42 | 21.90 | 15.20 | 23.16 | 15.94 | 24.43 | 15.40 |
| 17 | | | | | 19.56 | 14.57 | 20.77 | 15.68 | 21.37 | 15.46 | 21.99 | 15.23 | 23.23 | 15.96 | 24.47 | 15.41 |
| 19 | | | | | 19.64 | 14.60 | 20.84 | 15.70 | 21.48 | 15.49 | 22.09 | 15.25 | 23.30 | 15.98 | 24.51 | 15.42 |
| 21 | | | | | 19.34 | 14.49 | 20.50 | 15.60 | 21.11 | 15.38 | 21.72 | 15.15 | 22.92 | 15.88 | 24.13 | 15.34 |
| 23 | | | | | 19.04 | 14.39 | 20.16 | 15.49 | 20.74 | 15.27 | 21.35 | 15.04 | 22.55 | 15.79 | 23.76 | 15.26 |
| 25 | | | 17.82 | 14.94 | 18.89 | 14.33 | 19.99 | 15.43 | 20.56 | 15.21 | 21.16 | 14.99 | 22.37 | 15.75 | 23.57 | 15.22 |
| 27 | | | 17.68 | 14.89 | 18.74 | 14.28 | 19.82 | 15.38 | 20.38 | 15.16 | 21.25 | 15.02 | 22.13 | 15.69 | | |
| 29 | | | 17.40 | 14.78 | 18.43 | 14.17 | 19.49 | 15.28 | 20.03 | 15.06 | 20.93 | 14.93 | 21.83 | 15.62 | | |
| 31 | | | 17.11 | 14.67 | 18.11 | 14.07 | 19.15 | 15.17 | 19.69 | 14.96 | 20.60 | 14.84 | 21.52 | 15.54 | | |
| 33 | 15.84 | 13.56 | 16.58 | 14.46 | 17.80 | 13.96 | 18.82 | 15.07 | 19.34 | 14.86 | 20.28 | 14.75 | 21.21 | 15.47 | | |
| 35 | 15.73 | 13.52 | 16.37 | 14.39 | 17.49 | 13.85 | 18.49 | 14.97 | 19.00 | 14.76 | 19.95 | 14.66 | 20.91 | 15.40 | | |
| 37 | 15.52 | 13.43 | 16.13 | 14.30 | 17.14 | 13.73 | 18.05 | 14.84 | 18.57 | 14.63 | 19.48 | 14.53 | 20.39 | 15.27 | | |
| 39 | 15.31 | 13.34 | 15.89 | 14.20 | 16.78 | 13.61 | 17.61 | 14.70 | 18.13 | 14.51 | 19.00 | 14.40 | 19.87 | 15.15 | | |
| 41 | 15.10 | 13.26 | 15.65 | 14.12 | 16.43 | 13.49 | 17.18 | 14.57 | 17.70 | 14.39 | 18.53 | 14.28 | 19.36 | 15.03 | | |
| 43 | 14.89 | 13.17 | 15.41 | 14.03 | 16.07 | 13.38 | 16.74 | 14.45 | 17.26 | 14.27 | 18.05 | 14.15 | 18.84 | 14.92 | | |
| 46 | 14.58 | 13.04 | 15.05 | 13.89 | 15.54 | 13.20 | 16.09 | 14.25 | 16.61 | 14.09 | 17.34 | 13.97 | 18.06 | 14.74 | | |
| 50 | 11.25 | 11.02 | 11.78 | 11.54 | 12.39 | 12.14 | 12.68 | 12.42 | 12.88 | 12.62 | 13.08 | 12.82 | 13.28 | 13.01 | | |

| Outdoor air temp. | °CWB | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 |

PFA004Z048 


Model FDE250VSAPVH Indoor unit FDE125VH (2 units) Outdoor unit FDC250VSA
Cooling mode

(kW) Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 24.64 | 16.48 | 26.08 | 17.48 | 26.80 | 17.20 | 27.60 | 16.92 | 29.20 | 17.55 | 30.80 | 16.88 |
| 13 | | | | | 24.67 | 16.49 | 26.11 | 17.49 | 26.83 | 17.21 | 27.63 | 16.93 | 29.23 | 17.56 | 30.83 | 16.88 |
| 15 | | | | | 24.69 | 16.50 | 26.14 | 17.50 | 26.86 | 17.22 | 27.66 | 16.94 | 29.26 | 17.57 | 30.86 | 16.89 |
| 17 | | | | | 24.70 | 16.51 | 26.23 | 17.53 | 26.99 | 17.26 | 27.78 | 16.98 | 29.34 | 17.59 | 30.91 | 16.90 |
| 19 | | | | | 24.81 | 16.55 | 26.33 | 17.57 | 27.13 | 17.31 | 27.90 | 17.02 | 29.43 | 17.62 | 30.96 | 16.92 |
| 21 | | | | | 24.43 | 16.40 | 25.90 | 17.41 | 26.67 | 17.15 | 27.43 | 16.87 | 28.96 | 17.48 | 30.48 | 16.80 |
| 23 | | | | | 24.05 | 16.25 | 25.47 | 17.26 | 26.20 | 16.99 | 26.96 | 16.72 | 28.49 | 17.35 | 30.01 | 16.68 |
| 25 | | | 22.51 | 16.85 | 23.86 | 16.17 | 25.25 | 17.19 | 25.97 | 16.92 | 26.73 | 16.64 | 28.25 | 17.28 | 29.77 | 16.62 |
| 27 | | | 22.33 | 16.77 | 23.67 | 16.10 | 25.04 | 17.11 | 25.74 | 16.84 | 26.85 | 16.68 | 27.96 | 17.20 | | |
| 29 | | | 21.97 | 16.62 | 23.27 | 15.95 | 24.61 | 16.96 | 25.30 | 16.70 | 26.44 | 16.55 | 27.57 | 17.10 | | |
| 31 | | | 21.61 | 16.47 | 22.88 | 15.80 | 24.19 | 16.82 | 24.87 | 16.55 | 26.03 | 16.42 | 27.18 | 16.99 | | |
| 33 | 20.01 | 15.38 | 20.94 | 16.19 | 22.49 | 15.65 | 23.77 | 16.67 | 24.44 | 16.41 | 25.62 | 16.30 | 26.80 | 16.89 | | |
| 35 | 19.87 | 15.31 | 20.68 | 16.08 | 22.10 | 15.50 | 23.35 | 16.53 | 24.00 | 16.27 | 25.21 | 16.17 | 26.41 | 16.78 | | |
| 37 | 19.61 | 15.20 | 20.42 | 15.98 | 21.78 | 15.38 | 22.94 | 16.39 | 23.56 | 16.13 | 24.66 | 16.01 | 25.76 | 16.61 | | |
| 39 | 19.51 | 15.15 | 20.33 | 15.94 | 21.65 | 15.33 | 22.72 | 16.32 | 23.30 | 16.05 | 24.30 | 15.90 | 25.30 | 16.49 | | |
| 41 | 20.09 | 15.41 | 20.57 | 16.04 | 21.47 | 15.27 | 22.44 | 16.23 | 22.98 | 15.95 | 23.88 | 15.77 | 24.77 | 16.35 | | |
| 43 | 19.02 | 14.93 | 19.85 | 15.74 | 21.05 | 15.11 | 21.92 | 16.05 | 22.41 | 15.77 | 23.19 | 15.57 | 23.96 | 16.14 | | |
| 46 | 17.16 | 14.12 | 17.71 | 14.90 | 18.29 | 14.13 | 18.93 | 15.11 | 19.55 | 14.92 | 20.41 | 14.78 | 21.26 | 15.48 | | |
| 50 | 11.31 | 11.08 | 11.84 | 11.60 | 12.45 | 12.20 | 12.74 | 12.49 | 12.94 | 12.69 | 13.14 | 12.88 | 13.35 | 13.08 | | |

| Outdoor air temp. | °CWB | Indoor air temperature | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 13.22 | 13.07 | 12.93 | 12.78 | 12.63 |
| -11.5 | -12 | 13.88 | 13.73 | 13.58 | 13.43 | 13.28 |
| -9.5 | -10 | 14.55 | 14.39 | 14.24 | 14.08 | 13.93 |
| -7.5 | -8 | 15.21 | 15.05 | 14.89 | 14.73 | 14.58 |
| -5.5 | -6 | 15.48 | 15.32 | 15.17 | 15.02 | 14.87 |
| -3.0 | -4 | 15.74 | 15.59 | 15.45 | 15.30 | 15.16 |
| -1.0 | -2 | 16.00 | 15.87 | 15.73 | 15.59 | 15.45 |
| 1.0 | 0 | 16.27 | 16.14 | 16.01 | 15.87 | 15.74 |
| 2.0 | 1 | 16.40 | 16.27 | 16.14 | 16.01 | 15.88 |
| 3.0 | 2 | 18.64 | 18.48 | 18.32 | 18.18 | 18.04 |
| 5.0 | 4 | 23.11 | 22.89 | 22.66 | 22.50 | 22.34 |
| 7.0 | 6 | 27.59 | 27.29 | 27.00 | 26.82 | 26.65 |
| 9.0 | 8 | 28.92 | 28.67 | 28.42 | 28.22 | 28.03 |
| 11.5 | 10 | 30.24 | 30.04 | 29.84 | 29.63 | 29.41 |
| 13.5 | 12 | 31.28 | 31.09 | 30.89 | 30.68 | 30.46 |
| 15.5 | 14 | 32.32 | 32.14 | 31.95 | 31.73 | 31.51 |
| 16.5 | 16 | 32.85 | 32.66 | 32.47 | 32.25 | 32.03 |

- Notes (1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

PFA004Z048 

(c) Triple type

Model **FDE140VNATVH** Indoor unit FDE50VH (3 units) Outdoor unit FDC140VNA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 11.05 | 9.45 | 11.68 | 10.22 | 12.00 | 10.14 | 12.34 | 10.06 | 13.01 | 10.63 | 13.68 | 10.44 |
| 13 | | | | | | 11.56 | 9.66 | 12.25 | 10.44 | 12.59 | 10.35 | 12.95 | 10.27 | 13.69 | 10.85 | 14.42 | 10.65 |
| 15 | | | | | | 12.07 | 9.87 | 12.81 | 10.65 | 13.18 | 10.57 | 13.57 | 10.49 | 14.36 | 11.07 | 15.14 | 10.87 |
| 17 | | | | | | 12.59 | 10.09 | 13.38 | 10.87 | 13.77 | 10.79 | 14.19 | 10.72 | 15.04 | 11.29 | 15.87 | 11.09 |
| 19 | | | | | | 12.86 | 10.20 | 13.66 | 10.99 | 14.07 | 10.91 | 14.49 | 10.83 | 15.35 | 11.40 | 16.20 | 11.19 |
| 21 | | | | | | 13.12 | 10.32 | 13.95 | 11.10 | 14.36 | 11.02 | 14.79 | 10.94 | 15.66 | 11.50 | 16.53 | 11.29 |
| 23 | | | | | | 13.12 | 10.32 | 13.99 | 11.12 | 14.40 | 11.03 | 14.84 | 10.95 | 15.73 | 11.53 | 16.61 | 11.31 |
| 25 | | | 12.14 | 10.49 | 13.11 | 10.31 | 14.02 | 11.13 | 14.44 | 11.05 | 14.89 | 10.97 | 15.79 | 11.54 | 16.69 | 11.33 | |
| 27 | | | 12.06 | 10.45 | 13.11 | 10.31 | 14.06 | 11.14 | 14.48 | 11.07 | 14.90 | 10.98 | 15.74 | 11.53 | | | |
| 29 | | | 11.97 | 10.41 | 12.91 | 10.23 | 13.82 | 11.05 | 14.26 | 10.98 | 14.70 | 10.90 | 15.56 | 11.47 | | | |
| 31 | | | 11.88 | 10.37 | 12.72 | 10.14 | 13.59 | 10.96 | 14.04 | 10.90 | 14.49 | 10.83 | 15.40 | 11.41 | | | |
| 33 | 11.18 | 9.68 | 11.67 | 10.27 | 12.52 | 10.06 | 13.36 | 10.87 | 13.82 | 10.81 | 14.29 | 10.75 | 15.22 | 11.36 | | | |
| 35 | 10.96 | 9.57 | 11.48 | 10.19 | 12.32 | 9.97 | 13.11 | 10.77 | 13.60 | 10.73 | 14.09 | 10.68 | 15.05 | 11.30 | | | |
| 37 | 10.76 | 9.48 | 11.29 | 10.10 | 12.11 | 9.89 | 12.87 | 10.68 | 13.32 | 10.62 | 13.77 | 10.57 | 14.69 | 11.18 | | | |
| 39 | 10.58 | 9.39 | 11.10 | 10.02 | 11.91 | 9.80 | 12.62 | 10.58 | 13.05 | 10.52 | 13.46 | 10.46 | 14.32 | 11.06 | | | |
| 41 | 10.39 | 9.30 | 10.91 | 9.93 | 11.70 | 9.71 | 12.37 | 10.48 | 12.76 | 10.42 | 13.16 | 10.35 | 13.95 | 10.94 | | | |
| 43 | 10.21 | 9.21 | 10.71 | 9.84 | 11.49 | 9.63 | 12.11 | 10.39 | 12.48 | 10.32 | 12.85 | 10.24 | 13.58 | 10.82 | | | |
| 46 | 10.03 | 9.12 | 10.47 | 9.73 | 11.13 | 9.48 | 11.73 | 10.24 | 12.10 | 10.18 | 12.27 | 10.04 | 13.01 | 10.64 | | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | | |

| Outdoor air temp. | | Indoor air temperature | | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|----|
| °CDB | | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 | |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 | |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 | |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 | |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 | |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 | |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 | |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 | |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 | |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 | |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 | |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 | |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 | |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 | |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 | |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 | |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 | |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 | |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 | |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 | |

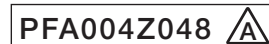


Model **FDE140VSATVH** Indoor unit FDE50VH (3 units) Outdoor unit FDC140VSA
Cooling mode

(kW) Heating mode:HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|-------|
| | 18 °CDB | | 21 °CDB | | 23 °CDB | | 26 °CDB | | 27 °CDB | | 28 °CDB | | 31 °CDB | | 33 °CDB | | |
| | 12 °CWB | | 14 °CWB | | 16 °CWB | | 18 °CWB | | 19 °CWB | | 20 °CWB | | 22 °CWB | | 24 °CWB | | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | | 11.05 | 9.45 | 11.68 | 10.22 | 12.00 | 10.14 | 12.34 | 10.06 | 13.01 | 10.63 | 13.68 | 10.44 |
| 13 | | | | | | 11.56 | 9.66 | 12.25 | 10.44 | 12.59 | 10.35 | 12.95 | 10.27 | 13.69 | 10.85 | 14.42 | 10.65 |
| 15 | | | | | | 12.07 | 9.87 | 12.81 | 10.65 | 13.18 | 10.57 | 13.57 | 10.49 | 14.36 | 11.07 | 15.14 | 10.87 |
| 17 | | | | | | 12.59 | 10.09 | 13.38 | 10.87 | 13.77 | 10.79 | 14.19 | 10.72 | 15.04 | 11.29 | 15.87 | 11.09 |
| 19 | | | | | | 12.86 | 10.20 | 13.66 | 10.99 | 14.07 | 10.91 | 14.49 | 10.83 | 15.35 | 11.40 | 16.20 | 11.19 |
| 21 | | | | | | 13.12 | 10.32 | 13.95 | 11.10 | 14.36 | 11.02 | 14.79 | 10.94 | 15.66 | 11.50 | 16.53 | 11.29 |
| 23 | | | | | | 13.12 | 10.32 | 13.99 | 11.12 | 14.40 | 11.03 | 14.84 | 10.95 | 15.73 | 11.53 | 16.61 | 11.31 |
| 25 | | | 12.14 | 10.49 | 13.11 | 10.31 | 14.02 | 11.13 | 14.44 | 11.05 | 14.89 | 10.97 | 15.79 | 11.54 | 16.69 | 11.33 | |
| 27 | | | 12.06 | 10.45 | 13.11 | 10.31 | 14.06 | 11.14 | 14.48 | 11.07 | 14.90 | 10.98 | 15.74 | 11.53 | | | |
| 29 | | | 11.97 | 10.41 | 12.91 | 10.23 | 13.82 | 11.05 | 14.26 | 10.98 | 14.70 | 10.90 | 15.56 | 11.47 | | | |
| 31 | | | 11.88 | 10.37 | 12.72 | 10.14 | 13.59 | 10.96 | 14.04 | 10.90 | 14.49 | 10.83 | 15.40 | 11.41 | | | |
| 33 | 11.18 | 9.68 | 11.67 | 10.27 | 12.52 | 10.06 | 13.36 | 10.87 | 13.82 | 10.81 | 14.29 | 10.75 | 15.22 | 11.36 | | | |
| 35 | 10.96 | 9.57 | 11.48 | 10.19 | 12.32 | 9.97 | 13.11 | 10.77 | 13.60 | 10.73 | 14.09 | 10.68 | 15.05 | 11.30 | | | |
| 37 | 10.76 | 9.48 | 11.29 | 10.10 | 12.11 | 9.89 | 12.87 | 10.68 | 13.32 | 10.62 | 13.77 | 10.57 | 14.69 | 11.18 | | | |
| 39 | 10.58 | 9.39 | 11.10 | 10.02 | 11.91 | 9.80 | 12.62 | 10.58 | 13.05 | 10.52 | 13.46 | 10.46 | 14.32 | 11.06 | | | |
| 41 | 10.39 | 9.30 | 10.91 | 9.93 | 11.70 | 9.71 | 12.37 | 10.48 | 12.76 | 10.42 | 13.16 | 10.35 | 13.95 | 10.94 | | | |
| 43 | 10.21 | 9.21 | 10.71 | 9.84 | 11.49 | 9.63 | 12.11 | 10.39 | 12.48 | 10.32 | 12.85 | 10.24 | 13.58 | 10.82 | | | |
| 46 | 10.03 | 9.12 | 10.47 | 9.73 | 11.13 | 9.48 | 11.73 | 10.24 | 12.10 | 10.18 | 12.27 | 10.04 | 13.01 | 10.64 | | | |
| 50 | 7.61 | 7.45 | 7.88 | 7.72 | 8.35 | 8.19 | 8.75 | 8.58 | 8.97 | 8.79 | 8.98 | 8.80 | 9.33 | 9.14 | | | |

| Outdoor air temp. | | Indoor air temperature | | | | | |
|-------------------|------|------------------------|-------|-------|-------|-------|----|
| °CDB | | °CDB | | | | | |
| °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | 24 |
| -19.8 | -20 | 7.94 | 7.91 | 7.88 | 7.85 | 7.82 | |
| -17.7 | -18 | 8.44 | 8.41 | 8.37 | 8.34 | 8.30 | |
| -15.7 | -16 | 8.94 | 8.90 | 8.86 | 8.82 | 8.79 | |
| -13.5 | -14 | 9.50 | 9.46 | 9.41 | 9.37 | 9.33 | |
| -11.5 | -12 | 10.07 | 10.02 | 9.98 | 9.93 | 9.88 | |
| -9.5 | -10 | 10.64 | 10.59 | 10.54 | 10.49 | 10.44 | |
| -7.5 | -8 | 11.21 | 11.15 | 11.10 | 11.04 | 10.99 | |
| -5.5 | -6 | 11.51 | 11.45 | 11.39 | 11.33 | 11.27 | |
| -3.0 | -4 | 11.80 | 11.74 | 11.68 | 11.62 | 11.55 | |
| -1.0 | -2 | 12.11 | 12.05 | 11.98 | 11.91 | 11.84 | |
| 1.0 | 0 | 12.42 | 12.35 | 12.28 | 12.20 | 12.13 | |
| 2.0 | 1 | 12.58 | 12.50 | 12.43 | 12.35 | 12.28 | |
| 3.0 | 2 | 13.35 | 13.27 | 13.20 | 13.13 | 13.08 | |
| 5.0 | 4 | 14.12 | 14.05 | 13.96 | 13.95 | 13.93 | |
| 7.0 | 6 | 15.68 | 15.59 | 15.50 | 15.52 | 15.55 | |
| 9.0 | 8 | 16.30 | 16.21 | 16.11 | 16.07 | 16.03 | |
| 11.5 | 10 | 16.91 | 16.83 | 16.73 | 16.63 | 16.53 | |
| 13.5 | 12 | 17.86 | 17.76 | 17.65 | 17.52 | 17.44 | |
| 15.5 | 14 | 18.80 | 18.69 | 18.57 | 18.40 | 18.36 | |
| 16.5 | 16 | 19.28 | 19.15 | 19.03 | 18.84 | 18.81 | |




- Notes (1) These data show average status.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDE200VSATVH** Indoor unit **FDE71VH** (3 units) Outdoor unit **FDC200VSA**
Cooling mode (kW) Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 19.36 | 15.16 | 20.45 | 16.28 | 20.99 | 16.11 | 21.67 | 15.98 | 23.02 | 16.84 | 24.37 | 16.49 |
| 13 | | | | | 19.46 | 15.20 | 20.57 | 16.33 | 21.13 | 16.16 | 21.78 | 16.02 | 23.09 | 16.87 | 24.40 | 16.50 |
| 15 | | | | | 19.55 | 15.24 | 20.69 | 16.37 | 21.26 | 16.21 | 21.90 | 16.06 | 23.16 | 16.89 | 24.43 | 16.51 |
| 17 | | | | | 19.56 | 15.24 | 20.77 | 16.40 | 21.37 | 16.25 | 21.99 | 16.10 | 23.23 | 16.91 | 24.47 | 16.52 |
| 19 | | | | | 19.64 | 15.28 | 20.84 | 16.43 | 21.48 | 16.29 | 22.09 | 16.13 | 23.30 | 16.93 | 24.51 | 16.53 |
| 21 | | | | | 19.34 | 15.15 | 20.50 | 16.30 | 21.11 | 16.16 | 21.72 | 16.00 | 22.92 | 16.82 | 24.13 | 16.43 |
| 23 | | | | | 19.04 | 15.03 | 20.16 | 16.17 | 20.74 | 16.03 | 21.35 | 15.87 | 22.55 | 16.70 | 23.76 | 16.32 |
| 25 | | | 17.82 | 15.43 | 18.89 | 14.97 | 19.99 | 16.11 | 20.56 | 15.96 | 21.16 | 15.81 | 22.37 | 16.64 | 23.57 | 16.27 |
| 27 | | | 17.68 | 15.37 | 18.74 | 14.91 | 19.82 | 16.05 | 20.38 | 15.89 | 21.25 | 15.84 | 22.13 | 16.57 | | |
| 29 | | | 17.40 | 15.24 | 18.43 | 14.78 | 19.49 | 15.92 | 20.03 | 15.77 | 20.93 | 15.73 | 21.83 | 16.48 | | |
| 31 | | | 17.11 | 15.12 | 18.11 | 14.66 | 19.15 | 15.80 | 19.69 | 15.65 | 20.60 | 15.62 | 21.52 | 16.38 | | |
| 33 | 15.84 | 13.97 | 16.58 | 14.89 | 17.80 | 14.53 | 18.82 | 15.68 | 19.34 | 15.53 | 20.28 | 15.51 | 21.21 | 16.29 | | |
| 35 | 15.73 | 13.92 | 16.37 | 14.80 | 17.49 | 14.41 | 18.49 | 15.55 | 19.00 | 15.41 | 19.95 | 15.40 | 20.91 | 16.19 | | |
| 37 | 15.52 | 13.82 | 16.13 | 14.70 | 17.14 | 14.27 | 18.05 | 15.39 | 18.57 | 15.26 | 19.48 | 15.24 | 20.39 | 16.04 | | |
| 39 | 15.31 | 13.72 | 15.89 | 14.59 | 16.78 | 14.13 | 17.61 | 15.24 | 18.13 | 15.11 | 19.00 | 15.09 | 19.87 | 15.88 | | |
| 41 | 15.10 | 13.63 | 15.65 | 14.49 | 16.43 | 13.99 | 17.18 | 15.08 | 17.70 | 14.96 | 18.53 | 14.93 | 19.36 | 15.73 | | |
| 43 | 14.89 | 13.53 | 15.41 | 14.39 | 16.07 | 13.85 | 16.74 | 14.93 | 17.26 | 14.81 | 18.05 | 14.77 | 18.84 | 15.58 | | |
| 46 | 14.58 | 13.39 | 15.05 | 14.24 | 15.54 | 13.64 | 16.09 | 14.69 | 16.61 | 14.59 | 17.34 | 14.54 | 18.06 | 15.35 | | |
| 50 | 11.25 | 11.02 | 11.78 | 11.54 | 12.39 | 12.14 | 12.68 | 12.42 | 12.88 | 12.62 | 13.08 | 12.82 | 13.28 | 13.01 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | | |
| -17.7 | -18 | | | | | | |
| -15.7 | -16 | | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 | |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 | |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 | |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 | |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 | |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 | |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 | |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 | |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 | |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 | |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 | |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 | |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 | |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 | |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 | |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 | |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 | |


PFA004Z048 

(d) Double twin type

Model **FDE200VSADVH** Indoor unit **FDE50VH** (4 units) Outdoor unit **FDC200VSA**
Cooling mode (kW) Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 19.36 | 14.79 | 20.45 | 15.79 | 20.99 | 15.66 | 21.67 | 15.58 | 23.02 | 16.37 | 24.37 | 16.11 |
| 13 | | | | | 19.46 | 14.83 | 20.57 | 15.84 | 21.13 | 15.72 | 21.78 | 15.62 | 23.09 | 16.40 | 24.40 | 16.12 |
| 15 | | | | | 19.55 | 14.87 | 20.69 | 15.89 | 21.26 | 15.77 | 21.90 | 15.67 | 23.16 | 16.43 | 24.43 | 16.13 |
| 17 | | | | | 19.56 | 14.88 | 20.77 | 15.93 | 21.37 | 15.82 | 21.99 | 15.70 | 23.23 | 16.45 | 24.47 | 16.15 |
| 19 | | | | | 19.64 | 14.91 | 20.84 | 15.96 | 21.48 | 15.86 | 22.09 | 15.74 | 23.30 | 16.47 | 24.51 | 16.16 |
| 21 | | | | | 19.34 | 14.78 | 20.50 | 15.81 | 21.11 | 15.71 | 21.72 | 15.60 | 22.92 | 16.34 | 24.13 | 16.03 |
| 23 | | | | | 19.04 | 14.64 | 20.16 | 15.67 | 20.74 | 15.57 | 21.35 | 15.45 | 22.55 | 16.21 | 23.76 | 15.91 |
| 25 | | | 17.82 | 14.93 | 18.89 | 14.57 | 19.99 | 15.60 | 20.56 | 15.49 | 21.16 | 15.38 | 22.37 | 16.14 | 23.57 | 15.85 |
| 27 | | | 17.68 | 14.87 | 18.74 | 14.51 | 19.82 | 15.53 | 20.38 | 15.42 | 21.25 | 15.42 | 22.13 | 16.06 | | |
| 29 | | | 17.40 | 14.73 | 18.43 | 14.37 | 19.49 | 15.39 | 20.03 | 15.28 | 20.93 | 15.29 | 21.83 | 15.95 | | |
| 31 | | | 17.11 | 14.59 | 18.11 | 14.23 | 19.15 | 15.26 | 19.69 | 15.14 | 20.60 | 15.17 | 21.52 | 15.84 | | |
| 33 | 15.84 | 13.53 | 16.58 | 14.34 | 17.80 | 14.09 | 18.82 | 15.12 | 19.34 | 15.01 | 20.28 | 15.05 | 21.21 | 15.74 | | |
| 35 | 15.73 | 13.47 | 16.37 | 14.25 | 17.49 | 13.96 | 18.49 | 14.98 | 19.00 | 14.87 | 19.95 | 14.92 | 20.91 | 15.63 | | |
| 37 | 15.52 | 13.37 | 16.13 | 14.13 | 17.14 | 13.80 | 18.05 | 14.81 | 18.57 | 14.71 | 19.48 | 14.74 | 20.39 | 15.45 | | |
| 39 | 15.31 | 13.26 | 15.89 | 14.02 | 16.78 | 13.65 | 17.61 | 14.63 | 18.13 | 14.54 | 19.00 | 14.57 | 19.87 | 15.27 | | |
| 41 | 15.10 | 13.16 | 15.65 | 13.91 | 16.43 | 13.49 | 17.18 | 14.46 | 17.70 | 14.37 | 18.53 | 14.39 | 19.36 | 15.10 | | |
| 43 | 14.89 | 13.05 | 15.41 | 13.80 | 16.07 | 13.34 | 16.74 | 14.28 | 17.26 | 14.20 | 18.05 | 14.21 | 18.84 | 14.92 | | |
| 46 | 14.58 | 12.90 | 15.05 | 13.63 | 15.54 | 13.11 | 16.09 | 14.02 | 16.61 | 13.96 | 17.34 | 13.95 | 18.06 | 14.66 | | |
| 50 | 11.25 | 11.02 | 11.78 | 11.54 | 12.39 | 11.81 | 12.68 | 12.42 | 12.88 | 12.58 | 13.08 | 12.45 | 13.28 | 13.01 | | |

| Outdoor air temp. | Indoor air temperature | | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|----|
| | °CDB | °CWB | 16 | 18 | 20 | 22 | 24 |
| -19.8 | -20 | | | | | | |
| -17.7 | -18 | | | | | | |
| -15.7 | -16 | | | | | | |
| -13.5 | -14 | 11.10 | 10.98 | 10.86 | 10.73 | 10.60 | |
| -11.5 | -12 | 11.93 | 11.80 | 11.67 | 11.54 | 11.40 | |
| -9.5 | -10 | 12.75 | 12.61 | 12.48 | 12.34 | 12.20 | |
| -7.5 | -8 | 13.57 | 13.43 | 13.29 | 13.14 | 13.00 | |
| -5.5 | -6 | 13.78 | 13.64 | 13.51 | 13.37 | 13.24 | |
| -3.0 | -4 | 13.99 | 13.86 | 13.73 | 13.60 | 13.47 | |
| -1.0 | -2 | 14.20 | 14.08 | 13.95 | 13.83 | 13.71 | |
| 1.0 | 0 | 14.41 | 14.29 | 14.18 | 14.06 | 13.94 | |
| 2.0 | 1 | 14.51 | 14.40 | 14.29 | 14.17 | 14.06 | |
| 3.0 | 2 | 16.19 | 16.05 | 15.91 | 15.79 | 15.67 | |
| 5.0 | 4 | 19.54 | 19.35 | 19.15 | 19.02 | 18.89 | |
| 7.0 | 6 | 22.89 | 22.64 | 22.40 | 22.25 | 22.11 | |
| 9.0 | 8 | 23.99 | 23.78 | 23.58 | 23.42 | 23.25 | |
| 11.5 | 10 | 25.09 | 24.92 | 24.75 | 24.58 | 24.40 | |
| 13.5 | 12 | 25.95 | 25.79 | 25.63 | 25.45 | 25.27 | |
| 15.5 | 14 | 26.82 | 26.66 | 26.50 | 26.32 | 26.14 | |
| 16.5 | 16 | 27.25 | 27.10 | 26.94 | 26.76 | 26.57 | |

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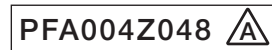
- Notes (1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed. (Cooling only)
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDE250VSADVH** Indoor unit FDE60VH (4 units) Outdoor unit FDC250VSA
 Cooling mode (kW) Heating mode : HC (kW)

| Outdoor air temp. | Indoor air temperature | | | | | | | | | | | | | | | |
|-------------------|------------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 24.64 | 18.95 | 26.08 | 20.38 | 26.80 | 20.13 | 27.60 | 19.89 | 29.20 | 20.91 | 30.80 | 20.32 |
| 13 | | | | | 24.67 | 18.96 | 26.11 | 20.39 | 26.83 | 20.14 | 27.63 | 19.90 | 29.23 | 20.92 | 30.83 | 20.33 |
| 15 | | | | | 24.69 | 18.97 | 26.14 | 20.40 | 26.86 | 20.15 | 27.66 | 19.91 | 29.26 | 20.92 | 30.86 | 20.34 |
| 17 | | | | | 24.70 | 18.97 | 26.23 | 20.43 | 26.99 | 20.19 | 27.78 | 19.95 | 29.34 | 20.95 | 30.91 | 20.35 |
| 19 | | | | | 24.81 | 19.01 | 26.33 | 20.47 | 27.13 | 20.24 | 27.90 | 19.98 | 29.43 | 20.97 | 30.96 | 20.36 |
| 21 | | | | | 24.43 | 18.87 | 25.90 | 20.32 | 26.67 | 20.09 | 27.43 | 19.84 | 28.96 | 20.84 | 30.48 | 20.24 |
| 23 | | | | | 24.05 | 18.72 | 25.47 | 20.17 | 26.20 | 19.94 | 26.96 | 19.69 | 28.49 | 20.71 | 30.01 | 20.13 |
| 25 | | | 22.51 | 19.34 | 23.86 | 18.65 | 25.25 | 20.10 | 25.97 | 19.86 | 26.73 | 19.62 | 28.25 | 20.65 | 29.77 | 20.07 |
| 27 | | | 22.33 | 19.27 | 23.67 | 18.58 | 25.04 | 20.03 | 25.74 | 19.79 | 26.85 | 19.66 | 27.96 | 20.57 | | |
| 29 | | | 21.97 | 19.12 | 23.27 | 18.44 | 24.61 | 19.88 | 25.30 | 19.65 | 26.44 | 19.53 | 27.57 | 20.46 | | |
| 31 | | | 21.61 | 18.98 | 22.88 | 18.29 | 24.19 | 19.74 | 24.87 | 19.51 | 26.03 | 19.41 | 27.18 | 20.36 | | |
| 33 | 20.01 | 17.53 | 20.94 | 18.71 | 22.49 | 18.15 | 23.77 | 19.60 | 24.44 | 19.37 | 25.62 | 19.28 | 26.80 | 20.26 | | |
| 35 | 19.87 | 17.47 | 20.68 | 18.60 | 22.10 | 18.00 | 23.35 | 19.46 | 24.00 | 19.24 | 25.21 | 19.16 | 26.41 | 20.15 | | |
| 37 | 19.61 | 17.35 | 20.42 | 18.50 | 21.78 | 17.89 | 22.94 | 19.33 | 23.56 | 19.10 | 24.66 | 19.00 | 25.76 | 19.98 | | |
| 39 | 19.51 | 17.31 | 20.33 | 18.46 | 21.65 | 17.84 | 22.72 | 19.25 | 23.30 | 19.02 | 24.30 | 18.89 | 25.30 | 19.86 | | |
| 41 | 20.09 | 17.56 | 20.57 | 18.56 | 21.47 | 17.77 | 22.44 | 19.16 | 22.98 | 18.92 | 23.88 | 18.77 | 24.77 | 19.72 | | |
| 43 | 19.02 | 17.10 | 19.85 | 18.27 | 21.05 | 17.62 | 21.92 | 18.99 | 22.41 | 18.74 | 23.19 | 18.57 | 23.96 | 19.51 | | |
| 46 | 17.16 | 16.31 | 17.71 | 17.36 | 18.29 | 16.65 | 18.93 | 18.05 | 19.55 | 17.88 | 20.41 | 17.77 | 21.26 | 18.83 | | |
| 50 | 11.31 | 11.08 | 11.84 | 11.60 | 12.45 | 12.20 | 12.74 | 12.49 | 12.94 | 12.69 | 13.14 | 12.88 | 13.35 | 13.08 | | |

| Outdoor air temp. | Indoor air temperature | | | | | |
|-------------------|------------------------|-------|-------|-------|-------|-------|
| | °CDB | | °CWB | | °CDB | |
| | 16 | 18 | 20 | 22 | 24 | |
| -19.8 | -20 | | | | | |
| -17.7 | -18 | | | | | |
| -15.7 | -16 | | | | | |
| -13.5 | -14 | 13.22 | 13.07 | 12.93 | 12.78 | 12.63 |
| -11.5 | -12 | 13.88 | 13.73 | 13.58 | 13.43 | 13.28 |
| -9.5 | -10 | 14.55 | 14.39 | 14.24 | 14.08 | 13.93 |
| -7.5 | -8 | 15.21 | 15.05 | 14.89 | 14.73 | 14.58 |
| -5.5 | -6 | 15.48 | 15.32 | 15.17 | 15.02 | 14.87 |
| -3.0 | -4 | 15.74 | 15.59 | 15.45 | 15.30 | 15.16 |
| -1.0 | -2 | 16.00 | 15.87 | 15.73 | 15.59 | 15.45 |
| 1.0 | 0 | 16.27 | 16.14 | 16.01 | 15.87 | 15.74 |
| 2.0 | 1 | 16.40 | 16.27 | 16.14 | 16.01 | 15.88 |
| 3.0 | 2 | 18.64 | 18.48 | 18.32 | 18.18 | 18.04 |
| 5.0 | 4 | 23.11 | 22.89 | 22.66 | 22.50 | 22.34 |
| 7.0 | 6 | 27.59 | 27.29 | 27.00 | 26.82 | 26.65 |
| 9.0 | 8 | 28.92 | 28.67 | 28.42 | 28.22 | 28.03 |
| 11.5 | 10 | 30.24 | 30.04 | 29.84 | 29.63 | 29.41 |
| 13.5 | 12 | 31.28 | 31.09 | 30.89 | 30.68 | 30.46 |
| 15.5 | 14 | 32.32 | 32.14 | 31.95 | 31.73 | 31.51 |
| 16.5 | 16 | 32.85 | 32.66 | 32.47 | 32.25 | 32.03 |

- Notes (1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.(Cooling only)
- (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
- (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)

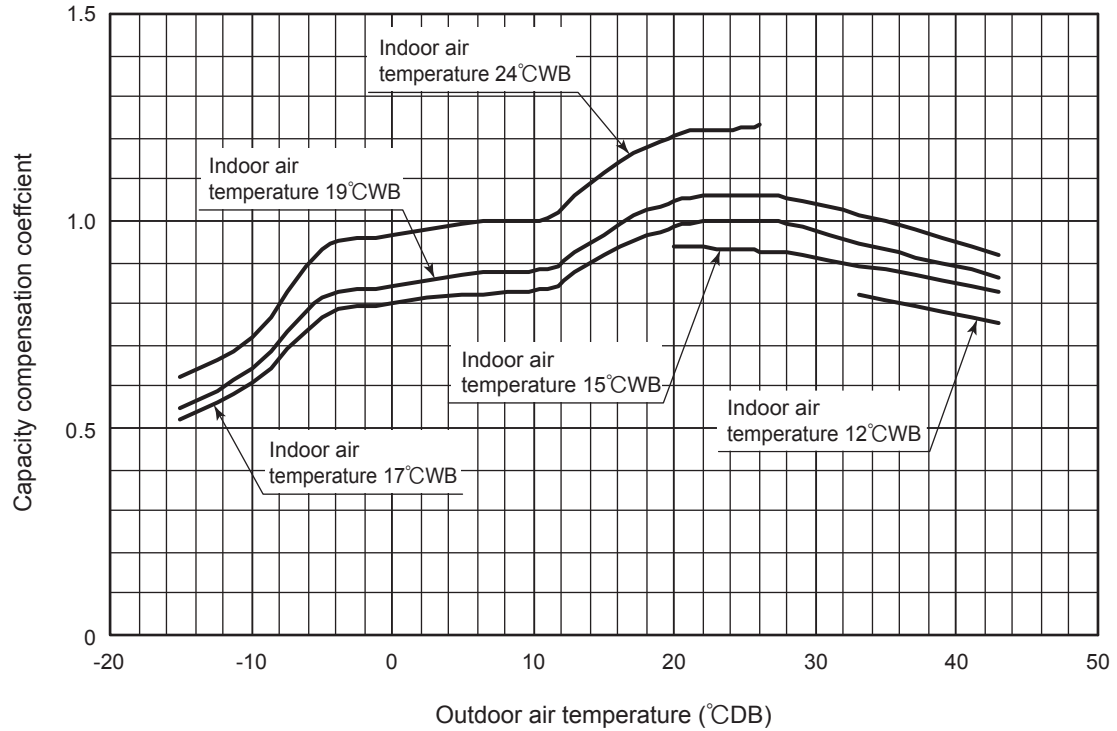


[References data]

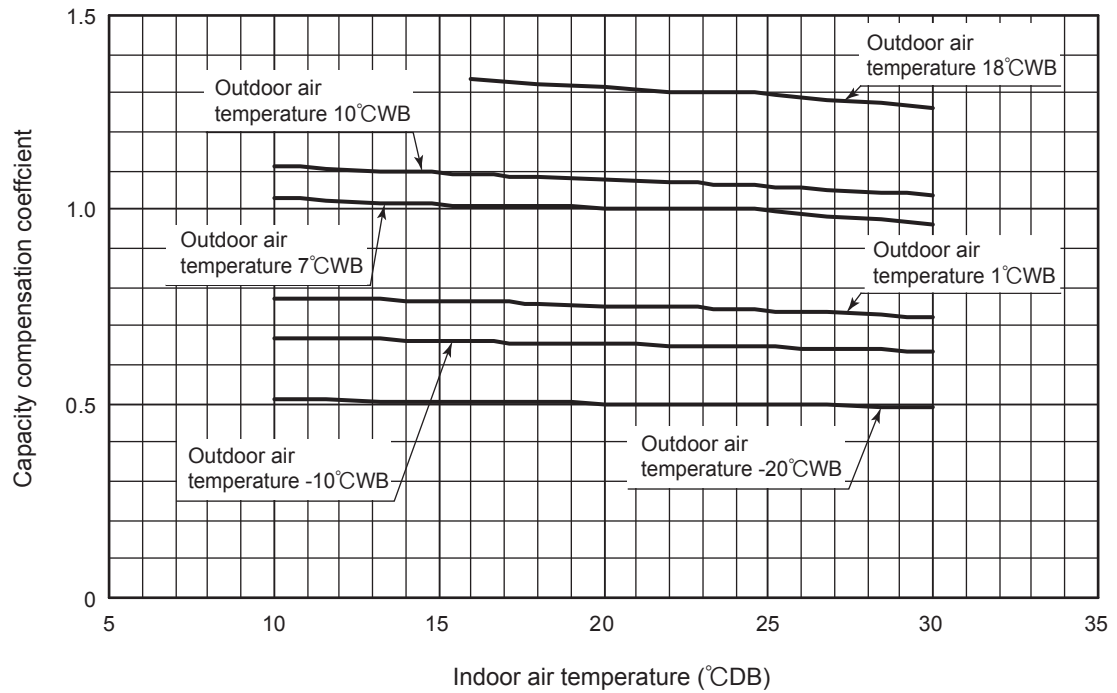
Capacity variation against outdoor and indoor temperature at rated capacity condition.

(I) Models FDC100, 125, 140VNA, 100, 125, 140VSA

① Cooling

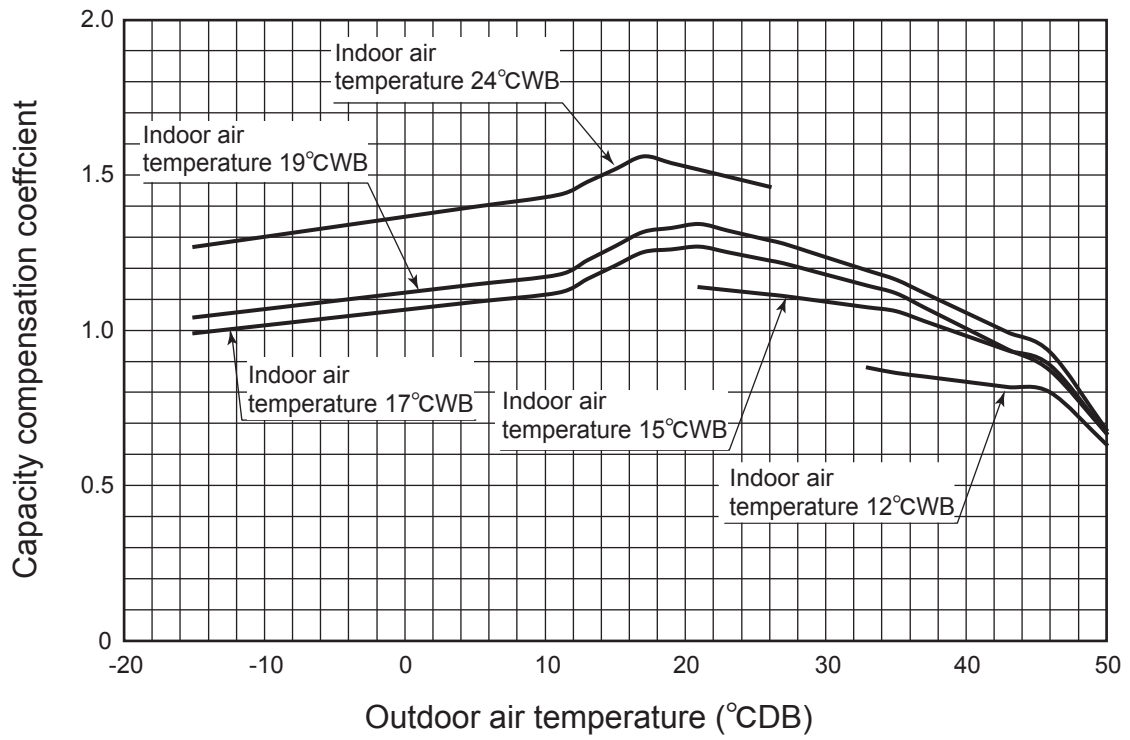


② Heating

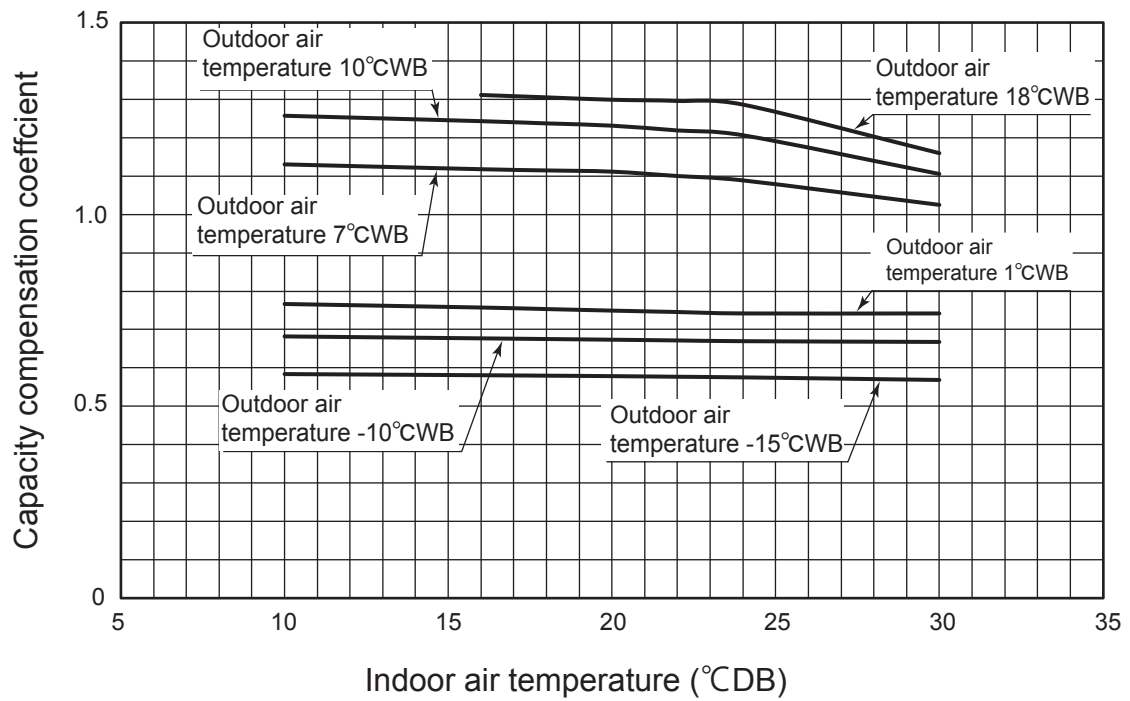


(II) Model FDC200VSA

① Cooling

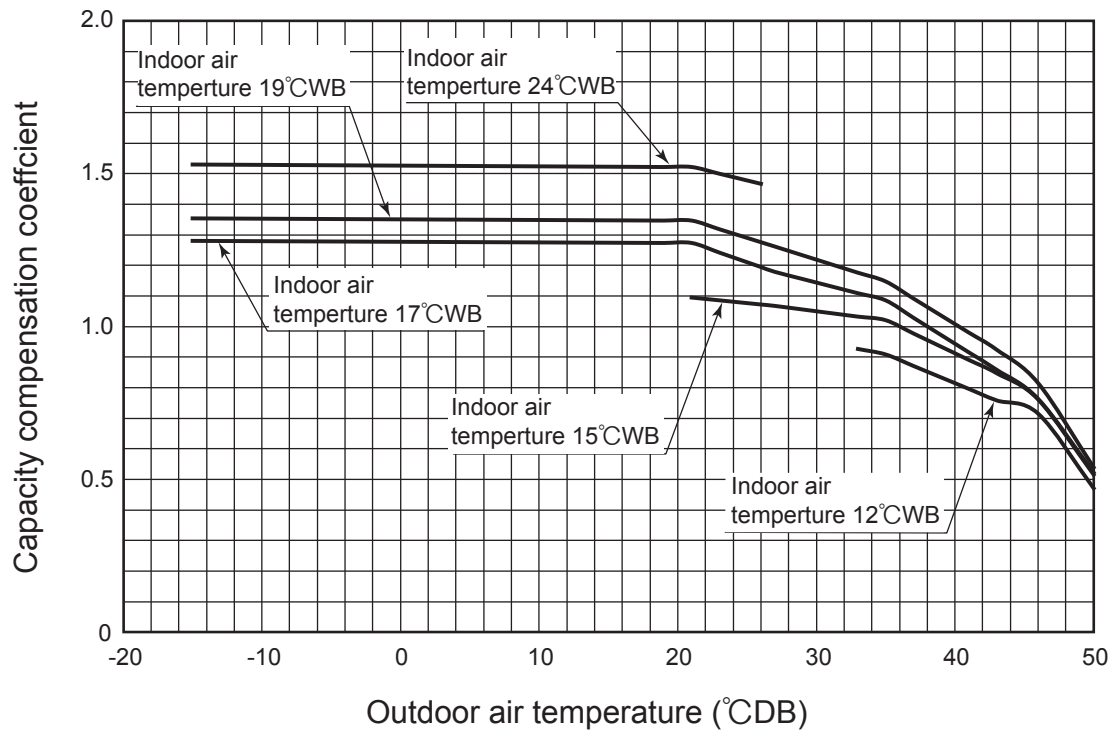


② Heating

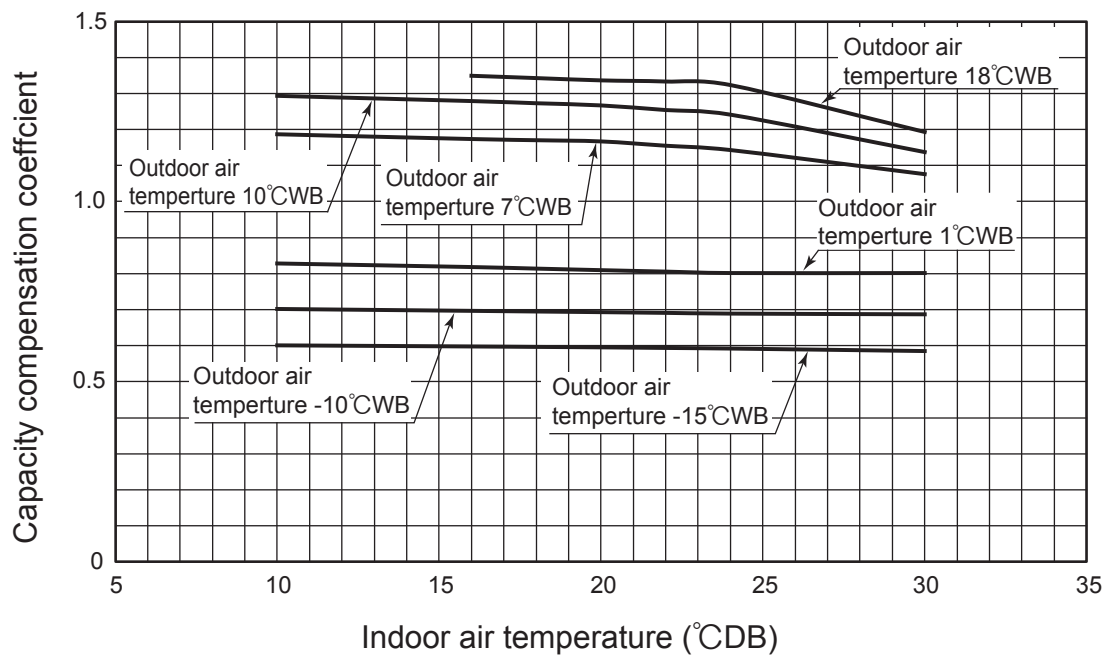


(III) Model FDC250VSA

① Cooling



② Heating



2.9.2 Correction of cooling and heating capacity in relation to air flow rate control (Fan speed)

| Fan speed | P-Hi or Hi | Me | Lo |
|--------------------|------------|------|------|
| Coefficient | 1.00 | 0.97 | 0.95 |

2.9.3 Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

(1) Models FDC100 - 140

| Equivalent piping length ⁽¹⁾ (m) | | 7.5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | |
|---|--------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Heating | | 1 | 1 | 1 | 1 | 1 | 0.998 | 0.998 | 0.993 | 0.993 | 0.988 | 0.988 | |
| Cooling | FDC100 model | φ 15.88 | 1 | 0.991 | 0.978 | 0.964 | 0.951 | 0.937 | 0.924 | 0.910 | 0.897 | 0.883 | 0.870 |
| | FDC125 model | | 1 | 0.986 | 0.968 | 0.950 | 0.932 | 0.914 | 0.896 | 0.878 | 0.860 | 0.842 | 0.824 |
| | FDC140 model | | 1 | 0.985 | 0.966 | 0.946 | 0.927 | 0.907 | 0.888 | 0.868 | 0.849 | 0.829 | 0.810 |
| | FDC100 model | φ 19.05 | 1.016 | 1.013 | 1.007 | 1.002 | 0.996 | 0.991 | 0.985 | 0.980 | 0.974 | 0.969 | 0.963 |
| | FDC125 model | | 1.022 | 1.018 | 1.009 | 1.001 | 0.992 | 0.984 | 0.975 | 0.967 | 0.958 | 0.950 | 0.941 |
| | FDC140 model | | 1.026 | 1.021 | 1.011 | 1.002 | 0.992 | 0.983 | 0.973 | 0.964 | 0.954 | 0.945 | 0.935 |

Note (1) Calculate the equivalent length using the following formula.

However, install the piping so that the piping length is within +5 m of the limit length (actual length) for the respective types.

(2) Models FDC200, 250

| Equivalent piping length ⁽¹⁾ (m) | | 7.5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 |
|---|--------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Heating | | 1 | 0.998 | 0.995 | 0.991 | 0.988 | 0.984 | 0.981 | 0.977 | 0.974 | 0.970 | 0.967 | 0.963 | 0.960 | 0.956 | 0.953 |
| Cooling | FDC200 model | φ 22.22 | 1 | 0.997 | 0.991 | 0.984 | 0.978 | 0.971 | 0.965 | - | - | - | - | - | - | - |
| | FDC250 model | | 1 | 0.995 | 0.985 | 0.975 | 0.965 | 0.954 | 0.944 | - | - | - | - | - | - | - |
| | FDC200 model | φ 25.4 | - | - | - | - | - | 0.988 | 0.984 | 0.981 | 0.977 | 0.974 | 0.970 | 0.967 | 0.963 | 0.960 |
| | FDC250 model | | - | - | - | - | - | 0.978 | 0.972 | 0.966 | 0.960 | 0.953 | 0.947 | 0.941 | 0.935 | 0.929 |
| | FDC200 model | φ 28.58 | - | - | - | - | - | 0.999 | 0.997 | 0.995 | 0.993 | 0.991 | 0.989 | 0.987 | 0.985 | 0.983 |
| | FDC250 model | | - | - | - | - | - | 0.997 | 0.994 | 0.990 | 0.987 | 0.983 | 0.980 | 0.976 | 0.973 | 0.969 |

Note (1) Calculate the equivalent length using the following formula.

However, install the piping so that the piping length is within +5 m of the limit length (actual length) for the respective types.

• Equivalent Length = Actual Length + (Equivalent bend length x number of bends in the piping.)

Equivalent length per bend.

| Gas pipe diameter (mm) | φ 12.7 | φ 15.88 | φ 19.05 | φ 22.22 | φ 25.4 | φ 28.58 |
|-------------------------------|--------|---------|---------|---------|--------|---------|
| Equivalent bend length | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 |

2.9.4 Height difference between the indoor unit and outdoor unit

When the outdoor unit is located below indoor units in cooling mode, or when the outdoor unit is located above indoor units in heating mode, the correction coefficient mentioned in the below table should be subtracted from the value in the above table.

| Height difference between the indoor unit and outdoor unit in the vertical height difference | 5m | 10m | 15m | 20m | 25m | 30m |
|--|------|------|------|------|------|------|
| Adjustment coefficient | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 |

Piping length limitations

| Model | FDC100 - 140 | FDC200, 250 |
|--|---|-------------|
| Item | | |
| Max. one way piping length | 50m | 70m |
| Max. vertical height difference | Outdoor unit is higher 30m Outdoor unit is lower 15m | |

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling and heating capacity

Example : The net cooling capacity of the model FDTC200VSADVH with the air flow “P-Hi”, the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulbtemperature at 19.0°C and outdoor dry-bulb temperature 35°C is

$$\text{Net cooling capacity} = \frac{19.0}{\text{Net cooling total capacity of FDTC200VSADVH (Outdoor temp. : 35°CDB Indoor temp. : 19°CWB) shown in 2.9.1}} \times \frac{1.00}{\text{Air flow : P-Hi shown in 2.9.2}} \times \frac{0.991}{\text{Piping length : 15m (Gas pipe size is } \phi 22.22 \text{) shown in 2.9.3}} \times \frac{0.99}{\text{Height diff. : 5m (Outdoor unit : below) shown in 2.9.4}} \approx 18.6\text{kW}$$

2.10 APPLICATION DATA







2.10.1 Installation of indoor unit (Except FDU200VG, 250VG) See page 141.

FDU200VG, 250VG






PJG012D017 

- This manual is for the installation of an indoor unit and an outdoor air processing unit (FDU-F).
- For electrical wiring work (Indoor), refer to page 403. For remote control installation, refer to page 407. For wireless kit installation, refer to page 640. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 416.
- The case of FDU-F
- The total connection capacity of the other air conditioning units and the outdoor air processing units must be from 50% to 100% (the total includes the outdoor air processing unit).
- The connection capacity of the outdoor air processing unit must not exceed 30% of the capacity of the outdoor unit.
- Single outdoor air processing unit can be used alone. The connection capacity of the outdoor air processing unit must be from 50% to 100% of the total capacity of the outdoor unit.
- Maximum number of outdoor air processing units that can be connected to the outdoor unit is 2 units.
- Capacities of the suction air processing units can be calculated with the following formulas.
FDU1800FKXZE1 = 224, FDU2400FKXZE1 = 280































SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels.  **WARNING** and  **CAUTION**.
 **WARNING**: Wrong installation would cause serious consequences such as injuries or death.
 **CAUTION**: Wrong installation might cause serious consequences depending on circumstances.
Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
 Never do it under any circumstances.  Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

WARNING

- **Installation should be performed by the specialist.**
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. 
- **Install the system correctly according to these installation manuals.**
Improper installation may cause explosion, injury, water leakage, electric shock, and fire. 
- **Check the density referred by the formula (accordance with ISO5149).**
If the density exceeds the limit density, please consult the dealer and install the ventilation system. 
- **Use the genuine accessories and the specified parts for installation.**
If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit. 
- **Ventilate the working area well in case the refrigerant leaks during installation.**
If the refrigerant contacts the fire, toxic gas is produced. 
- **Install the unit in a location that can hold heavy weight.**
Improper installation may cause the unit to fall leading to accidents. 
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
Improper installation may cause the unit to fall leading to accidents. 
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries. 
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
Power source with insufficient capacity and improper work can cause electric shock and fire. 
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
Loose connections or hold could result in abnormal heat generation or fire. 
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.**
Improper fitting may cause abnormal heat and fire. 
- **Check for refrigerant gas leakage after installation is completed.**
If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced. 
- **Use the specified pipe, flare nut, and tools for R410A.**
Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle. 
- **Tighten the flare nut according to the specified method by with torque wrench.**
If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period. 
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak. 
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system. 
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle. 
- **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. 
- **Do not repair by yourself. And consult with the dealer about repair.**
Improper repair may cause water leakage, electric shock or fire. 
- **Consult the dealer or a specialist about removal of the air conditioner.**
Improper installation may cause water leakage, electric shock or fire. 
- **Turn off the power source during servicing or inspection work.**
If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan. 
- **Do not run the unit when the panel or protection guard are taken off.**
Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock. 
- **Shut off the power before electrical wiring work.**
It could cause electric shock, unit failure and improper running.

CAUTION

- **Perform earth wiring surely.**
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock or fire due to a short circuit. 
- **Earth leakage breaker must be installed.**
If the earth leakage breaker is not installed, it could cause electric shocks or fire. 
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
Using the incorrect one could cause the system failure and fire. 
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
Connecting the circuit by wire or copper wire could cause unit failure and fire. 
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
If the gas leaks and gathers around the unit, it could cause fire. 
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire. 
- **Secure a space for installation, inspection and maintenance specified in the manual.**
Insufficient space can result in accident such as personal injury due to falling from the installation place. 
- **Do not use the indoor unit at the place where water splashes such as laundry.**
Indoor unit is not waterproof. It could cause electric shock and fire. 
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
It could cause the damage of the items. 
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming. 
- **Do not install the remote control at the direct sunlight.**
It could cause breakdown or deformation of the remote control. 
- **Do not install the indoor unit at the place listed below.**
 - Places where flammable gas could leak.
 - Places where carbon fiber, metal powder or any powder is floated frequently used.
 - Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammoniac atmospheres.
 - Places exposed to oil mist or steam directly.
 - On vehicles and ships
 - Places where machinery which generates high harmonics is used.
 - Places where cosmetics or special sprays are frequently used.
 - Highly salted area such as beach.
 - Heavy snow area
 - Places where the system is affected by smoke from a chimney.
 - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
 - Locations with any obstacles which can prevent inlet and outlet air of the unit
 - Locations where vibration can be amplified due to insufficient strength of structure.
 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam, (in case of the infrared specification unit)
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely.
It can affect performance or function and etc. 
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings. 
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
It could cause the unit falling down and injury. 
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit. 
- **Install the drain pipe to drain the water surely according to the installation manual.**
Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings. 
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety. 
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. 
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance. 
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables. 
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean. 
- **Pay extra attention, carrying the unit by hand.**
Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin. 
- **Make sure to dispose of the packaging material.**
Leaving the materials may cause injury as metals like nail and woods are used in the package. 
- **Do not operate the system without the air filter.**
It may cause the breakdown of the system due to clogging of the heat exchanger. 
- **Do not touch any button with wet hands.**
It could cause electric shock. 
- **Do not touch the refrigerant piping with bare hands when in operation.**
The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite. 
- **Do not clean up the air conditioner with water.**
It could cause electric shock. 
- **Do not turn off the power source immediately after stopping the operation.**
Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown. 
- **Do not control the operation with the circuit breaker.**
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury. 

○ This model is middle static ducted type air conditioning unit. Therefore, do not use this model for direct blow type air conditioning unit.

1 Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items

Accessory item

| For hanging | For drain pipe | | | | | | |
|-------------------|---------------------------|-------------------------|-------------------------------------|-------------------------------------|---------------------------|-------------------------|--|
| | FDU, FDU-F | | | FDUA | | | |
| Flat washer (M10) | Hose clamp | Socket | Pipe cover (big) | Pipe cover (small) | Drain hose | Hose clamp | |
| 8 | 2 | 1 | 1 | 1 | 1 | 1 | |
| For unit hanging | For drain socket mounting | For drain pipe mounting | For heat insulation of drain socket | For heat insulation of drain socket | For drain pipe connecting | For drain hose mounting | |



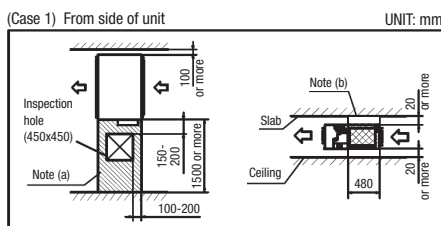
2 Selection of installation location for the indoor unit

- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - Areas where there is no obstruction of airflow on both air return grille and air supply port.
 - Areas where fire alarm will not be accidentally activated by the air conditioner.
 - Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
 (This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.)
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
 (A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air conditioner might not work properly.)

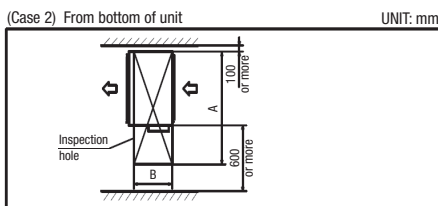
- Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

- Make installation altitude over 2.5m. (Indoor Unit)
- Select either of two cases to keep space for installation and services.



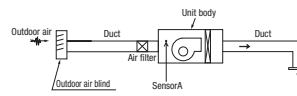
Notes (a) There must not be obstacle to draw out fan motor. (b) Install refrigerant pipe, drain pipe, and wiring so as not to cross marked area.



| (Size of inspection hole) | | UNIT: mm |
|---------------------------|-----------|----------|
| Single type | 200-250 | |
| Multi type | 224-280 | |
| FDU-F | 1800-2400 | |
| A | 1900 | |
| B | 880 | |

3 Cautions for the handling and installation place of outdoor air processing unit

- This unit monitors the outdoor air temperature at the position of sensor A in the figure, and controls the start and stop with the thermostat based on the value of sensor A and the setting temperature by the remote control.



Remote control's setting temperature indicates the outdoor air temperature that controls the start and stop of operation by the thermostat.

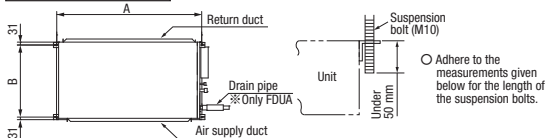
- When the thermostat is turned off, the operation is changed to the fan mode so that the outdoor air is blown out directly into the room. For example if the remote control is set to 22°C in cooling operation, and if the outdoor air temperature is 22°C or lower at that time, the unit will go into fan operation.
- When there is a difference between the air conditioning temperature in the room during cooling operation and the temperature of air blown out from the outdoor air processing unit, dewing water may drip from the unit. To prevent the dewing, provide a sufficient heat insulation means at the air blow outlet.
- Since the air blow outlet on the outdoor air processing unit may blow out the outdoor air directly, orient the outlet in such a way that it will not blow air directly to persons in the room.
- Since the unit controls the thermostat start and stop by monitoring the outdoor air temperature, it is prohibited to monitor the room temperature by means of the room temperature monitoring by changing the thermostat setting at the remote control side and the optional remote thermostat. Otherwise, dewing water may drip from the unit at lower outdoor air temperatures during cooling operation.
- Install the remote control of the outdoor air processing unit at a place closer to the administrator to avoid the end user from using the remote control.

When handing over the unit to the end user, make sure to explain sufficiently about the foregoing cautions, the installation place of the remote control for the outdoor air processing unit and the position of air blow outlet.

4 Preparation before installation

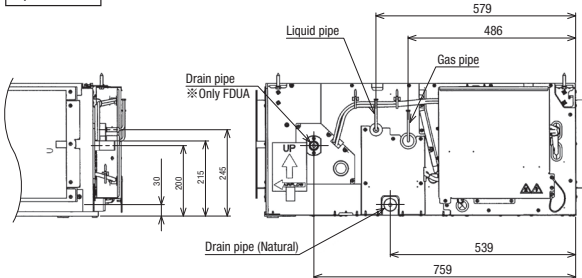
- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
 - When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Suspension Bolt Location



| UNIT: mm | |
|-------------|------------|
| Single type | 200, 250 |
| Multi type | 224, 280 |
| FDU-F | 1800, 2400 |
| A | 1634 |
| B | 831 |

Pipe locations

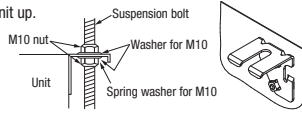


⑤ Installation of indoor unit

Installation

[Hanging]

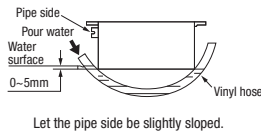
Hang the unit up.



Adjustment for horizontality

○ Either use a level vial, or adjust the level according to the method below.

- Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.



○ If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

⑥ Duct Work

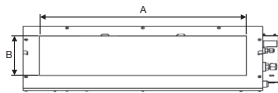
① A corrugated board (for preventing sputtering) is attached to the main body of the air conditioner (on the outlet port). Do not remove it until connecting the duct.

- An air filter can be provided on the main body of the air conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.

② Blowout duct

- Use rectangular duct to connect with unit.
- Duct size for each unit is as shown below.

| UNIT: mm | |
|-------------|------------|
| Single type | 200, 250 |
| Multi type | 224, 280 |
| FDU-F | 1800, 2400 |
| A | 1450 |
| B | 250 |

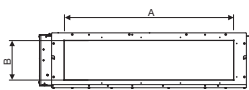


- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.

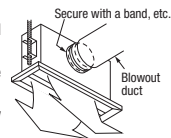
③ Inlet port

- When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
- Inlet port size for each unit is as shown below.

| UNIT: mm | |
|-------------|------------|
| Single type | 200, 250 |
| Multi type | 224, 280 |
| FDU-F | 1800, 2400 |
| A | 1450 |
| B | 250 |

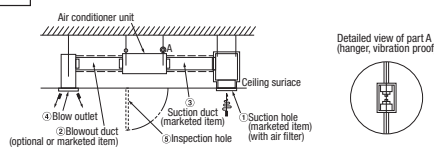


- Make sure to insulate the duct to prevent dewing on it.
- ④ Install the specific blowout duct in a location where the air will circulate to the entire room.
- Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
- Insulate the area where the duct is secured by a band for dew condensation prevention.



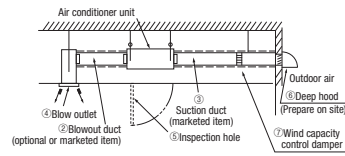
⑤ Make sure provide an inspection hole on the ceiling. It is indispensable to service electric equipment, motor, functional components and cleaning of heat exchanger.

FDU · FDUA



⑥ Duct Work (continued)

FDU-F



Bad example of duct work

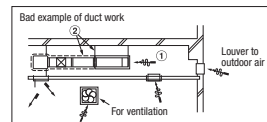
① If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the outdoor air louver, weather (rainy day) and others.

a) Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)

b) It may run out the allowable limit of unit operation (Example: When outdoor air temperature is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload, etc..

c) There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from the heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.

② If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



⑦ Refrigerant pipe

Caution

- Use the new refrigerant pipe.

When re-using the existing pipe system for R22 or R407C, pay attention to the following items.

- Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
- Do not use thin-walled pipes.

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation.

In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.

- Do not use any refrigerant other than R410A.

Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.

- Use special tools for R410 refrigerant.

- The indoor unit pipes allow the maintenance panel to be removed. Therefore, regardless of the piping direction, there should be a straight section of 400 mm or more.

Work procedure

- When brazing work, perform it while cool down around the brazing port with wet towels to prevent the overheating.
- After check the gas leak test, install the heat insulation (prepare on site) to the brazing port of the indoor unit.

- Be sure to perform the heat insulation both of gas side piping with liquid side piping.

※ If heat insulation does not install to the pipes, dew condensation may occurs and it may cause the water leakage.

The thickness of the heat insulation should be more than 20mm.

- Refrigerant is charged in the outdoor unit.

As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

○ The brazing port size of the indoor unit.

| Single unit | Liquid/Gas | Size | Multi unit | Liquid/Gas | Size |
|-------------|---------------|--------|------------|---------------|---------|
| Type 200 | Liquid piping | φ 9.52 | Type 224 | Liquid piping | φ 9.52 |
| | Gas piping | φ 25.4 | | Gas piping | φ 19.05 |
| Type 250 | Liquid piping | φ 12.7 | Type 280 | Liquid piping | φ 9.52 |
| | Gas piping | φ 25.4 | | Gas piping | φ 22.22 |

※ Please refer to the installation sheet of outdoor units for details.

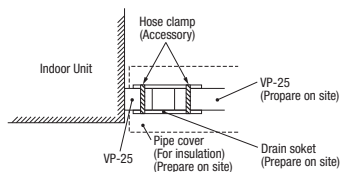
⑧ Drain pipe

Caution

- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

1. Insert the supplied drain hose (the end made of soft PVC) to the step of the drain socket on the indoor unit and fix it securely with the clamp.
 - Do not apply adhesives on this end.

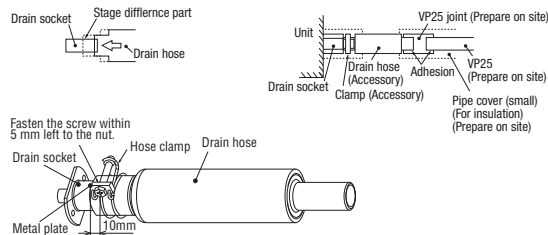


- The cases of FDUA and mounting a Drain-up KIT (option parts)

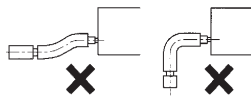
Make sure to insert the drain hose (the end made of soft PVC) to the end of the step part of drain socket.

Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.

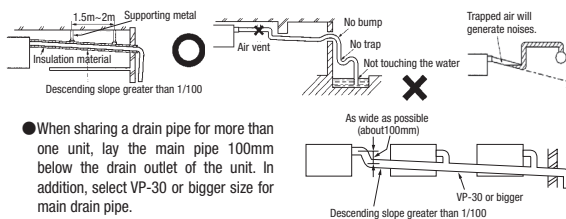
- Do not apply adhesives on this end.
- Do not use acetone-based adhesives to connect to the drain socket.



2. Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP-25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set up air vent.



- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.

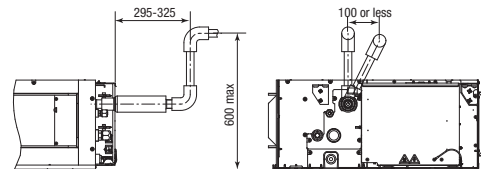
⑧ Drain pipe (continued)

4. Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.

Drain up

- The cases of FDUA and mounting a drain-up KIT (option parts)

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



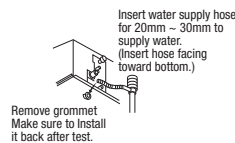
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.
3. In case of a new building, conduct the test before it is furnished with the ceiling.
4. Be sure to conduct this test even when the unit is installed in the heating season.

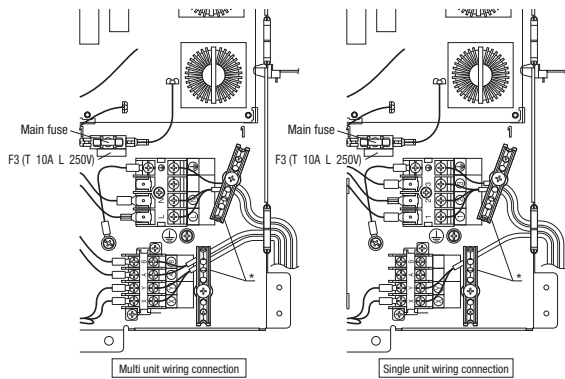
Procedures

1. Supply about 2000 cc of water to the unit through the air outlet by using a feed water pump.
2. Check the drain while cooling operation.



⑨ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
Be sure to use an exclusive circuit.
 - Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
 - Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
 - For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
1. Remove a lid of the control box (2 screws).
 2. Hold each wiring inside the unit and fasten them to terminal block securely.
 3. Fix the wiring with clamps.
 4. Install the removed parts back to original place.



* Please fix the wiring in the band not to move even if it pulls.

| Main fuse specification | |
|-------------------------|---------------|
| Specification | Part No. |
| T 10A L 250V | SSA 564A149AL |

⑩ External static pressure setting

If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 – 200 Pa (E.S.P. setting No. 1 – 19). This should not be used when actual E.S.P. cannot be confirmed, because the risk above becomes higher.

| Setting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|-------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E.S.P. (Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 200 |

※ If 20 is selected for the setting No. on the remote control, the setting No. shows No. 19.

⑪ Check list after installation

- Check the following items after all installation work completed.

| Check if | Expected trouble | Check |
|--|---|-------|
| The indoor and outdoor units are fixed securely? | Falling, vibration, noise | |
| Inspection for leakage is done? | Insufficient capacity | |
| Insulation work is properly done? | Water leakage | |
| Water is drained properly? | Water leakage | |
| Power source voltage is same as mentioned in the model name plate? | PCB burnt out, not working at all | |
| No mis-wiring or mis-connection of piping? | PCB burnt out, not working at all | |
| Earth wiring is connected properly? | Electric shock | |
| Cable size comply with specified size? | PCB burnt out, not working at all | |
| Any obstacle blocks airflow on air inlet and outlet? | Insufficient capacity | |
| Is setting of E.S.P. finished? | Excessive air flow, water drop blow out | |

⑩ External static pressure setting

You can set External Static Pressure (E.S.P.) by method of MANUAL SETTING on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting (Lo-Uhi). You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.

- How to set E.S.P. by wired remote control
 - ① Push "◆" marked button (E.S.P. button).
 - ② Select indoor unit No. by using ◀ button.
 - ③ Select setting No. by using ▶ button and set E.S.P. by □ button.
 See detailed procedure in technical manual.

Notice

You can NOT set E.S.P. by wireless remote control.



With E.S.P. setting, confirm that actual E.S.P. agrees with E.S.P. setting. When E.S.P. setting is higher than actual E.S.P., the airflow rate becomes excessively higher. This will cause water leakage if water splashes. When E.S.P. setting is lower than actual E.S.P., the airflow rate becomes excessively lower and the cooling or heating may become ineffective. In order to reduce the risk above the factory E.S.P. setting is set within the range of 80 – 150 Pa (E.S.P. setting No. 8 – 15). Be sure to use within the range of 80 – 150 Pa in actual operations. If actual E.S.P. is lower than 80 Pa, it may cause water leakage.

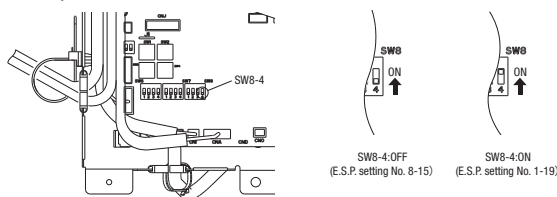
| Setting No. | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------|----|----|-----|-----|-----|-----|-----|-----|
| E.S.P. (Pa) | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |

※ If 1 – 7 is selected for the setting No. on the remote control, the setting No. shows No. 8.
If 16 – 20 is selected for the setting No. on the remote control, the setting No. shows No. 15.
Factory default is No. 8.

The Case of FDU-F

| Setting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|
| E.S.P. (Pa) | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |

※ If 13-20 is selected for the setting No. on the remote control, the setting No. shows No. 12.
※ Factory default is No. 8.









2.10.2 Electric wiring work installation (Except FDU200VG, 250VG) See page 164.

FDU200VG, 250VG


Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.


PSC012D049 


Security instructions


- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels,  and .
 -  : Wrong installation would cause serious consequences such as injuries or death.
 -  : Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
 -  Never do it under any circumstances.
 -  Do it according to the instruction.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.


⚠ WARNING


- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. 


Power source with insufficient capacity and improper work can cause electric shock and fire.
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal. 


Loose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly. 

Improper fitting may cause abnormal heat and fire.
- Use the genuine option parts. And installation should be performed by a specialist. 

If you install the unit by yourself, it could cause water leakage, electric shock and fire.
- Do not repair by yourself. And consult with the dealer about repair. 


Improper repair may cause water leakage, electric shock or fire.
- Consult the dealer or a specialist about removal of the air-conditioner. 


Improper installation may cause water leakage, electric shock or fire.
- Turn off the power source during servicing or inspection work. 


If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- Shut off the power before electrical wiring work. 


It could cause electric shock, unit failure and improper running.


⚠ CAUTION


- Perform earth wiring surely. 


Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- Earth leakage breaker must be installed. 


If the earth leakage breaker is not installed, it can cause electric shocks.
- Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.) 


Absence of breaker could cause electric shock.
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current. 

Using the incorrect one could cause the system failure and fire.
- Do not use any materials other than a fuse of correct capacity where a fuse should be used. 

Connecting the circuit by wire or copper wire could cause unit failure and fire.
- Use power source line of correct capacity. 

Using incorrect capacity one could cause electric leak, abnormal heat generation and fire.
- Do not mingle solid cord and stranded cord on power source and signal side terminal block. 

In addition, do not mingle difference capacity solid or stranded cord. Inappropriate cord setting could cause losing screw on terminal block, bad electrical contact, smoke and fire.
- Do not turn off the power source immediately after stopping the operation. 

Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- Do not control the operation with the circuit breaker. 

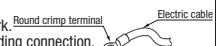
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

Control mode switching

● The control content of indoor units can be switched in following way. (is the default setting)

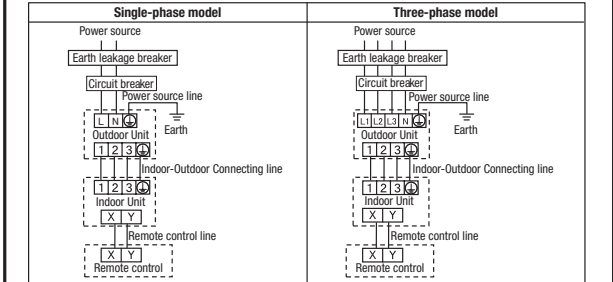
| Switch No. | Control Content | |
|------------|---|---------------------------------------|
| SW2 | Indoor unit address (0-FH) | |
| SW5-1 | Master/Slave Switching (plural /Slave unit Setting) | |
| SW5-2 | | |
| SW6-1-4 | Model capacity setting | |
| SW7 - 1 | ON | Operation check, Drain motor test run |
| | OFF | Normal operation |

① Electrical Wiring Connection



- Electrical wiring work must be performed by an electrician qualified by a local power provider. These wiring specifications are determined on the assumption that the following instructions are observed:
 - Do not use cords other than copper ones.
 - Do not use any power source line lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51), if allowed in the relevant part 2;
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53);
 - flat twin tinsel cord (code designation 60227 IEC 41);
 - ordinary polyvinyl chloride sheathed cord (code designation 60227 IEC 53);
 - Connect the power source to the outdoor unit.
 - Pay extra attention so as not to confuse signal line and power source line connection, because an error in their connection can burn all the boards at once.
- Connect ground wires before connecting wires between the indoor and outdoor units and between indoor units. The ground wires need to be longer than the wires between the indoor and outdoor units, and protected from undue stress.
- Do not turn on the power source before completing the work. 
 - The ground wires must be connected by the Class D grounding connection.
 - Use the round crimp terminals for connections to the terminal block.
 - Use dedicated branch circuits, avoiding combination with other devices. Otherwise, it could trip the power source breaker, resulting in secondary accidents.
 - Install the overcurrent and earth leakage breakers (sensitivity current: 30 mA) specified to respective models.
 - Do not connect indoor and outdoor signal cables to extension cables on the way. If the joint is wetted with intruding water, it could cause a ground insulation failure or poor connection, resulting in communication errors. (If it is inevitable to connect cables on the way, make sure to prevent the water intrusion completely.)
- When running wires (wires for power source, remote control, connecting between indoor and outdoor units, or other) behind the ceiling, protect them using copper or other pipes against assault by rat, or other.
 - It is up to 3.5 mm² the size of power source cables connected to indoor units. When using cables of 5.5 mm² or larger, provide a dedicated pull box for branching connection to indoor units.
 - If signal and power source cables are connected mistakenly, it could burn down all PCBs.
 - Even if the power source of AC 220/240/380/415 V is connected mistakenly to A-B signal cable, it is protected at initial occasion only.
 - If the remote control fails to detect the unit No. (address) at 15 minutes after turning the power on, check and repair all signal cables for misconnection.
 - Cut the jumper wire J10SL1 of burnt PCB, and reconnect connectors CnK (yellow) and CnK1 (white) to CnK2 (black).
 - If any anomaly is found on wires between the A-B terminal block and the PCB, replace them.
- At the outside of indoor and outdoor units, take care to avoid direct contacts between remote control and power source cables.
- In no event connect the power source of AC 220/240/380/415 V to the remote control terminal block. It could cause failures.
- Connections of wiring between units, ground wire and remote control cable
 - When connecting wires between units, ground wire or remote control wire, connect them according to the number of terminals on the power source terminal block or signal terminal block in the control box. Connect the ground wire to the ground terminal on the power source terminal block.
 - Make sure to install an earth leakage breaker for the power source. Select a breaker for inverter circuit.
 - When the earth leakage breaker is exclusive for the earth leakage protection, it is necessary to connect also an isolating switch (Switch + Class B fuse) or wiring circuit breaker in series to the earth leakage breaker.
 - Install the isolating switch close to the unit.
- Connect wires securing by tightening screws firmly. Confirm also no connector or wire (from terminal) is disconnected in the control box.
- When installing an auxiliary electric heater, consult the electric heater manual or technical data.

Cable connection for single unit installation

- As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect power source line to inside unit.
 - As for exceptional connecting method of power source, discuss with the power provider of the country with referring to technical documents, and follow its instruction.
- For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- Connect the same pairs number of terminal block "①, ②, and ③" and "X and Y" between master and slave indoor units.
- Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).
- Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.
- When the [AIR CON No.] button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the  or  button.

Method of setting Master/Slave of indoor unit

(Factory setting: "Master")

| Indoor Unit | Master | Slave 1 | Slave 2 | Slave 3 |
|-------------|--------|---------|---------|---------|
| PCB SW | SW5-1 | OFF | OFF | ON |
| | SW5-2 | OFF | ON | OFF |

② Remote control, wiring and functions

● Do not install it on the following places

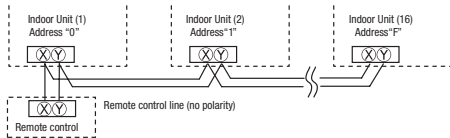
- ① Places exposed to direct sunlight
- ② Places near heat devices
- ③ High humidity places
- ④ Hot surface or cold surface enough to generate condensation
- ⑤ Places exposed to oil mist or steam directly.
- ⑥ Uneven surface

Installation and wiring of remote control

- ① Install remote control referring to the attached installation manual.
- ② Wiring of remote control should use 0.3mm² × 2 core wires or cables.
The insulation thickness is 1mm or more. (on-site configuration)
- ③ Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
100 - 200m 0.5mm² × 2 cores
Under 300m 0.75mm² × 2 cores
Under 400m 1.25mm² × 2 cores
Under 600m 2.0mm² × 2 cores
- ④ Avoid using multi-core cables to prevent malfunction.
- ⑤ Keep remote control line away from earth (frame or any metal of building).
- ⑥ Make sure to connect remote control line to the remote control and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote control

- ① A remote control can control plural indoor units (Up to 16).
- In above setting, all plural indoor units will operate under same mode and temperature setting.
- ② Connect all indoor units with 2 core remote control line.
- ③ Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.



Master/ slave setting when more than one remote control unit are used

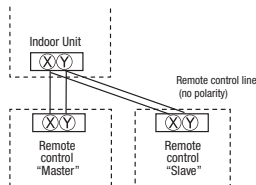
A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it.

Acceptable combination is "two (2) wired remote controls", "one (1) wired remote control and one (1) wireless kit" or "two (2) wireless kits".

Set one to "Master" and the other to "Slave".

Note: The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.

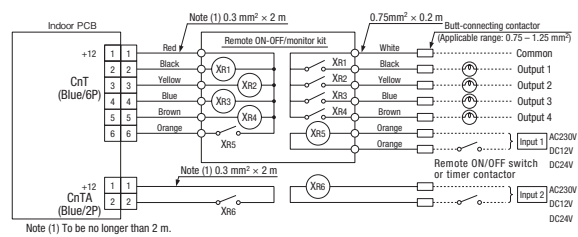


③ Operation and confirmation from remote control

| No. | Item | Operation from the eco touch remote control (RC-EX3A) | Operation from the standard remote control (RC-E4, RC-E5) |
|-----|---|--|--|
| 1 | Check the number of units connected in the multi remote control system. | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address] | ① Press the [AIR CON No.] button to display the IU address. ② Press the [▲] or [▼] button and check addresses of connected indoor units one by one. |
| 2 | Check if each unit is connected properly in the remote control system. | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address] ⇒ [Check run mode] | ① Press the [AIR CON No.] button to display the IU address. ② Press the [▲] or [▼] button and select one of IU addresses. ③ Press the [MODE] button. The unit starts to blow air. |
| 3 | Setting main/sub remote controls | [Menu] ⇒ [Service setting] ⇒ [R/C function settings] ⇒ [Service password] ⇒ [Main/Sub of R/C] | Set SW1 to "Sub" for the sub remote control unit. |
| 4 | Checking operation data | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [Operation data] | Press the [CHECK] button. ⇒ "OPER DATA" is displayed. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Select one of addresses for connected indoor units by pressing the [▲] or [▼] button. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Select data by pressing the [▲] or [▼] button. |
| 5 | Checking inspection display | [Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [Error display] | Press the [CHECK] button. ⇒ "OPER DATA" is displayed. ⇒ Press the [▼] button. ⇒ "ERRR DATA" is displayed. ⇒ Press the [SET] button. ⇒ "DATA LINKING" is displayed. ⇒ Data is displayed. |
| 6 | Cooling test run from remote control | [Menu] ⇒ [Service setting] ⇒ [Installation settings] ⇒ [Service password] ⇒ [Test run] ⇒ [Cooling test run] ⇒ [Start] | ① Start the system by pressing the [ON/OFF] button. ② Select "C (Cool)" with the [MODE] button. ③ Press the [TEST] button for 3 seconds or longer. The screen display will switch to "TEST RUN". ④ Pressing the [SET] button, while the "TEST RUN" is displayed, starts the cooling test run. The screen display will switch to "TEST RUN". |
| 7 | Trial operation of drain pump from remote control | [Menu] ⇒ [Service setting] ⇒ [Installation settings] ⇒ [Service password] ⇒ [Test run] ⇒ [Drain pump test run] ⇒ [Run] | ① Start the system by pressing the [ON/OFF] button. The display will change to "TEST RUN". ② Press the [▼] button once to display "DRAIN PUMP". ③ Pressing the [SET] button starts the drain pump operation. The display will show "DRAIN TO STOP". |

The menu configuration may vary depending on models of the remote control. If the model of your remote control is different, refer to the installation manual attached to the remote control.

④ Function of CnT connector of indoor printed circuit board



Note (1) To be no longer than 2 m.

- XR1-4 are DC 12 V relays. (Equivalent to Omron's LY2F)
- XRS is a DC 12 V, 24 V or AC230 V relay. (Equivalent to Omron's MY2F)
- Maker and model of CnT connector (Site side)
Connector : Molex 5264-06
Terminal : Molex 5263T
- CnTA connector is used on FDT, or other. <Check with the specifications.> (Site side) Maker and model
Connector : J.S.T. Mfg. XAPQ2V-1-E
Terminal : J.S.T. Mfg. SXA-01T-P0.6
- Output 1 - 4 and input1/2 can be selected/set as required from following items.
Factory default is set as shown below.

| Output | |
|-----------------------------|--------------------------------|
| ① RUN output | ⑧ Fan ON output 3 |
| ② Heating output | ⑨ Defrost/oil return output |
| ③ Compressor ON output | ⑩ Ventilation output |
| ④ Inspection (error) output | ⑪ Heater output |
| ⑤ Cooling output | ⑫ Free cleaning output |
| ⑥ Fan ON output 1 | ⑬ Indoor overload error output |
| ⑦ Fan ON output 2 | |

| Input | |
|--------------------------|-----------------------------|
| ① RUN/STOP | ⑤ Setting temp. shift |
| ② RUN permit prohibition | ⑥ Compulsory thermostat OFF |
| ③ Emergency stop | ⑦ Temporary stop |
| ④ Cooling/Heating | ⑧ Silent mode |

| Factory default setting | | | | | |
|-------------------------|----------|----------------------|-------|----------|---------------------------|
| CnT-2 | Output 1 | RUN output | CnT-5 | Output 4 | Inspection (error) output |
| CnT-3 | Output 2 | Heating output | CnT-6 | Input 1 | RUN/STOP |
| CnT-4 | Output 3 | Compressor ON output | CnTA | Input 2 | RUN/STOP |

● For the setting method, refer to the technical data.

5 Operation and setting from remote control

A : Refer to the instruction manual for RC-EX series ○ : Nearly same function setting and operations are possible. *1: Remote controls before RC-EX1A don't have this function.
 B : Refer to the installation manual for RC-EX series △ : Similar function setting and operations are possible. *2: Remote controls before RC-EX3 don't have this function.
 C : Loading a utility software via Internet

| Setting & display item | Description | RC-EX3A | RC-E5 | |
|---|--|--|-------|---|
| 1.Remote Control network | | | | |
| 1 Control plural indoor units by a single remote control | A remote control can control plural indoor units up to 16 (in one group of remote control network). An address is set to each indoor unit. | | ○ | |
| 2 Main/sub setting of remote controls | A pair of remote controls (including option wireless remote control) can be connected within the remote control network. Set one to "Main" and the other to "Sub". | B | ○ | |
| 2.TOP screen, Switch manipulation | | | | |
| 1 Menu | "Control", "State", or "Details" can be selected. (3-8) | A | | |
| 2 Operation mode | "Cooling", "Heating", "Fan", "Dry" or "Auto" can be set. | A | ○ | |
| 3 Set temp. | "Set temperature" can be set by 0.5°C interval. | A | ○ | |
| 4 Air flow direction | "Air flow direction" (Individual flap control) can be set. Select Enable or Disable for the "3D AUTO" (in case of FDK). *1 | A | △ | |
| 5 Fan speed | "Fan speed" can be set. | A | ○ | |
| 6 Timer setting | "Timer operation" can be set. | A | ○ | |
| 7 ON/OFF | "On/Off operation of the system" can be done. | A | ○ | |
| 8 F1 SW | *1 The system operates and is controlled according to the function specified to the F1 switch. | A | | |
| 9 F2 SW | *1 The system operates and is controlled according to the function specified to the F2 switch. | A | | |
| 10 Select the language | *2 Select the language to display on the remote control. • Select from English, German, French, Spanish, Italian, Dutch, Turkish, Portuguese, Russian, Polish, Japanese and Chinese. | A | | |
| 3.Useful functions | | | | |
| 1 Individual flap control | The moving range (the positions of upper limit and lower limit) of the flap for individual flap can be set. Set also the left and right limit positions for FDK. *1 | A | △ | |
| 2 Anti draft setting When the panel with the anti-draft function is assembled. | *1 • DetailsYou can set Enable or Disable for anti draft motion performed at each blow outlet in each operation mode. • ON/OFF settingYou can set ON/OFF (operation/stop) of anti draft function for the enabled blow outlet set in Details. *2 | A | | |
| 3 Timer settings | Set On timer by hour | The period of time to start operation after stopping can be set. • The period of set time can be set within range of 1hour-12hours (1hr interval). • The operation mode, set temp-and fan speed at starting operation can be set. | A | △ |
| | Set Off timer by hour | The period of time to stop operation after starting can be set. • The period of set time can be set within range of 1hour-12hours (1hr interval). | A | △ |
| | Set On timer by clock | The clock time to start operation can be set. • The set clock time can be set by 5-minutes intervals. • [Once (one time only)] or [Everyday] operation can be switched. • The operation mode, set temp. and fan speed at starting operation can be set. | A | △ |
| | Set Off timer by clock | The clock time to stop operation can be set. • The set clock time can be set by 5-minute intervals. • [Once (one time only)] or [Everyday] operation can be switched. | A | △ |
| | Confirmation of timer settings | Status of timer settings can be seen. | A | |
| 4 Favorite setting [Administrator password] | *1 Set the operation mode, setting temperature, air flow capacity and air flow direction for the choice setting operations. Set them for the Favorite set 1 and the Favorite set 2 respectively. | A | | |
| 5 Weekly timer | On timer and Off timer on weekly basis can be set. • 8-operation patterns per day can be set at a maximum. • The setting clock time can be set by 5-minute intervals. • Holiday setting is available. • The operation mode, set temp. and fan speed at starting operation can be set. | A | △ | |
| 6 Home leave mode [Administrator password] | When leaving home for a long period like a vacation leave, the unit can be operated to maintain the room temperature not to be hotter in summer or not to be colder in winter. • The judgment to switch the operation mode (Cooling ⇄ Heating) is done by the both factors of the set temp. and outdoor air temp. • The set temp. and fan speed can be set. | A | | |
| 7 External Ventilation When the ventilator is combined. | On/Off operation of the external ventilator can be done. It is necessary to set from [Menu] ⇒ [Service setting] ⇒ [R/C function settings] ⇒ [Ventilation setting]. • If the "Independent" is selected for the ventilation setting, the ventilator can be operated or stopped. | A | ○ | |
| 8 Select the language | Select the language to display on the remote control. • Select from English, German, French, Spanish, Italian, Dutch, Turkish, Portuguese, Russian, Polish, Japanese and Chinese. *1 | A | | |
| 9 Silent mode control | *2 The period of time to operate the unit by prioritizing the quietness can be set. • Start and end can be set for the silent mode | A | | |
| 4.Energy-saving setting | | | | |
| Administrator password | | | | |
| 1 Sleep timer | To prevent the timer from keeping ON, set hours to stop operation automatically with this timer. • The selectable range of setting time is from 30 to 240 minutes. (10-minute intervals) • When setting is "Enable", this timer will activate whenever the ON timer is set. | A | △ | |
| 2 Peak-cut timer | Power consumption can be reduced by restructuring the maximum capacity. Set the [Start time], the [End time] and the capacity limit % (Peak-cut %). • 4-operation patterns per day can be set at maximum. • The setting time can be changed by 5-minute intervals. • The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval) • Holiday setting is available. | A | | |
| 3 Automatic temp set back | After the elapse of the set time period, the current set temp. will be set back to the [Set back time.] • The setting can be done in cooling and heating mode respectively. • Selectable range of the set time is from 20 min. to 120 min. (10 min. interval). • Set the [Set back temp.] by 1°C interval. | A | △ | |
| 4 Motion sensor control When the panel with the motion sensor is assembled. | *1 When the motion sensor is used, it is necessary to set Enable or Disable for the "Power control" and the "Auto-off". | A | | |
| 5.Filter | | | | |
| 1 Filter sign reset | Filter sign reset | The filter sign can be reset. | A | |
| | Setting next cleaning date | The next cleaning date can be set. | A | |
| 6.User setting | | | | |
| 1 Internal settings | Clock setting | The current date and time can be set or revised. • If a power failure continues no longer than 80 hours, the clock continues to tick by the built-in power source. | A | △ |
| | Date and time display | [Display] or [Hide] the date and/or time can be set, and [12H] or [24H] display can be set. | A | |
| | Summer time | When select [Enable], the +1hour adjustment of current time can be set. When select [Disable], the [Summer time] adjustment can be reset. | A | |
| | Contrast | The contrast of LCD can be adjusted higher or lower. | A | |
| | Backlight | Switching on/off a light can be set and period of the lighting time can be set within the range of 5sec-90 sec (5sec interval). | A | |
| | Control sound | It can set with or without [Control sound (beep sound)] at touch panel. | A | |
| | Operation lamp luminance | *1 This is used to adjust the luminance of operation lamp. | A | |
| 2 Administrator settings [Administrator password] | Permission/Prohibition setting | • Permission/Prohibition setting of operation can be set. [On/Off] [Change set temp] [Change operation mode] [Change flap direction] [Change fan speed] [High power operation] [Energy-saving operation] [Timer] Request for administrator can be set. [Individual flap control] [Weekly timer] [Select the language] [Anti draft setting] *1 | A | △ |
| | Outdoor unit silent mode timer | The period of time to operate the outdoor unit by prioritizing the quietness can be set. • The [Start time] and the [End time] for operating outdoor unit in silent mode can be set. • The period of the operation time can be set once a day by 5-minute intervals. | A | △ |
| | Setting temp. range | The upper/lower limit of temp. setting range can be set. • The limitation of indoor temp. setting range can be set for each operation mode in cooling and heating. | A | △ |

⑤ Operation and setting from remote control (continued)

| Setting & display item | | Description | RC-EX3A | RC-E5 | |
|--|---|--|--|-------|---|
| 2 Administrator settings [Administrator password] | Temp increment setting | The temp increment setting can be changed by 0.5°C or 1.0°C. | A | | |
| | Set temp display | Ways of displaying setting temperatures can be selected. | A | | |
| | R/C display setting | Register [Room name] [Name of I/U] Display [Indoor temp display] or not. Display [Error code display] or not. Display [Heating stand-by display] [Defrost operation display] [Auto cooling/heating display] [Display temp of R/C, Room, Outdoor] or not. | A | △ | |
| | Change administrator password | The administrator password can be changed. (Default setting is "0000") The administrator password can be reset. | A B | | |
| | F1/F2 function setting *1 | Functions can be set for F1 and F2. Selectable functions: [Anti draft ON/OFF] *2 [High power operation], [Energy-saving operation], [Silent mode cont.], [Home leave mode], [Favorite set 1], [Favorite set 2] and [Filter sign reset]. | A | | |
| 7. Service setting | | | | | |
| 1 Installer settings [Service password] | Installation date | The [Installation date] can be registered. • When registering the [Installation date], the [Next service date] is displayed automatically. (For changing the [Next service date], please refer the item of [Service & Maintenance]) | B | | |
| | Company information | The [Company information] can be registered and can be displayed on the R/C. • The [Company] can be registered within 26 characters. • The [Phone No.] can be registered within 13 digits. | B | | |
| | Test run | On/Off operation of the test run can be done. | | | |
| | | Cooling test run | The [Cooling test run] can be done at 5°C of set temp. for 30 minutes. | B | ○ |
| | Drain pump test run | Only drain pump can be operated. | | | |
| | Static pressure adjustment | In case of combination with only the ducted indoor unit which has a function of static pressure adjustment, the static pressure is adjustable. • It can be set for each indoor unit individually. | B | | |
| | Change auto-address | The set address of each indoor unit decided by auto-address setting method can be changed to any other address. (For multiple KX units only) | B | △ | |
| | Address setting of main IU | Main indoor unit address can be set. • Only the Main indoor unit can change operation mode and the Sub indoor units dominated by the Main indoor shall follow. • The Main indoor unit can domain 10 indoor units at a maximum. | B | △ | |
| | IU back-up function | When a pair of indoor units (2 groups) is connected to one unit of remote control, it can be set Enable or Disable for the [IU rotation], [IU capacity back-up] and [IU fault back-up] | B | | |
| | Motion sensor setting *1 | Set Enable or Disable for the infrared sensor detectors of indoor units connected to the remote control. If Disable is selected, it cannot be control the motion sensor control for the energy-saving setting. | B | | |
| 2 R/C function setting [Service password] | Main/Sub R/C | The R/C setting of [Main/Sub] can be changed. | B | ○ | |
| | Return air temp | When two or more indoor units are connected to one unit of remote control, suction sensors, which are used for the judgement by thermostat, can be selected. • It can be selected from [Individual], [Master IU] and [Average temp]. | B | | |
| | R/C sensor | It can be set the mode to switch to the remote control sensor. It can be selected from cooling and heating. | B | △ | |
| | R/C sensor adjustment | The offset value of [R/C sensor] sensing temp. can be set respectively in heating and cooling. | B | △ | |
| | Operation mode | Enable or Disable can be set for each operation mode. | B | △ | |
| | °C / °F | Set the unit for setting temperatures. • °C or °F can be selected. | B | | |
| | Fan speed | Fan speeds can be selected. | B | ○ | |
| | External input | When two or more indoor units are connected to one unit of remote control, the range to apply CNT inputs can be set. | B | ○ | |
| | Upper/lower flap control | [Stop at fixed position] or [Stop at any position] can be selected for the upper and lower louvers. | B | ○ | |
| | Left/right flap control *1 | [Fixed position stop] or [Stop at any position] can be selected for the right and left louvers. | B | | |
| | Ventilation setting | Combination control for ventilator can be set. | B | ○ | |
| | Auto-restart | The operation control method after recovery of power failure happened during operation can be set. | B | ○ | |
| | Auto temp setting | [Enable] or [Disable] of [Auto temp setting] can be selected. | B | | |
| | Auto fan speed | [Enable] or [Disable] of [Auto fan speed] can be selected. | B | | |
| | 3 IU settings [Service password] | Fan speed setting | The fan speed for indoor units can be set. | B | ○ |
| Filter sign | | The setting of filter sign display timer can be done from following patterns. | B | ○ | |
| External input 1 | | The connect of control by external input 1 can be changed. | B | ○ | |
| External input 1 signal | | The type of external input 1 signal can be changed. | B | ○ | |
| External input 2 | | The connect of control by external input 2 can be changed. | B | | |
| External input 2 signal | | The type of external input 2 signal can be changed. | B | | |
| Heating thermo-OFF temp adjustment | | The judgement temp. of heating thermo-off can be adjusted within the range from 0 to +3°C (1°C interval) | B | △ | |
| Return temperature adjustment | | The sensing temp. of return air temp. sensor built in the indoor unit can be adjusted within the range of ±2°C. | B | △ | |
| Fan control in cooling thermo-OFF | | Fan control, when the cooling thermostat is turned OFF, can be changed. | B | ○ | |
| Fan control in heating thermo-OFF | | Fan control, when the heating thermostat is turned OFF, can be changed. | B | ○ | |
| Anti-frost temp | | Judgment temperature for the anti-frost control during cooling can be changed. | B | ○ | |
| Anti-frost control | | When the anti-frost control of indoor unit in cooling is activated, the fan speed can be changed. | B | ○ | |
| Drain pump operation | | In any operation mode in addition to cooling and dry mode, the setting of drain pump operation can be done. | B | | |
| Keep fan operating after cooling is stopped | | The time period residual fan operation after stopping or thermo-off in cooling mode can be set. | B | ○ | |
| Keep fan operating after heating is stopped | | The time period residual fan operation after stopping or thermo-off in heating mode can be set. | B | ○ | |
| Intermittent fan operation in heating | | The fan operation rule following the residual fan operation after stopping or thermo-off in heating mode can be set. | B | ○ | |
| Fan circulator operation | | In case that the fan is operated as the circulator, the fan control rule can be set. | B | | |
| Control pressure adjust | | When only the OA processing units are operated, control pressure value can be changed. | B | | |
| Auto operation mode | The [Auto rule selection] for switching the operation mode automatically can be selected from 3 patterns. | B | | | |
| Thermo. rule setting | When selecting [Outdoor air temp. control], the judgment temp can be offset by outdoor temp.. | B | | | |
| Auto fan speed control | Auto switching range for the auto fan speed control can be set. | B | | | |
| IU overload alarm | If the difference between the setting temperature and the suction temperature becomes larger than the temperature difference set for the overload alarm, at 30 minutes after the start of operation, the overload alarm signal is transmitted from the external output (CNT-5). | B | | | |
| External output setting *1 | Functions assigned to the external outputs 1 to 4 can be changed. | B | | | |
| 4 Service & Maintenance [Service password] | IU address | Max 16 indoor units can be connected to one remote control, and all address No. of the connected indoor units can be displayed. • The indoor unit conforming to the address No. can be identified by selecting the address No. and tapping [Check] to operate the indoor fan. | B | ○ | |
| | Next service date | The [Next service date] can be registered. • The [Next service date] and [Company information] is displayed on the message screen. | A B | ○ | |
| | Operation data | The [Operation data] for indoor unit and outdoor unit can be displayed. | B | ○ | |
| | Error display | Error history | The error history can be displayed. | | |
| | | Display anomaly data | The operation data just before the latest error stop can be displayed. | B | △ |
| | | Erase anomaly data | Anomaly operation data can be erased. | | |
| | | Reset periodical check | The timer for the periodical check can be reset. | | |
| Saving IU settings | The [IU settings] memorized in the indoor PCB connected to the remote control can be saved in the memory of the remote control. | B | | | |
| Special settings | [Erase IU address] [CPU reset] [Restore of default setting] [Touch panel calibration] | B | △ | | |
| Indoor unit capacity display *1 | Address No. and capacities of indoor units connected to the remote control are displayed. | B | | | |
| 8. Contact company | | | | | |
| 9. Inspection | | | | | |
| Confirmation of Inspection | | This is displayed when any error occurs. | A | △ | |
| 10. PC connection | | | | | |
| USB connection | | Weekly timer setting and etc., can be set from PC. | C | | |

◆ Listed items may not function depending on the specifications of indoor and outdoor units which are combined.

2.10.3 Installation of wired remote control (Option parts) See page 169.

2.10.4 Installation of outdoor unit

(1) Models FDC100-140VNA, 100-140VSA

PSC012D106 

Inverter driven split PAC
100VNA – 140VNA, 100VSA – 140VSA
Designed for R410A refrigerant

Ⓞ This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 398.
Ⓞ When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (pipng length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces.

Check before installation work



- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

SAFETY PRECAUTIONS

● We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.

● The precautions described below are divided into **⚠ WARNING** and **⚠ CAUTION**. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the **⚠ WARNING** and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in **⚠ CAUTION**. These are very important precautions for safety. Be sure to observe all of them without fail.

● The meaning of "Marks" used here are as shown below.

 Never do it under any circumstance.  Always do it according to the instruction

● For 3 phase power source outdoor unit, EN61000-3-2 is not applicable if consent by the utility company or notification to the utility company is given before usage.

● 3 phase power source unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a house-hold appliance it could cause electromagnetic interference.

● 5 and 6 HP units of single phase power source are equipment complying with IEC 61000-3-12.

● Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.

● Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.

WARNING

| | |
|--|--|
| <p>⚠ Installation must be carried out by the qualified installer. If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction.</p> <p>⚠ Install the system in full accordance with the instruction manual. Incorrect installation may cause burst, personal injury, water leaks, electric shocks and fire.</p> <p>⚠ Use the original accessories and the specified components for installation. If you use other parts, it may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury.</p> <p>⚠ When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with ISO145. Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents.</p> <p>⚠ Ventilate the working area well in the event of refrigerant leakage during installation. If the refrigerant comes into contact with naked flames, poisonous gas is produced.</p> <p>⚠ After completed installation, check that no refrigerant leaks from the system. If refrigerant leaks into the room and comes into contact with an open or other hot surface, poisonous gas is produced.</p> <p>⚠ Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support. An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit.</p> <p>⚠ Install the unit in a location with good support. Unstable installation locations can cause the unit to fall and cause material damage and personal injury.</p> <p>⚠ Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.</p> <p>⚠ The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit. Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire.</p> <p>⚠ Be sure to shut off the power before starting electrical work. Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.</p> <p>⚠ Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work. Unconformable cables can cause electric leak, anomalous heat production or fire.</p> <p>⚠ Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks. Loose connections or cable mountings can cause anomalous heat production or fire.</p> <p>⚠ Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly. Incorrect installation may result in overheating and fire.</p> <p>⚠ Do not perform brazing work in the airtight room. Incorrect installation may result in overheating and fire. It can cause lack of oxygen.</p> <p>⚠ Use the prescribed pipes, flare nuts and tools for R410A. Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.</p> | <p>⚠ Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much. Loose flare compression or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen.</p> <p>⚠ Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation. If it is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.</p> <p>⚠ Only use prescribed optional parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.</p> <p>⚠ Do not perform any change of protective device (circuit breaker) or its setup condition. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan. Specified component can cause fire or burst.</p> <p>⚠ Be sure to switch off the power source in the event of installation, inspection or servicing. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.</p> <p>⚠ Consult the dealer or an expert regarding removal of the unit. Incorrect installation can cause water leaks, electric shocks or fire.</p> <p>⚠ Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation. If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit.</p> <p>⚠ Be sure to wear protective goggles and gloves while at work.</p> <p>⚠ Ensure that no air enters in the refrigerant circuit when the unit is installed and removed. If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.</p> <p>⚠ Do not run the unit with removal panels or protections. Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.</p> <p>⚠ Be sure to fix up the service panels. Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.</p> <p>⚠ Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair. If you repair or modify the unit, it can cause water leaks, electric shocks or fire.</p> <p>⚠ Do not process or splice the power cord, or share the socket with other power plugs. This may cause fire or electric shock due to abutting contact, detecting insulation and over-current etc.</p> <p>⚠ Do not bundle or wind or process the power cord. Do not deform the power cord by treading it. This may cause fire or heating.</p> |
|--|--|

CAUTION



- **Carry out the electrical work for ground lead with care.**
Do not connect the ground lead to the gas line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks, it could cause explosion or ignition.
- **Use the circuit breaker or all pole with correct capacity.**
If the capacity of the circuit breaker is insufficient, it may cause a fire or an electric shock.
- **Install the battery or disconnect switch on the top or corner wiring in accordance with the local codes and regulations.**
The battery should be locked as recommended with EN60204-1.
- **Be careful when carrying the unit by hand.**
If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps; always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **Pay attention not to damage the drain pan by weld spatter when welding work is done near the indoor unit.**
If weld spatter enters the indoor unit during welding work, it can cause pin-hole indentation and result in water leakage. To prevent such damage, keep the indoor unit in its packing or cover it.
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
The density of nitrogen exceeds the limit in the event of refrigerant leakage in the small room. Lack of oxygen can occur, which can cause serious accidents.
- **Perform installation work properly according to this installation manual.**
Improper installation can cause personal injury or fire.
- **Use an appropriate size of pipe for all metal parts should be secured.**
If the earth leakage breaker is not installed, it can cause fire or electric shocks.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
If leaked gases accumulate around the unit, it can cause fire.
- **Do not install the unit where corrosive gas (such as sulfuric acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **When the outdoor unit is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fence and handrails around the outdoor unit.**
If safety facilities are not provided, it can cause personal injury due to falling from the installation place.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics.**
The system can be affected by electromagnetic fields and high frequency harmonics. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.
- **Do not use the base frame for outdoor unit which is corroded or damaged due to long periods of operation.**
Using an old and damaged base frame can cause the unit falling down and cause personal injury.

- **Do not install the unit in the locations listed below.**
 - Locations where carbon fiber, metal powder or any powder is floating.
 - Locations where any substances that can affect the unit such as sulphuric gas, chloride gas, acid and alkaline can occur.
 - Vehicles and ships.
 - Locations where cosmetic or special sprays are often used.
 - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
 - Locations where any machines which generate high frequency harmonics are used.
 - Locations with salty atmospheres such as coastlines.
 - Locations where the unit is exposed to chemical spraying.
 - Locations at high altitude (more than 1000m high).
 - Locations with ammoniac atmospheres (e.g. organic fertilizer).
 - Locations where heat radiation from other heat source can affect the unit.
 - Locations with any gasbecks which can prevent inlet and outlet air of the unit.
 - Locations where strong air flows against the air outlet of outdoor unit.
 - Locations where something located above the unit could fall.
- **Do not install the outdoor unit in the locations listed below.**
 - Locations where discharges hot air or operating sound of the outdoor unit can bother neighborhood.
 - Locations where vibration can be amplified and transmitted due to insufficient strength of structure.
 - Locations where vibration and operation sound generated by the outdoor unit can affect seriously on the wall or at the place near bed room.
 - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 - Locations where drainage cannot run off safely.
 - Locations where environment and cause a claim.
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
It can cause the damage of the items.
- **Do not touch any buttons with wet hands.**
It can cause electric shocks.
- **Do not touch any refrigerant pipes with your hands when the system is in operation.**
During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not clean up the unit with water.**
It can cause electric shocks.
- **Do not operate the outdoor unit with any article placed on it.**
You may incur property damage or personal injury from a fall of the article.
- **Do not step onto the outdoor unit.**
You may incur injury from a drop or fall.
- **Do not touch the suction or aluminum fin on the outdoor unit.**
This may cause injury.
- **Do not put anything on the outdoor unit and operating unit.**
This may cause damage the objects or injury due to falling to the object.

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit operation valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

| Dedicated R410A tools | |
|-----------------------|---|
| a) | Gauge manifold |
| b) | Charge hose |
| c) | Electronic scale for refrigerant charging |
| d) | Torque wrench |
| e) | Flare tool |
| f) | Protrusion control copper pipe gauge |
| g) | Vacuum pump adapter |
| h) | Gas leak detector |

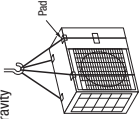
1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

CAUTION

When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the transporting the unit beyond its carrying in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.



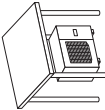
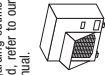
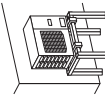
3) Selection of installation location for the outdoor unit

- Be sure to select a suitable installation place in consideration of following conditions.
- A place where the unit is not exposed to vibration, transparency of the unit.
 - A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit.
 - A place where it can be free from danger of inflammable gas leakage.
 - A place where drain water can be disposed without any trouble.
 - A place where the unit will not be affected by heat radiation from other heat source.
 - A place where snow will not accumulate.
 - A place where the unit will not be affected by electromagnetic waves from TV set and/or radio receiver in order to avoid any radio or TV interference.
 - A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
 - A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
 - A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
 - A place where strong wind will not blow against the outlet air flow of the unit.
 - Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required.

1. Install the unit on the base so that the bottom is higher than snow cover surface.
2. Provide a snow hood to the outdoor unit on site. Regarding outline of a snow hood, refer to our technical manual.
3. Install the unit under eaves or provide the roof on site.



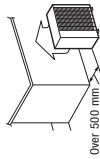
Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grommets (optional parts). [Refer to Drain piping work.]
- Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). [Refer to Setting SW3-1, SW3-2.]
- Attach heater on a base plate on site, if there is possibility to freeze drain water.

In case that the product has a corrective drainage system, the drainage paths should have suitable measure against freezing but be sure not to meet the material of drainage paths with heat.

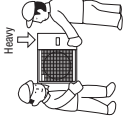
(2) If the unit can be affected by strong wind, following measures are required.

- Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.
1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.
 2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.
 3. The unit should be installed on the stable and level foundation. If the foundation is not stable, tie down the unit with wires.



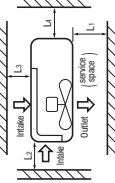
2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with the right hand the handle provided on the front panel of the unit and with his left hand the corner column section.



5) Installation space

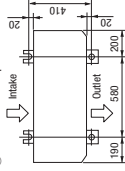
- Walls surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- Where a danger of short-circuiting exists, install guide louvers.
- Where more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.



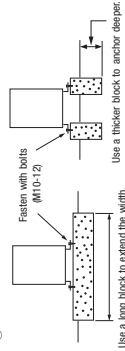
| Size | EXHAUST (DIFFUSER) (mm) | | | |
|------|-------------------------|------|------|----|
| | I | II | III | IV |
| L1 | Open | Open | 500 | |
| L2 | 300 | 5 | Open | |
| L3 | 150 | 300 | 150 | |
| L4 | 150 | 150 | 150 | |

6) Installation

① Anchor bolt fixed position



② Nonabilla for installation



- In installing the unit, fix the unit's legs with bolts specified on the left.
- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the left illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)

Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Restrictions | One-way pipe length difference from the first branching point to the indoor unit | | Markings appearing in the drawing | |
|---|--|--------------------------|------------------------------------|-------------|
| | Model for outdoor units | Dimensional restrictions | Type type A | Type type B |
| One-way pipe length of refrigerant piping | 100WNA, 125WA, 100WSA, 125WSA | ≤ 30m | L+L1+L2 | — |
| | 140WNA, 140WSA | ≤ 30m | L+L1+L2+L3 | L+L1+L2+L3 |
| | 120WNA, 120WSA | ≤ 30m | — | — |
| Main pipe length | 140WNA, 140WSA | ≤ 5m | — | La |
| | All Models | ≤ 30m | L1, L2, L3 | L1 m |
| One-way pipe length between the first branching point to the second branching point | 140WNA, 140WSA | ≤ 5m | — | — |
| | All Models | ≤ 30m | — | — |
| One-way pipe length after the first branching point | 140WNA, 140WSA | ≤ 30m | — | — |
| | All Models | ≤ 30m | — | — |
| One-way pipe length from the first branching point to indoor units through the second branching point | 140WNA, 140WSA | ≤ 27m | — | — |
| | All Models | ≤ 10m | L1, L2 | — |
| One-way pipe length difference from the first branching point to the indoor unit | 140WNA, 140WSA | ≤ 3m | — | — |
| | All Models | ≤ 10m | L1, L2, L3, L1+L2, L1+L3, L1+L2+L3 | L1, L2, L3 |
| One-way pipe length difference from the second branching point to the indoor unit | 140WNA, 140WSA | ≤ 10m | — | — |
| | All Models | ≤ 10m | — | — |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher. | ≤ 30m | H | H |
| | When the outdoor unit is positioned lower. | ≤ 15m | h | h |
| Elevation difference between indoor units | When the outdoor unit is positioned higher. | ≤ 15m | H | H |
| | When the outdoor unit is positioned lower. | ≤ 15m | h | h |

CAUTION

- The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, see "6. UTILIZATION OF EXISTING PIPING."
- With the triple pipe connection, the way of use is different when the difference of one-way pipe length after the first branching point is 3m to 10m. For details, refer to the above table and right figure.

Note (1) Install the indoor units so that L + L1 becomes the longest one-way pipe.

Keep the pipe length difference between L1 and (L+L2) or (L+L1+L3) within 10m.

Note (2) When the outdoor unit is installed at a position higher than the indoor unit by 30m or more, set SW5-2 on the control PCB to ON.

2) Determination of pipe size

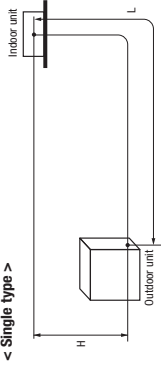
- Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

| | Model 100V | | Model 125V | | Model 140V | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe |
| Outdoor unit connected | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| | Flare | Flare | Flare | Flare | Flare | Flare |
| | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| Refrigerant piping (Main pipe L) | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| Capacity of indoor unit | Model 100V | | Model 125V | | Model 140V | |
| | DS-WA1G | | DS-WA1G | | DS-WA1G | |
| Refrigerant piping (branch pipe L1, L2) | φ12.7 | φ9.52 | φ12.7 | φ9.52 | φ15.88 | φ9.52 |
| | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ15.88 | φ9.52 |
| Capacity of indoor unit | Model 50V+2 | | Model 60V+2 | | Model 71V+2 | |
| | DS-TA1G | | DS-TA1G | | DS-TA1G | |
| Refrigerant piping (branch pipe L1, L2, L3) | φ12.7 | φ9.52 | φ12.7 | φ9.52 | φ12.7 | φ9.52 |
| | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ12.7 | φ6.35 |
| Capacity of indoor unit | Model 50V+3 | | Model 60V+3 | | Model 71V+3 | |
| | DS-WA1G | | DS-WA1G | | DS-WA1G | |
| Refrigerant piping (branch pipe La) | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| | φ15.88 | φ9.52 | φ15.88 | φ9.52 | φ15.88 | φ9.52 |
| Refrigerant piping (branch pipe L1) | φ12.7 | φ9.52 | φ12.7 | φ9.52 | φ12.7 | φ9.52 |
| | φ12.7 | φ6.35 | φ12.7 | φ6.35 | φ12.7 | φ6.35 |
| Capacity of indoor unit | Model 50V+3 | | Model 60V+3 | | Model 71V+3 | |
| | DS-WA1G | | DS-WA1G | | DS-WA1G | |

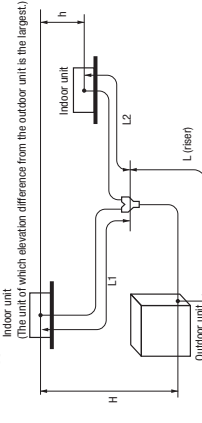
- When the 50V or 60V model is connected as an indoor unit, always use a φ9.52 liquid pipe for the branch (branching pipe – indoor unit) and a different diameter joint supplied with the branching pipe set for connection with the indoor unit (φ6.35 on the liquid pipe side).
- If a φ6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall short of the rated capacity.
- A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
- A branching part must be dressed with a heat-insulation material supplied as an accessory.
- For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set.

CAUTION

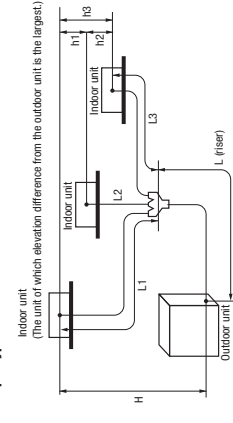
< Single type >



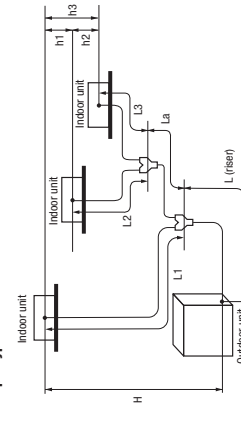
< Twin type >



< Triple type A >



< Triple type B >



About brazing

Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.
- This unit uses R410A. Always use 1/2H pipes having a 1.0mm or thicker wall for φ19.05 or larger pipes, because O-type pipes do not meet the pressure resistance requirement.

| Pipe diameter (mm) | 6.35 | 9.52 | 12.7 | 15.88 | 22.22 | 25.4 | 28.58 |
|----------------------------------|---|------|---------------------------|-------|---------------------------------|------|----------------|
| Minimum pipe wall thickness (mm) | 0.8 | 0.8 | 0.8 | 1.0 | 1.0 | 1.0 | 1.0 |
| Pipe material* | O-type pipe / O-type pipe / O-type pipe | | O-type pipe / O-type pipe | | 1/2H-type pipe / 1/2H-type pipe | | 1/2H-type pipe |

NOTE

- Select pipes having a wall thickness larger than the specified minimum pipe thickness.

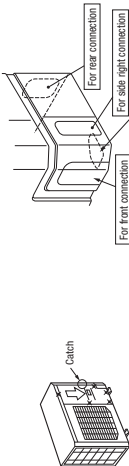
4) On-site piping work

- Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

How to remove the service panel

First remove the five screws (X mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.

- The pipe can be laid in any of the following directions: side right, front, rear and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- Give sufficient protection to a pipe end (compressed and blazed, or with an adhesive tape) so that water or foreign matters may not enter the pipe.
- Bend a pipe to a radius as large as practical (R100~R150). Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibrator.
- Tighten a flare joint securely with a double spanner.



| Flared pipe end-A (mm) | 0 | -0.4 |
|----------------------------|--------|------|
| Copper pipe outer diameter | φ6.35 | 9.1 |
| | φ9.52 | 13.2 |
| | φ12.7 | 16.6 |
| | φ15.88 | 19.7 |

| Copper pipe protrusion for flaring: B (mm) | 0~0.5 | 0.7~1.3 |
|--|--------------------|--------------------------|
| In the case of a rigid (clutch) type | With an R410A tool | With a conventional tool |
| Copper pipe outer diameter | φ6.35 | φ9.52 |
| | φ12.7 | φ15.88 |

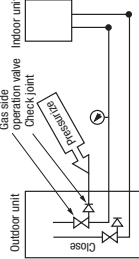
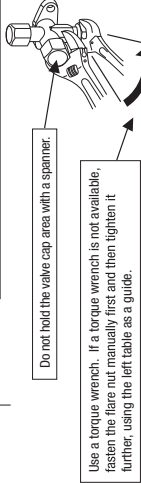
Do not apply force beyond proper fastening torque in tightening the flare nut.

Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

| Operation valve size (mm) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|---------------------------|----------------------|--|
| φ6.35 (1/4") | 45-60 | 150 |
| φ9.52 (3/8") | 30-45 | 200 |
| φ12.7 (1/2") | 30-45 | 250 |
| φ15.88 (5/8") | 68-82 | 300 |

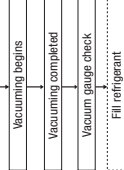
5) Air tightness test

- Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the operation valve's check joint equipped on the outdoor unit side. While conducting a test, keep the operation valve shut all the time.
 - Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
 - If a pressure drop is observed in checking e) and g) - h), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



6) Evacuation

- <Work flow>
- When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.



Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

<Single type>

| Item | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe) | Refrigerant volume charged for shipment at the factory (kg) | Refrigerant volume covered without additional refrigerant charge | Installation's pipe length (m) |
|--|---|--|---|---|--|--------------------------------|
| Capacity 100VNA~140VNA 100VSA~140VSA | 2.0 | 0 | 0.06 | 3.8 | 30 | 30 |

<Twin, triple type>

| Item | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe) | Main pipe | Branch pipe | Refrigerant volume charged at the factory (kg) | Installation's pipe length (m) |
|--|---|--|---|-----------|-------------|--|--------------------------------|
| Capacity 100VNA~140VNA 100VSA~140VSA | 2.0 | 0 | 0.06 | 0.06 | 0.06 | 3.8 | 30 |

- A standard refrigerant charge volume means a refrigerant charge volume for an installation with 0m long refrigerant piping.
- This unit contains refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping.
- When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
- When refrigerant piping is shorter than 30m, reduce refrigerant by kg from the above table and adjust 2.0kg.
- If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

$$\text{Additional charge volume (kg)} = (\text{Main pipe length (m)} - \text{Length covered without additional charge 30 (m)}) \times 0.06 \text{ (kg/m)} + \text{Total length of branch pipes (m)} \times 0.06 \text{ (kg/m)}$$

When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

- To charge refrigerant again, recover refrigerant from the system first and then charge the volume calculated from the above table (Standard refrigerant charge volume + additional charge volume for total pipe length).

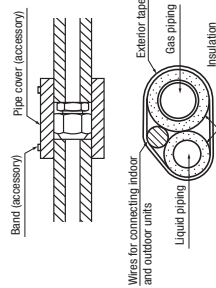
(2) Charging refrigerant

- Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
- Charge refrigerant always from the liquid side service port with the operation valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion valve is used, the pressure and temperature of the refrigerant will change and the amount of refrigerant charged will be affected.
- When charging refrigerant, always charge a calculated volume by using a scale measures the charge volume.
- When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

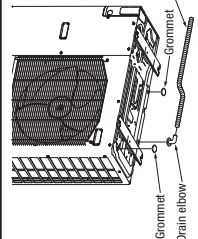
8) Heating and condensation prevention

- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
 - Although it is verified in a test that this air-conditioner unit shows satisfactory performance under JIS condensation test conditions, both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.

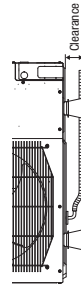


3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as optional parts, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of operation valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)
- Do not use drain elbow and grommet made of plastic for drain piping when base heater for outdoor unit is used. Plastic grommet and elbow will be damaged and burnt in worst case.
- Prepare another drain tray made of metallic material for collecting drain when base heater is used.



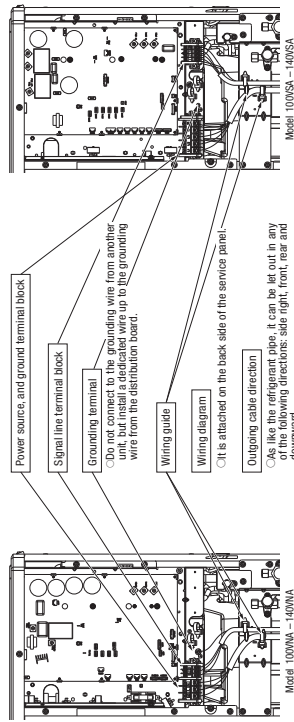
- When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an optional part) or concrete blocks. Then, please secure space for the drain elbow and the drain hose.



4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual.

Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country. Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

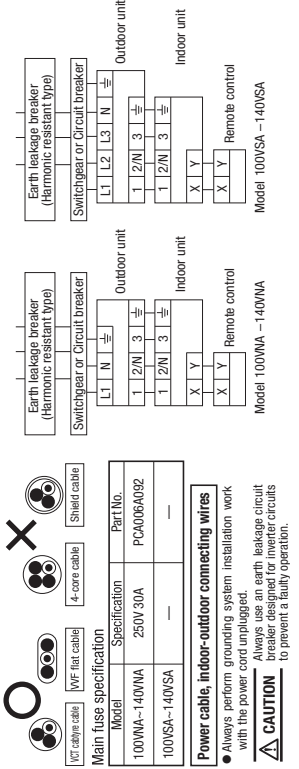
- Do not use any supply lighter than one specified in parentheses for each type below.
 - residence (code designation 60245 IEC 51)
 - ordinary tough cord (code designation 60245 IEC 51)
 - fit for any other use (code designation 60227 IEC 41)
- Do not use any supply lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC 57) for supply cords of parts of appliances for use in the kitchen.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire. If improper grounding, an electric shock or malfunction may result.
- When the power cable is connected, the power cable must be tested before connecting the power cable. Provide a grounding wire longer than the power cable.
- The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.



| Model | Power source | Power cable thickness(mm) | MAX. over current (A) | Cable length (m) | Bounding wire thickness | Indoor-outdoor wire thickness × number |
|-------------|--|---------------------------|-----------------------|------------------|-------------------------|--|
| 100WA-140WA | Single phase 3 wire 220-240V/50Hz | 5.5 | 24 | 22 | φ1.6mm | φ1.6mm x 3 |
| | 3 phase 4 wire 380-415V/50Hz | 3.5 | 15 | 46 | | |
| 100SA-140SA | 3 phase 4 wire 380-415V/50Hz 380V/60Hz | 3.5 | | | | |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions of the construction instructions of the indoor unit.
- MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

- Do not turn on the power until the electrical work is completed.
- Do not use a condensate capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheat accident)
- For power source cables, use conduits.
- Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
- When cables are connected, make sure that all electrical components within the electrical component box are free of loose connection coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
- Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.



| Model | Power source | Power cable thickness(mm) | MAX. over current (A) | Cable length (m) | Bounding wire thickness | Indoor-outdoor wire thickness × number |
|-------------|--|---------------------------|-----------------------|------------------|-------------------------|--|
| 100WA-120WA | Single phase 3 wire 220-240V/50Hz | 5.5 | 26 | 20 | φ1.6mm | φ1.6mm x 3 |
| | 3 phase 4 wire 380-415V/50Hz | 3.5 | 17 | 40 | | |
| 100SA-120SA | 3 phase 4 wire 380-415V/50Hz 380V/60Hz | 3.5 | 18 | 38 | | |

5. TEST RUN

⚠ WARNING

- Before conduct a test run, make sure that the operation valves are open.
- Turn on power 6 hours prior to a test run to energize the crankcase heater.
- In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
- Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
- Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous. Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

⚠ CAUTION

- When you operate switches (SW3, SW5) for on-site setting, be careful not to touch a live part.
- You cannot check discharge pressure from the liquid operation valve charge port.
- The 4-way valve (ZDS) is energized during a heating operation.
- When the power source is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "Communication error between outdoor and indoor unit" may occur.

1) Test run method

- (1) A test run can be initiated from an outdoor unit by using SW3-3 and SW9-4 for on-site setting.
- (2) Switching SW3-3 to ON will start the compressor.
- (3) The unit will start a cooling operation, when SW3-4 is OFF, or a heating operation, when SW3-4 is ON.
- (4) **Do not fail to switch SW3-3 to OFF when a test run is completed.**

2) Checking the state of the unit in operation

Use check points provided on the piping before and after the four-way valve installed inside the outdoor unit to check the state of the unit in operation. As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

| Check point of the pipe | Charge part of the gas operation valve |
|-----------------------------------|--|
| Cooling operation (high pressure) | Suction pressure (Low pressure) |
| Heating operation (Low pressure) | Discharge pressure (High pressure) |

3) Setting SW3-1, SW3-2, SW5-2, SW7-3, on-site

- (1) Defrost control switching (SW3-1)
 - When this switch is turned ON, the unit will run in the defrost mode more frequently.
 - Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.
- (2) Snow guard fan control (SW3-2)
 - When this switch is turned ON, the outdoor fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running.
 - When the unit is used in a very snowy country, set this switch to ON.
- (3) High height difference operation control (SW5-2)
 - Set this switch to ON when outdoor unit is installed at a position higher than indoor unit by 30m or more.
- (4) Lower noise silent mode (SW7-3)
 - Upper limit of compressor speed and fan speed becomes lower in silent mode

4) Failure diagnosis in a test run

| Error indicated on the remote control unit | Red LED | Green LED | Failure event | Action |
|--|---------------|-----------------------|---|---|
| E54 | Blinking once | Blinking continuously | Open phase | Check power cables for loose contact or disconnection. |
| E40 | Blinking once | Blinking continuously | ESHT actuation or operation with operation valves shut (occurs mainly during a heating operation) | 1. Check whether the operation valves are open. 2. If an error has been canceled when 3 minutes have elapsed after the error occurs, check the operation valves, especially the electronic expansion valve, for any effecting check leak from the remote control unit. |
| E57 | Blinking once | Blinking continuously | Short of refrigerant error or operation with operation valves shut (occurs mainly during a heating operation) | Check the refrigerant level and the electronic expansion valve. |

- If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

| Value for a cooling operation | When power is turned on | When the unit comes to a normal stop |
|-------------------------------|----------------------------|--------------------------------------|
| Complete shut position | During a cooling operation | During a heating operation |
| Full open position | Complete shut position | Full open position |
| Complete shut position | Full open position | Complete shut position |
| Full open position | Complete shut position | Full open position |

6) Heed the following on the first operation after turning on the circuit breaker.

This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

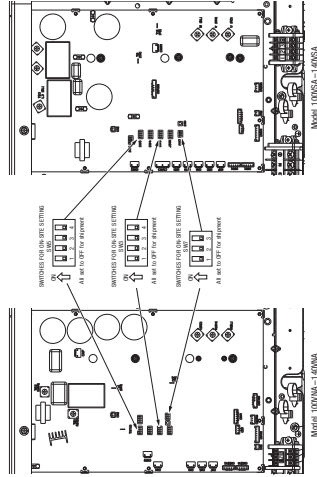
A failure to observe these instructions can result in a compressor breakdown.

- When you leave the outdoor unit with power supplied to it, be sure to close the panel.

| Item No listed in the installation manual | Item | Check item | Check |
|---|----------------------|--|-------|
| 2 | Refrigerant plumbing | If brazing was performed under a nitrogen gas flow? Were air tightness test and vacuum extraction surely performed? Are heat insulation materials installed on both liquid and gas pipes? Are operation valves surely opened for both liquid and gas systems? Have you recorded the additional refrigerant charge volume and refrigerant pipe length on the panel's label? Is the unit free of cabling errors such as uncompleted connection, an absent or reversed phase? Are property rated electrical equipments used for circuit breakers and cables? Doesn't cabling cross-connection between units, where more than one unit are installed? Are 1 indoor-outdoor signal wires connected to remote control wires? Do indoor-outdoor connecting cables connect between the same terminal numbers? Are either VDT cable or VFD flat cables used for indoor-outdoor connecting cables? Does grounding satisfy the D type grounding type II grounding requirements? Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire? Are cables free of those screws at their connection points? Are cables held down with cable clamps so that no external force works into terminal connections? Is indoor unit installation work completed? When a face cover should be attached onto an indoor unit, is the face cover attached to the indoor unit? | |
| 4 | Electric wiring | | |
| - | Indoor unit | | |

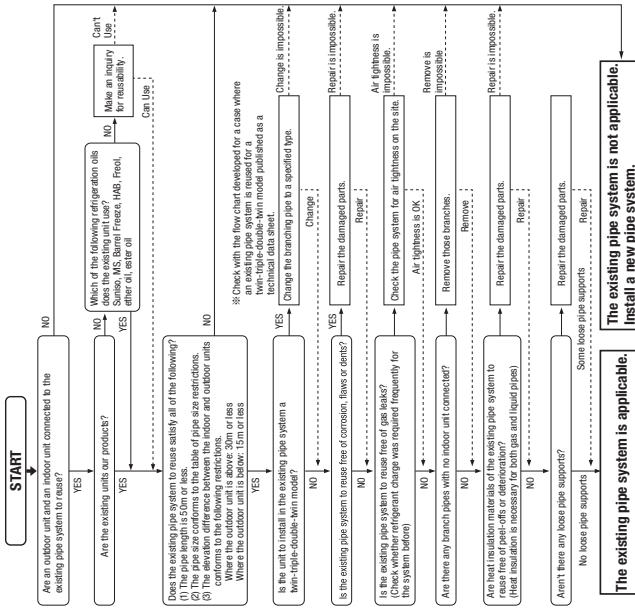
- Always carry out a test run and check the following in order as listed.

| Turn | The contents of operation | Check |
|------|---|-------|
| ① | Open the gas side operation valve fully. | |
| ② | Open the liquid side operation valve fully. | |
| ③ | Close the panel. | |
| ④ | When a remote control unit is used for unit setpoint on the installation site, follow instructions for unit setpoint on the installation site with a remote control unit. | |
| ⑤ | SW3-3 ON / SW3-4 OFF: the unit will start a cooling operation. | |
| ⑥ | SW3-3 ON / SW3-4 ON: the unit will start a heating operation. | |
| ⑦ | When the unit starts operation, press the wind direction button provided on the remote control unit to check its operation. | |
| ⑧ | Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation. | |
| ⑨ | Make sure that a red LED is not blinking. | |
| ⑩ | When you complete the test run, do not forget to turn SW3-3 to the OFF position. | |
| ⑪ | When options are used, check their operation according to the respective instruction manuals. | |



6. UTILIZATION OF EXISTING PIPING

Check whether an existing pipe system is reusable or not by using the following flow chart.



WARNING

<Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4))

- (1) Run the unit for 30 minutes for a cooling operation.
- (2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
- (3) Close the liquid side operation valve of the outdoor unit and pump down (refrigerant recovery)
- (4) Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
 - For the flare nut, do not use the old one, but use the one supplied with the outdoor unit.

● Turn on-site setting switch SW6-1 to the ON position. (Where the gas pipe size is φ19.05)

- <Where the existing unit cannot be run for a cooling operation.>
- Wash the pipe system or install a new pipe system.
 - If you choose to wash the pipe system, contact our distributor in the area.

<Table of pipe size restrictions>

○ Standard pipe size ○ Applicable
 △ Restricted to shorter pipe length limits × Not applicable

| Pipe size | Liquid pipe | Gas pipe | Additional charging amount of refrigerant per 1m | 0.08kg/m | φ12.7 | φ12.7 | φ12.7 |
|-----------|-------------|----------|--|----------|-------|-------|-------|
| 100V | ○ | ○ | φ15.88 | φ19.05 | △ | △ | △ |
| 125V | ○ | ○ | φ18.1 | △ | △ | △ | △ |
| 140V | ○ | ○ | φ18.1 | △ | △ | △ | △ |

<Pipe system after the branching pipe>

| Pipe size | Additional charging amount of refrigerant per 1m | |
|-----------|--|------------------|
| | After 1st branch | After 2nd branch |
| 100V | φ15.88 | φ19.05 |
| 125V | φ18.1 | △ |
| 140V | φ18.1 | △ |

※1 Because of its insufficient pressure resistance, turn the dip switch SW5-1 provided on the outdoor unit board to the ON position for φ19.05 × 11.0. However, you need not turn the dip switch SW5-1 to the ON position, if 1/2H pipes or pipes having 1.2 or thicker walls are used.

※2 When the main pipe length exceeds 40m, a significant capacity drop may be experienced due to pressure loss in the liquid pipe system. Use φ12.7 for the liquid main.

※3 Keep the total pipe length, not one-way pipe length, below the specified maximum pipe length.

※4 Piping size after branch should be equal or smaller than main pipe size.

※5 Piping size from first branch to the outdoor unit should be φ19.05 (Liquid) / φ12.7 (Gas).

※6 The piping size after branch should be φ12.7 (Liquid) / φ12.7 (Gas).

※7 The piping size after branch should be φ12.7 (Liquid) / φ12.7 (Gas).

※8 Any combinations of pipe sizes not listed in the table or marked with × in the table are not usable.

<The model types of existing units of which branching pipes are reusable.>

- FDC * * * 8 □ □ □ □
- FDCP * * * 8 □ □ □ □

The branching pipes used with models other than those listed above are not reusable because of their insufficient pressure resistance. Please use our genuine branching pipes for R410A.


● * * * are numbers representing horsepower. □ □ □ □ is an alphanumeric letter.

Formula to calculate additional charge volume

Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) × Total length of branch pipes (m) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.
 Example) When an 140V (single installation) is installed in a 20m long existing pipe system liquid φ12.7, gas φ19.05, the quantity of refrigerant to charge additionally should be (20m-15m) × 0.08kg/m = 0.4 kg.

(2) Models FDC200, 250VSA

| |
|--|
| PSC012D066D  |
| Inverter driven split PAC |
| FDC200VSA, 250VSA (200V, 250V) |
| FDCA160VSA, 200VSA (A160V, A200V) |
| Designed for R410A refrigerant |

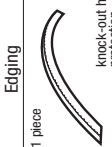
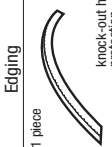
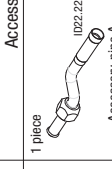
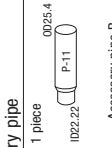
ⓘ This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 398.
 ⓘ When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces

SAFETY PRECAUTIONS

- We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.
- The precautions described below are divided into **WARNING** and **CAUTION**. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the **WARNING** and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in the **CAUTION**. These are very important precautions for safety. Be sure to observe all of them without fail.
- The meaning of "Marks" used here are as shown below.
 - ⚠ Never do it under any circumstance.
 - ⓘ Always do it according to the instruction
- For 3 phase power source outdoor unit:EN61000-3-2 is not applicable if consent by the utility company or notification to the utility company is given before usage.
- 3phase power source unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a house-hold appliance it could cause electromagnetic interference.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.

Check before installation work

[Accessory]

| | | | |
|--|--|--|--|
| 1 piece  | 1 piece  | 1 piece  | 1 piece  |
| Edging | knock-out hole protection | Accessory pipe | Accessory pipe B |

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

WARNING

- ⚠ **Installation must be carried out by the qualified installer.**
If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction.
- ⚠ **Install the system in full accordance with the instruction manual.**
Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- ⚠ **Use the original accessories and the specified components for installation.**
If parts other than those prescribed by us are used, it may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury.
- ⚠ **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage according with SWS149.**
Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents.
- ⚠ **Ventilate the working area well in the event of refrigerant leakage during installation.**
If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- ⚠ **After completed installation, check that no refrigerant leaks from the system.**
If refrigerant leaks into the room and comes into contact with an open or other hot surface, poisonous gas is produced.
- ⚠ **Hang up the unit at the specified points with ropes which can support the weight in lifting or portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support.**
An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit.
- ⚠ **Install the unit in a location with good support.**
Unstable installation locations can cause the unit to fall and cause material damage and personal injury.
- ⚠ **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
Unstable installation locations can cause the unit to fall and cause material damage and personal injury.
- ⚠ **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
Power source with insufficient capacity and incorrect function done by improper work, can cause electric shocks and fire.
- ⚠ **Be sure to shut off the power before starting electrical work.**
Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- ⚠ **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
Unconformable cables can cause electric leak, anomalous heat production or fire.
- ⚠ **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent connection to the terminal block.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- ⚠ **Arrange the wiring in the control box so that it cannot be pushed up further into the box. install the service panel correctly.**
Incorrect installation may result in overheating and fire.

- ⚠ **Do not perform brazing work in the airtight room**
It can cause lack of oxygen.
- ⚠ **Use the prescribed pipes, flare nuts and tools for R410A.**
Using existing parts for R22 or R407C can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- ⚠ **Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to**
Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen.
- ⚠ **Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.
- ⚠ **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- ⚠ **Do not perform any change of protective device itself or its setup condition**
The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.
- ⚠ **Be sure to switch off the power source in the event of installation, inspection or servicing.**
If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- ⚠ **Consult the dealer or an expert regarding removal of the unit.**
Incorrect installation can cause water leaks, electric shocks or fire.
- ⚠ **Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation.**
If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit.
- ⚠ **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- ⚠ **Do not run the unit with removed panels or protections**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- ⚠ **Be sure to fix up the service panels.**
Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- ⚠ **Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair.**
If you repair or modify the unit, it can cause water leaks, electric shocks or fire.

| ⚠ CAUTION | ⚡ |
|--|--|
| <ul style="list-style-type: none"> ● Do not use the base frame for outdoor unit which is corroded or damaged due to long periods of operation. Using an old and damaged base frame can cause the unit falling down and cause personal injury. ● Do not install the unit in the locations listed below. -Locations where carbon filter, metal powder or any powder is floating. -Locations where any substance that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur. -Vehicles and ships. -Locations with direct exposure of oil mist and steam such as kitchen and machine plant. -Locations where any machines which generate high frequency harmonics are used. -Locations with salty atmospheres such as coastlines. -Locations with heavy snow (if installed, be sure to provide base frame and snow hood mentioned in the manual) -Locations where the unit is exposed to heavy smoke. -Locations with ammonia atmospheres (e.g. organic fertilizer). -Locations with calcium chloride (e.g. snow melting agent). -Locations where heat radiation from other heat source can affect the unit. -Locations with an exhaust fan can prevent heat and cold air of the unit. -Locations where the unit is installed in the vicinity of other outdoor units (radiation). -Locations where strong air blows against the air outlet of outdoor unit. It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire. ● Do not install the outdoor unit in the locations listed below. -Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood. -Locations where outlet air of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc. -Locations where vibration can be amplified and transmitted due to insufficient strength of structure. -Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m) -Locations where drainage cannot run off safely. -Locations where surrounding environment and cause a claim. It can affect surrounding environment and cause a claim. ● Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art. It can cause the damage of the items. ● Do not touch any buttons with wet hands. It can cause electric shocks. ● Do not touch any refrigerant pipes with your hands when the system is in operation. During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury. ● Do not clean up the unit with water. It can cause electric shocks. ● Do not operate the outdoor unit with any article placed on it. You may incur property damage or personal injury from a fall of the article. ● Do not step onto the outdoor unit. You may incur injury from a fall of the unit. | <ul style="list-style-type: none"> ● Carry out the electrical work for ground lead with care Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks, it could cause explosion or ignition. ● Use the circuit breaker for all pipe with correct capacity. Using the incorrect circuit breaker, it can cause the unit malfunction and fire. ● Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be locked in accordance with EN62094-1. ● Take care when carrying the unit by hand. If the unit weighs more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins. ● Dispose of any packing materials correctly. Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrap far away from children and to dispose after tear it up. ● Pay attention not to damage the drain pan by wet spatter when welding work is done near the indoor unit. If metal spatters fall in the drain pan, it can result in water leakage. To prevent such damage, keep the indoor unit in packing or cover it. ● Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables. ● Be sure to perform air tightness test by pressurizing with nitrogen gas after completing refrigerant piping work. If the density of refrigerant leaks, the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. ● Perform installation work properly according to this installation manual. Improper installation can cause abnormal vibrations or increased noise generation. ● Earth leakage breaker must be installed. If the earth leakage breaker is not installed, it can cause fire or electric shocks. ● Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used. Connecting the circuit with copper wire or other metal thread can cause unit failure and fire. ● Do not install the unit near the location where leakage of combustible gases can occur. If leaked gases accumulate around the unit, it can cause fire. ● Do not install the unit where corrosive gas (such as sulfuric acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled. Corrosive gas can cause corrosion of heat exchanger, drainage or plastic parts and etc. And combustible gas can cause fire. ● Secure a space for installation, inspection and maintenance specified in the manual. Insufficient space can result in accident such as personal injury due to falling from the installation place. ● When the outdoor unit is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fences and handrails around the outdoor unit. If safety facilities are not provided, it can cause personal injury due to falling from the installation place. ● Do not install near the system close to the equipment that generates electromagnetic waves or high frequency harmonics Such as, TVs, radios, and other communication equipment. The system close to the equipment that generates electromagnetic waves, and cause malfunctions and breakdown. The system can also affect medical equipment and disturb its function or cause jamming. ● Do not install the outdoor unit in a location where insects and small animals can pass. Insects and small animals can enter the electric parts and cause damage of the. Instruct the user to keep the surroundings clean. |

| Notabilia as a unit designed for R410A | | | | | | | | | | | | | | | | | | | |
|--|---|----|-----------------------|----|----------------|----|-------------|----|---|----|---------------|----|------------|----|--------------------------------------|----|---------------------|--|-------------------|
| ● Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant. | | | | | | | | | | | | | | | | | | | |
| ● A cylinder containing R410A has a pink indication mark on the top. | | | | | | | | | | | | | | | | | | | |
| ● A unit designed for R410A has adopted a different size indoor unit service valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The R410A tools listed in the table on the right before installing or servicing this unit. | <table border="1"> <tr><td>a)</td><td>Dedicated R410A tools</td></tr> <tr><td>b)</td><td>Gauge manifold</td></tr> <tr><td>c)</td><td>Change hose</td></tr> <tr><td>d)</td><td>Electronic scale for refrigerant charging</td></tr> <tr><td>e)</td><td>Torque wrench</td></tr> <tr><td>f)</td><td>Flare tool</td></tr> <tr><td>g)</td><td>Protrusion control copper pipe gauge</td></tr> <tr><td>h)</td><td>Vacuum pump adapter</td></tr> <tr><td></td><td>Gas leak detector</td></tr> </table> | a) | Dedicated R410A tools | b) | Gauge manifold | c) | Change hose | d) | Electronic scale for refrigerant charging | e) | Torque wrench | f) | Flare tool | g) | Protrusion control copper pipe gauge | h) | Vacuum pump adapter | | Gas leak detector |
| a) | Dedicated R410A tools | | | | | | | | | | | | | | | | | | |
| b) | Gauge manifold | | | | | | | | | | | | | | | | | | |
| c) | Change hose | | | | | | | | | | | | | | | | | | |
| d) | Electronic scale for refrigerant charging | | | | | | | | | | | | | | | | | | |
| e) | Torque wrench | | | | | | | | | | | | | | | | | | |
| f) | Flare tool | | | | | | | | | | | | | | | | | | |
| g) | Protrusion control copper pipe gauge | | | | | | | | | | | | | | | | | | |
| h) | Vacuum pump adapter | | | | | | | | | | | | | | | | | | |
| | Gas leak detector | | | | | | | | | | | | | | | | | | |
| ● Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation. | | | | | | | | | | | | | | | | | | | |
| ● In charging refrigerant, always take it out from a cylinder in the liquid phase. | | | | | | | | | | | | | | | | | | | |
| ● All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation) | | | | | | | | | | | | | | | | | | | |

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

⚠ CAUTION

When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the unpacking of the unit before it is carried in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.

2) Portage

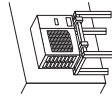
- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.

3) Selection of installation location for the outdoor unit

- Be sure to select a suitable installation place in consideration of following conditions.
- A place where it is not exposed to direct sunlight.
 - A place where it is not exposed to rain.
 - A place where it is not exposed to blowing neighbors due to noise or exhaust air from the unit.
 - A place where the unit is not exposed to oil splashes.
 - A place where it can be free from danger of flammable gas leakage.
 - A place where drain water can be disposed without any trouble.
 - A place where snow will not be affected by heat radiation from other heat source.
 - A place where snow will not accumulate.
 - A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
 - A place where the unit can be kept away 3m or more from the TV set and/or radio receiver in order to avoid any radio or TV interference.
 - A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
 - A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
 - A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
 - A place where strong wind will not blow against the outlet air blow of the unit.
 - Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

4) Caution about selection of installation location

- (1) If the unit is installed in the area where the snow will accumulate, following measures are required.
 - The bottom plate of unit and intake, outlet may be blocked by snow.
- (2) Provide a snow hood to the outdoor unit on site.
 - Regarding outline of a snow hood, refer to our technical manual.
- (3) Install the unit under eaves or provide the roof on site.



Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grommets (option parts). (Refer to Drain piping work.)
- Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). (Refer to Setting SW3-1, SW3-2.)
- Attach heater on a base plate on site, if there is possibility to freeze drain water.

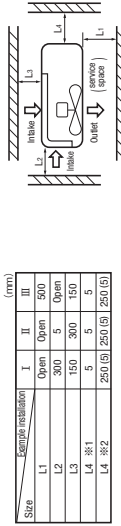
In case that the product has a corrective drainage system, the drainage paths should have suitable measure against freezing but be sure not to meet the material of drainage paths with heat.

- (2) If the unit can be affected by strong wind, following measures are required.
 - Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.
- (3) The unit should be installed on the stable and level foundation.
 - If the foundation is not level, tie down the unit with wires.



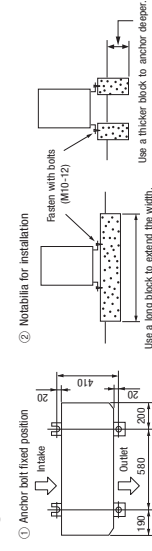
5) Installation space

- Helix surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- Where a danger of short-circuiting exists, install guide ladders.
- When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piping snow can bury the outdoor unit, provide proper snow guards.
- A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.



※1 In case of 200V model.
 ※2 In case of 230V, 200V, 400V models. If unit is installed in L4 space with 1/3 condition, secure space of 250mm in lateral (L4) by unit movement at the time of exchange work of compressor.

6) Installation



- In installing the unit, fix the unit's legs with bolts specified on the left.
- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the left illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)
- Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

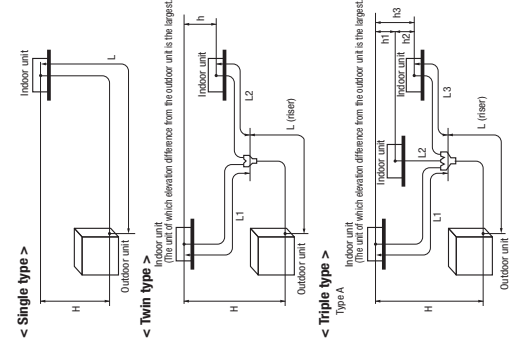
- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Restrictions | One-way pipe length difference from the first branching point to the indoor unit | | Multi-appears in the above | W-twin type | |
|---|--|--|---|------------------------------|------------------------|
| | Model for outdoor units | Model for indoor units | | | |
| One-way pipe length of refrigerant piping | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | Triple type A 200V-L4, L1, L2, L3 200V-L4, L1, L2, L3, L4, L5 | L4+L1, L4+L2 L4+L3, L4+L4 | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | 200V-L1, L2, L3 | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | Prohibition of the use | Prohibition of the use | Prohibition of the use |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | L |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | L |
| Main pipe length | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| One-way pipe length between the first branching point from the second branching point to the indoor unit | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| One-way pipe length after the first branching point to the indoor unit through the second branching point | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| One-way pipe length difference from the first branching point to the indoor unit | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| One-way pipe length difference from the second branching point to the indoor unit | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| Elevation difference between indoor and outdoor units | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| Elevation difference between indoor units | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |
| | 200V | Liquid φ 9.52 Gas Piping φ 12.7 | L | L | |

● For model 200V, always use φ12.7mm liquid main pipe when the one way piping length exceeds 40m. If φ9.52mm pipes are used in an installation having over 40m piping, they can cause performance degradation and/or water leaks from an indoor unit. Use φ9.52mm liquid main pipe when the one way piping length is less than 40m.

● If the A/P is 20mm, never use a 10mm insulation heat seal near the outdoor unit. Their can cause performance degradation and/or water leak from an indoor unit.

CAUTION



CAUTION

- For model 200V, always use $\phi 12.7\text{mm}$ liquid main pipe when the one way piping length exceeds 40m. If $\phi 9.52\text{mm}$ pipes are used in an installation having over 40m piping, they can cause refrigerant leakage. If the piping length is less than 40m, use $\phi 9.52\text{mm}$ pipes when the one way piping length is less than 40m.
- Always use $\phi 25.4\text{mm}$ or $\phi 28.58\text{mm}$ gas pipes when the length of the main "L" exceeds 35m.
- If the $\phi 22.22\text{mm}$ pipes are used in an installation having over 35m piping, they can cause performance degradation and/or water leaks from an indoor unit.
- Triple type B is not allowed to be in case of 250V.
- Note (1) In the indoor unit set (R1, L, L1) bases the longest one-way pipe.
- Note (2) Connect the indoor unit set (R1, L, L1) bases the longest one-way pipe.
- Note (3) Connect the indoor unit set (R1, L, L1) bases the longest one-way pipe.

2) Determination of pipe size

Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

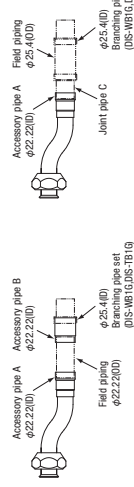
| | Model 200V | | Model 250V | | Model A160V, A200V | |
|---|--|----------------------------|--|---------------|---|----------------------------|
| | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe |
| Outdoor unit connected | $\phi 9.52$ | $\phi 12.7$ | $\phi 9.52$ | $\phi 12.7$ | $\phi 22.22$ | $\phi 12.7$ |
| Refrigerant piping (branch pipe) | $\phi 12.7$ or $\phi 15.4$ or $\phi 19.05$ | $\phi 9.52$ or $\phi 12.7$ | $\phi 12.722$ or $\phi 15.4$ or $\phi 19.05$ | $\phi 12.7$ | $\phi 22.22$ or $\phi 25.4$ or $\phi 28.58$ | $\phi 12.7$ |
| Capacity of indoor unit | $\phi 25.4$ | $\phi 12.7$ | $\phi 25.4$ | $\phi 12.7$ | $\phi 22.22$ | $\phi 25.4$ or $\phi 12.7$ |
| Branching pipe set | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 |
| Indoor unit connection | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ |
| Indoor unit connection | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ |
| Capacity of indoor unit | DS-B16 | DS-B16 | DS-B16 | DS-B16 | DS-B16 | DS-B16 |
| Branching pipe set | Model 71V-3 | Model 100V-2 | Model 100V-2 | Model 120V-2 | Model 120V-2 | Model 120V-2 |
| Refrigerant piping (branch pipe) (L1) | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 |
| Refrigerant piping (branch pipe) (L2, L3) | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ |
| Indoor unit connection | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ |
| Capacity of indoor unit | Model 71V-3 | Model 120V-2 | Model 71V-3 | Model 120V-2 | Model 71V-3+ Model 120V | Model 71V-3+ Model 100V |
| Branching pipe set | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 | DS-WB16 |
| Refrigerant piping (branch pipe) (L4, L5) | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ | $\phi 15.88$ | $\phi 9.52$ |
| Branching pipe set | DS-WB16 x 2 | DS-WB16 x 2 | DS-WB16 x 2 | DS-WB16 x 2 | DS-WB16 x 2 | DS-WB16 x 2 |
| Indoor unit connection | $\phi 12.7$ | $\phi 9.52$ | $\phi 12.7$ | $\phi 9.52$ | $\phi 12.7$ | $\phi 9.52$ |
| Capacity of indoor unit | Model 50V x 4 | Model 50V x 4 | Model 50V x 4 | Model 50V x 4 | Model 50V x 4 | Model 50V x 4 |

CAUTION

- When the model 50V or model 60V model is connected as an indoor unit, always use a $\phi 9.52$ liquid pipe for the branch (branching pipe - indoor unit) and a different diameter joint supplied with the branching pipe set for connection with the indoor unit ($\phi 6.35$ on the liquid pipe side).
- If a $\phi 6.35$ pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall short of the rated capacity.
- A refrigerant pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
- A branching joint must be dressed with a heat-insulation material supplied as an accessory.
- If the outdoor unit work required at and near a branching unit, see the installation manual supplied with your branching pipe set.

3) How to use pipe reducer.

- $\phi 22.22(OD)$ size of the refrigerant gas pipe can be used by using accessory pipe A and joint pipe C.
- $\phi 25.4(OD)$ size of the refrigerant gas pipe can be used by using accessory pipe B, Ready joint C yourself. Need not accessory pipe B.



4) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.
- This unit uses R410A. Always use 1/2H pipes having a 1.0mm or thicker wall for $\phi 19.05$ or larger pipes, because O-type pipes do not meet the pressure resistance requirement.

5) On-site piping work

- Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

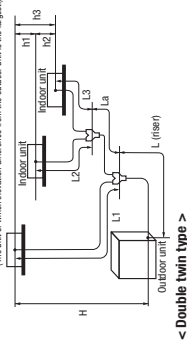
How to remove the service panel

First remove screws (x mark) of the service panel and push it down into the direction of the arrow and then remove it by pulling it toward you.

- The pipe can be laid in any of the following directions: side right, front, rear and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- Carry out the on site piping work with the service valve fully closed.
- Give sufficient protection to a pipe end (compressed and brazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical (R100-R150). Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut on it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.

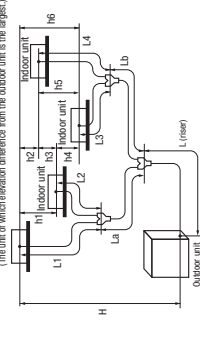
Triple type

(The unit of which elevation difference from the outdoor unit is the largest)



Double twin type

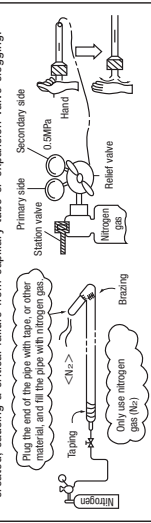
(The unit of which elevation difference from the outdoor unit is the largest)



About brazing

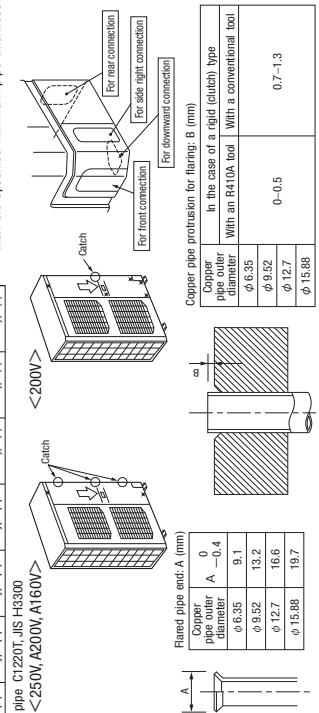
Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



NOTE

- Select pipes having a wall thickness larger than the specified minimum pipe thickness.



CAUTION Do not apply force beyond proper fastening torque in tightening the flare nut.

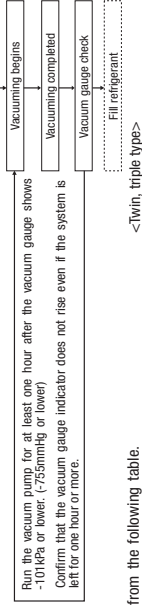
Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

6) Air tightness test

- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut at the time.
 - a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five more minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
 - d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature falls 1°C, the pressure also falls approximately 0.01 MPa. The pressure, further, should be compensated for.
 - e) If a pressure drop is observed in checking a) and b) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- ② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.

7) Evacuation

<Work flow> When the system has remaining moisture inside or a leaky point, the vacuum gauge Check the system for a leaky point and then draw air to create a vacuum again.



8) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

<Single type>

| Item | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|----------|---|--|---|--|
| Capacity | 200V | 3.8 | 0.06 (Liquid piping φ 9.52) | 30 |
| | 25W | 3.6 | 0.145 (Liquid piping φ 12.7) | 30 |
| | A160V, A200V | | 0.12 | |

- A standard refrigerant charge volume means a refrigerant charge volume for an installation with 0m long refrigerant piping.
- This unit contains factory charged refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping.
- When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
- If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

| | | |
|-------------------------|--|---|
| Model 200V | In the case of φ 9.52mm main liquid piping | Additional charge volume (kg) = (Main pipe length (m) - 30 (m)) × 0.06 (kg/m) + Total length of branch pipes (m) × 0.06 (kg/m) |
| | In the case of φ 12.7mm main liquid piping | Additional charge volume (kg) = (Main pipe length (m) - 30 (m)) × 0.145 (kg/m) + Total length of branch pipes (m) × 0.06 (kg/m) |
| Model 25W, A160V, A200V | | Additional charge volume (kg) = (Main pipe length (m) - 30 (m)) × 0.12 (kg/m) + Total length of branch pipes (m) × 0.06 (kg/m) |

● To charge refrigerant again, recover refrigerant from the system first and then charge the volume calculated from the above table (Standard refrigerant charge volume + additional charge volume for total pipe length).

In case of 200V and using φ 12.7 at main liquid piping, calculate the amount as follows.

Total charge volume(kg) = Refrigerant volume charged for shipment at the factory + (Main piping length(m)-30(m))×0.145(kg/m) + Total length of branch pipes (m) × 0.06 (kg/m)

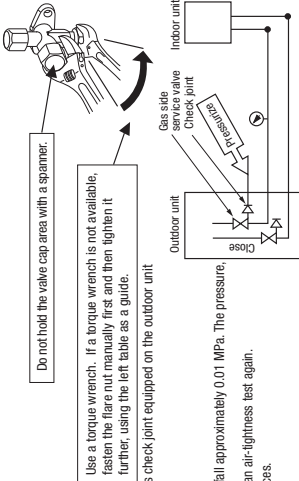
(2) Charging refrigerant

- Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container upside down or using a refrigerant cylinder equipped with a siphon tube.
- Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to charge liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
- In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
- When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the label attached on the back side of the service panel.

9) Heating and condensation prevention

- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid piping).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
- Both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.



| Service valve size (mm) | Tightening torque (N·m) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|-------------------------|-------------------------|----------------------|--|
| φ 6.35 (1/4") | 14-18 | 45-60 | 150 |
| φ 9.52 (3/8") | 34-42 | 30-45 | 200 |
| φ 12.7 (1/2") | 49-61 | 30-45 | 250 |
| φ 15.88 (5/8") | 88-92 | 15-20 | 300 |
| φ 19.05 (3/4") | 100-120 | 15-20 | 450 |

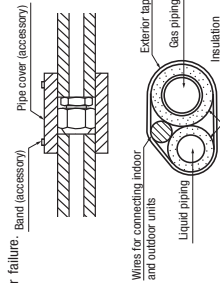
Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

<Twin, triple type>

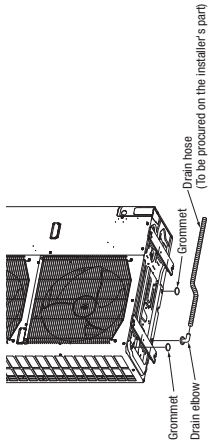
| Item | Standard refrigerant charge volume (kg) | Pipe length for standard refrigerant charge volume (m) | Additional charge volume (kg) per meter of refrigerant piping | | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|----------|---|--|---|-------------|---|--|
| | | | Main pipe | Branch pipe | | |
| Capacity | 200V | 3.8 | 0.06 (Liquid piping φ 9.52) | 0.06 | 5.6 | 30 |
| | 25W | 3.6 | 0.145 (Liquid piping φ 12.7) | 0.06 | 7.2 | |
| | A160V, A200V | | 0.12 | | | |

*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

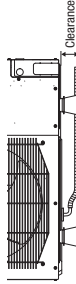


3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as option parts, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of service valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)
- Do not use drain elbow and grommet made of plastic for drain piping when base heater for outdoor unit is used. Plastic grommet and elbow will be damaged and burnt in worst case.
- Prepare another drain tray made of metallic material for collecting drain when base heater is used.



- When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an option part) or concrete blocks. Then, please secure space for the drain elbow and the drain hose.

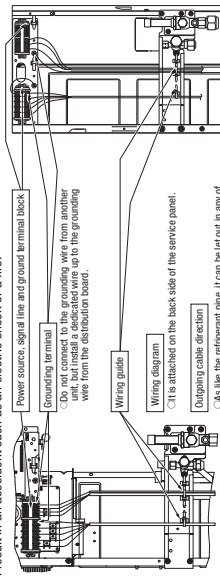


4. ELECTRICAL WIRING WORK

For details of electrical cabling, refer to the indoor unit installation manual.

Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country. Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

- Do not use any supply cord lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51).
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin tinsel cord (code designation 60227 IEC 41).
- Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC57) for supply cords of parts of appliances for outdoor use.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
- If improper grounded, an electric shock or malfunction may result.
- Grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
- The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.



Model 200V

| Model | Power source 3 phase, 4 wire 380V/400V/415V/480V | Power cable thickness (mm²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness (mm) | Indoor-outdoor wire thickness number |
|--------------------|--|--------------------------------|-----------------------|------------------|----------------------------------|---|
| 200V | | 5.5 | 20 | 5.4 | φ1.6mm | φ1.6mm x 3 |
| 250V, A160V, A200V | | | 21 | 51 | | |

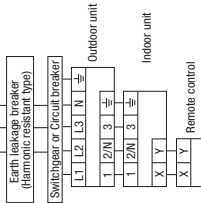
- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction manual.
- Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

Power cable, indoor-outdoor connecting wires

- Always perform grounding system installation work with the power cord unplugged.



Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.



Model 200V, 250V
A160V, A200V

※ At the connection with EDU indoor unit.

| Model | Power source 3 phase, 4 wire 380V/400V/415V/480V | Power cable thickness (mm²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness (mm) | Indoor-outdoor wire thickness number |
|--------------------|--|--------------------------------|-----------------------|------------------|----------------------------------|---|
| 200V | | 5.5 | 25 | 43 | φ1.6mm | φ1.6mm x 3 |
| 250V, A160V, A200V | | | 27 | 40 | | |

※ At the connection with FDUM indoor unit.

| Model | Power source 3 phase, 4 wire 380V/400V/415V/480V | Power cable thickness (mm²) | MAX. over current (A) | Cable length (m) | Grounding wire thickness (mm) | Indoor-outdoor wire thickness number |
|--------------------|--|--------------------------------|-----------------------|------------------|----------------------------------|---|
| 200V | | 5.5 | 22 | 49 | φ1.6mm | φ1.6mm x 3 |
| 250V, A160V, A200V | | | 24 | 45 | | |

5. TEST RUN

⚠ WARNING

- Before conduct a test run, make sure that the service valves are opened.
- Turn on power 6 hours prior to a test run to energize the crank case heater.
- In case of the first operation after turning on power, even if the unit again whenever it is stopped.
- Always give a 3-minute or longer interval before you start the unit again.
- Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous.
- Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

⚠ CAUTION

- When you operate switches (SW3, SW5) for on-site setting, be careful not to touch a live part.
- You cannot check discharge pressure from the liquid service valve charge port.
- The 4-way valve (2WS) is energized during a heating operation.
- When power source is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "Communication error between outdoor and indoor unit" may occur.

1) Test run method

- (1) A test run can be initiated from an outdoor unit by using SW3-3 and SW5-4 for on-site setting.
- (2) Switching SW3-3 to ON will start the compressor.
- (3) The unit will start a cooling operation when SW3-4 is OFF or a heating operation when SW3-4 is ON.
- (4) Do not fail to switch SW3-3 to OFF when a test run is completed.

| SW3-3 | SW3-4 | SW5-4 |
|-------|-------|-------|
| ON | OFF | ON |
| OFF | ON | — |

2) Checking the state of the unit in operation

Use check points provided on the piping before and after the four-way valve installed inside the outdoor unit for checking discharge pressure and suction pressure. As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

| Check point of the pipe | Change part of the gas operation valve |
|-------------------------|--|
| Cooling operation | Suction pressure |
| Heating operation | Discharge pressure (high pressure) |

3) Setting SW3-1, SW3-2, on-site

- (1) Defrost control switching (SW3-1)
 - When this switch is turned ON, the unit will run in the defrost mode more frequently.
 - Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.
- (2) Snow guard fan control (SW3-2)
 - When this switch is turned on, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3°C or lower and the compressor is not running.
 - When the unit is used in a very snowy country, set this switch to ON.

4) Failure diagnosis in a test run

| Error indicated on the remote control unit | Failure event | Action |
|--|------------------------------------|--|
| E40 | Red LED Blinking once | 1. Check whether the service valves are open. 2. If an error has been canceled when 3 minutes have elapsed since a compressor stop, you can restart the unit by effecting check reset from the remote control unit. |
| E49 | Green LED Blinking continuously | |

- If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

| Valve for a cooling operation | When power is turned on | When the unit comes to a normal stop |
|-------------------------------|----------------------------|--------------------------------------|
| Complete shut position | During a cooling operation | During a heating operation |
| Full open position | Complete shut position | Full open position |
| Valve for a heating operation | Full open position | Complete shut position |
| Complete shut position | Full open position | Full open position |

6) Heed the following on the first operation after turning on the circuit breaker.

- This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.
- At the first operation of heating mode after turning on the circuit breaker, the outdoor unit may start in cooling mode a while to prevent from liquid refrigerant back to compressor. If that is the case, do not suspect a unit failure.

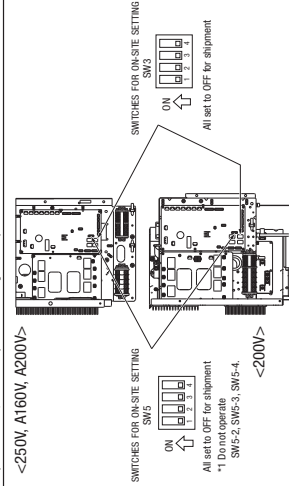
A failure to observe these instructions can result in a compressor breakdown.

- When you leave the outdoor unit with power supplied to it, be sure to close the panel.

| Item No. used in the installation manual | Item | Check item | Check |
|--|----------------------|---|-------|
| 2 | Refrigerant plumbing | Is freon, etc. it leaked under a nitrogen gas flow? Were air-tightness test and vacuum detection safety performed? Are test insulation materials installed on both liquid and gas pipes? Are service valves safely opened for both liquid and gas systems? Are service valves safely opened for additional refrigerant charge volume and refrigerant pipe length on the panel's label? Is the unit free of rattling noise such as uncompleted connection, an absent or reversed flange? Are temporary rated electrical equipments used for circuit breakers and cables? Doesn't cabling cause contact between units, where more than one unit are installed? Do indoor-outdoor signal wires connected to remote control wires? Are indoor-outdoor connecting cables connect between the same terminal numbers? Are either VCT cable or VV fit cables used for indoor-outdoor connecting cables? Does grounding satisfy the D type grounding (Type II) grounding requirements? Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire? Are cables tied or loose screws at their connection points? Are cables tied or loose screws at their connection points so that no external force works onto terminal connections? Is indoor unit installation work completed? Were a test cover should be attached onto an indoor unit, is the test cover attached to the indoor unit? | |
| 4 | Electric wiring | | |
| — | Indoor unit | | |

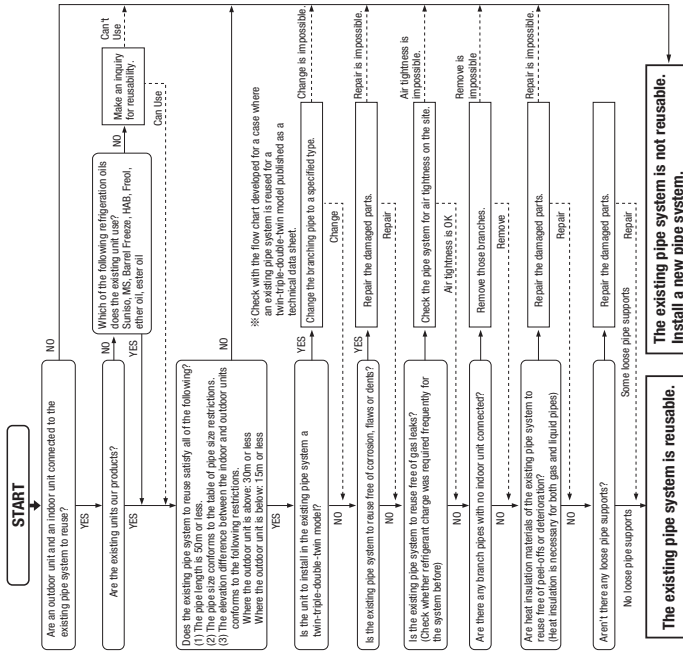
Test run procedure ● Always carry out a test run and check the following in order as listed.

| Turn | The contents of operation | Check |
|------|---|-------|
| (1) | Open the gas side service valve fully. | |
| (2) | Open the liquid side service valve fully. | |
| (3) | Close the panel. | |
| (4) | When a remote control unit is used for unit setup on the installation site, blow instructions for unit setup on the installation site with a remote control unit. | |
| (5) | SW3-3 ON/ SW3-4 OFF: the unit will start a cooling operation. | |
| (6) | SW3-3 ON/ SW3-4 ON: the unit will start a heating operation. | |
| (7) | Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation. | |
| (8) | Make sure that a red LED is not blinking. | |
| (9) | When you complete the test run, do not forget to turn SW3-3 to the OFF position. | |
| (10) | Where options are used, check their operation according to the respective instruction manuals. | |



6. UTILIZATION OF EXISTING PIPING.

Check whether an existing pipe system is reusable or not by using the following flow chart.



WARNING <Where the existing unit can be run for a cooling operation.>
 Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4)).
 (1) Run the unit for 30 minutes for a cooling operation.
 (2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid).
 (3) Close the liquid side service valve of the outdoor unit and pump down (refrigerant recovery) wash the pipe system with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
 ● For the flare nut, do not use the old one, but use the one supplied with the outdoor unit.
 ● turn on-site setting switch SW5-1 to the ON position. (Where the gas pipe size is φ19.05)
 <Where the existing unit cannot be run for a cooling operation.>
 Wash the pipe system or install a new pipe system.
 ● If you choose to wash the pipe system, contact our distributor in the area.

<Table of pipe size restrictions>

○: Standard pipe size ○: Usable
 △: Restricted to shorter pipe length limits ×: Not usable

| Pipe size | 0.08kg/m | | | | | 0.12kg/m ※5 | | | | | 0.2kg/m | | | | | | | |
|--|----------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|
| | φ9.52 | φ9.52 | φ9.52 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 | φ12.7 |
| Liquid pipe | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Gas pipe | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Usability | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Maximum one-way pipe length | 35 | 70 | 70 | 35 | 70 | 35 | 70 | 35 | 70 | 35 | 70 | 35 | 70 | 35 | 70 | 35 | 70 | |
| Length covered without additional charge | 30 | 30 | 30 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | |
| Usability | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| Maximum one-way pipe length | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | |
| Length covered without additional charge | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | × | |

<Pipe system after the branching pipe>

| Pipe size | After 1st branch ※3 | | | | | After 2nd branch | | | | | |
|------------------------|-------------------------|-------------|---|---|---|-------------------------|--------|----------|-------|--------|----------|
| | Liquid pipe | | | | | Gas pipe | | | | | |
| Model | Combination of capacity | | | | | Combination of capacity | | | | | |
| 200V | Twin | 100+100 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| | Triple A | 71+71+71 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| | Triple B | 71+71+71 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| 250V A160V A200V | Double twin | 50+50+50+50 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| | Twin | 125+125 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| | Triple A | 60+60+125 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| A160V A200V | Triple B | 71+71+100 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |
| | Double twin | 60+60+60+60 | × | ○ | ○ | φ12.7 | φ15.88 | φ19.05※3 | φ12.7 | φ15.88 | φ19.05※1 |

※1 Because of its insufficient pressure resistance, turn the dip switch SW5-1 provided on the outdoor unit bent to the ON position for φ19.05 × 11.0. (In the case of a twin-type-double-twin model, this also applies to the case where φ19.05 × 11.0 is used in a pipe system after the first branching point). However, you need not turn the dip switch SW5-1 to the ON position, if 1/2H pipes or pipes having 1.2 or thicker walls are used.
 ※2 When the main pipe length exceeds 40m, a significant capacity drop may be experienced due to pressure loss in the liquid pipe system. Use φ12.7 for the liquid main.
 ※3 Piping size after branch should be equal or smaller than main pipe size.
 ※4 Piping size from first branch to indoor unit should be φ9.52 (Liquid) / φ15.88 (Gas).
 ※5 In case of 200V, change 0.145 kg/m.

● Any combinations of pipe sizes not listed in the table or marked with × in the table are not usable.
 ● The model types of existing units of which branching pipes are reusable.>
 Models later than Type 8.
 ● FDC * * * 8 □ □ □ □ ● FDCP * * * 8 □ □ □ □

<The model types of existing units of which branching pipes are reusable.>

The branching pipes used with models other than those listed above are not reusable because of their insufficient pressure resistance. Please use our genuine branching pipes for R410A.

● * * * are numbers representing horsepower. □ □ □ is an alphanumeric letter.

Formula to calculate additional charge volume


Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) × Total length of branch pipes (m) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.

Example When an 250V (twin installation) is installed in a 40m long existing pipe system (main pipe length 30m, liquid φ15.88, gas φ25.4; pipe length after branching pipe 5m x 2, liquid φ9.52, gas φ15.88), the quantity of refrigerant to charge additionally should be (30m-18m) x 0.2kg/m + 5m x 2 x 0.06kg/m = 3.0 kg.

2.10.5 Method for connecting the accessory pipe

Model FDC200VSA

PSC012D028A 

- Be sure to use the accessory pipe to connect the service valve on the gas side with the field pipe.
- Be sure to use the straight pipe (Procured at the field) shown in the table 1 applicable.
- When tightening the flare, connect the pipe securely by pressing the flared face of pipe against the service valve.
- When brazing between the pipe in place and the attached pipe, confirm that no excessive force is applied to the flare joint. Otherwise gas could leak from the flare joint.
- Connect the attached pipe according to the following steps ① – ⑤.
 - ① Referring to Table 2 and Table 3, prepare the straight pipe and the elbow in the field, which are used in the construction examples (A) – (D) applicable to the connecting direction.
 - ② Firstly, use the accessory pipe to assemble the connecting pipe assembly outside the outdoor unit.
(As shown in the figure of connecting examples (A) – (D).)
 - ③ After assembling the connecting pipe, connect it to the service valve on the gas side inside the outdoor unit. Tighten the flare nut with appropriate torque.

| Proper torque | |
|---------------|----------------|
| φ 19.05 | 100 – 120N · m |

- ④ After connection of the connecting pipe assembly to the service valve on the gas side, braze the connecting pipe assembly and the field pipe.
- ⑤ When connecting pipe contacts wiring, attach heat insulating material to the pipe in order to prevent from contacting of the pipe and wiring. (If the wiring is rubbed with the pipe and the cover of wiring is teared, there is a risk of a short circuit or an electric shock.)

About brazing

- Be sure to braze while supplying nitrogen gas.
If no nitrogen gas is supplied, a large amount of impurity (oxidized film) will be generated, which may clog the capillary tube and the expansion valve, resulting in fatal malfunction.

Table 1 Pipe specification

| Refrigerant line (one way) | length (m) |
|----------------------------|---------------------------------|
| ≤ 35 (m) | φ 22.22 x T1.0 |
| ≤ 70 (m) | φ 25.4 x T1.0 or φ 28.58 x T1.0 |

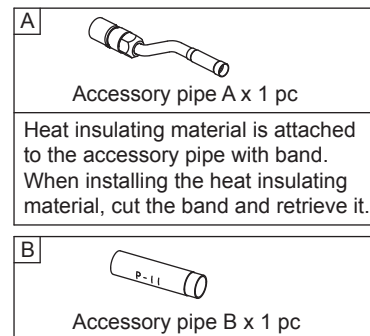
- Be sure to use pipes of 1/2H material, and wall thickness above 1mm. (Pressure resistance of O-type pipe is not enough)

Table 2 Parts used for the connecting pipe assembly

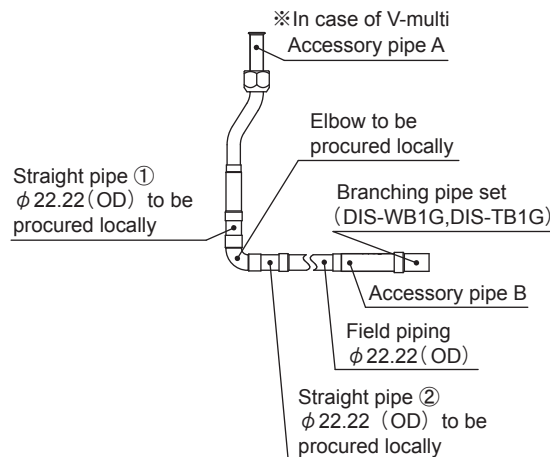
| No. | Name | Quantity | Remark |
|-----|------------------|----------|---|
| 1 | Accessory pipe A | 1 | Accessory |
| 2 | Straight pipe ① | 1 | Procured at the field |
| 3 | Straight pipe ② | 1 or 0 | Procured at the field (Not required for downward direction) |
| 4 | Elbow | 1 or 0 | Procured at the field (Not required for downward direction) |

Table 3 Length and specification of straight pipe (Procured in the field)

| | Ⓐ Downward | Ⓑ Forward | Ⓒ Rightward | Ⓓ Backward |
|-----------------|---------------|---------------|---------------|---------------|
| Straight pipe ① | 380mm or more | 200mm | 155mm | 215mm |
| Straight pipe ② | — | 160mm or more | 160mm or more | 370mm or more |

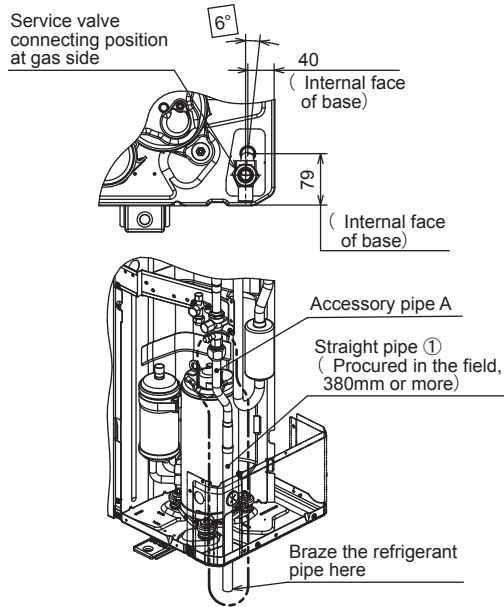


- Branching pipe set can be used by using the accessory pipe B.
When φ 22.22 (OD) size of the indoor unit gas pipe is used, the accessory pipe B is unnecessary.

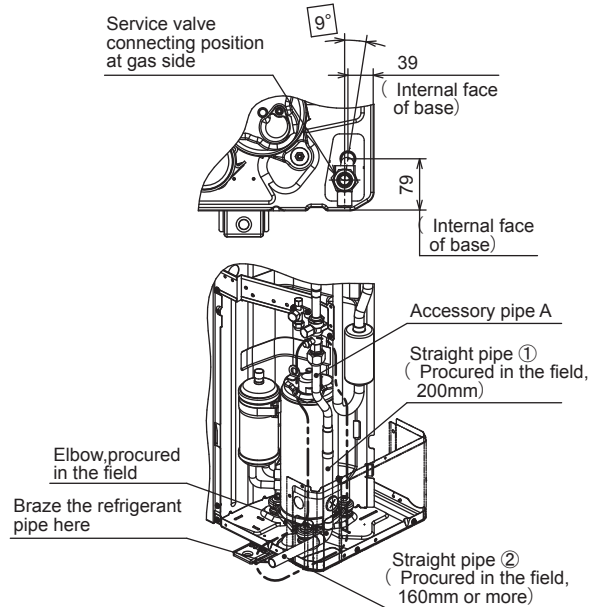


【 Connection example (A) – (D) applicable to the connecting direction.】

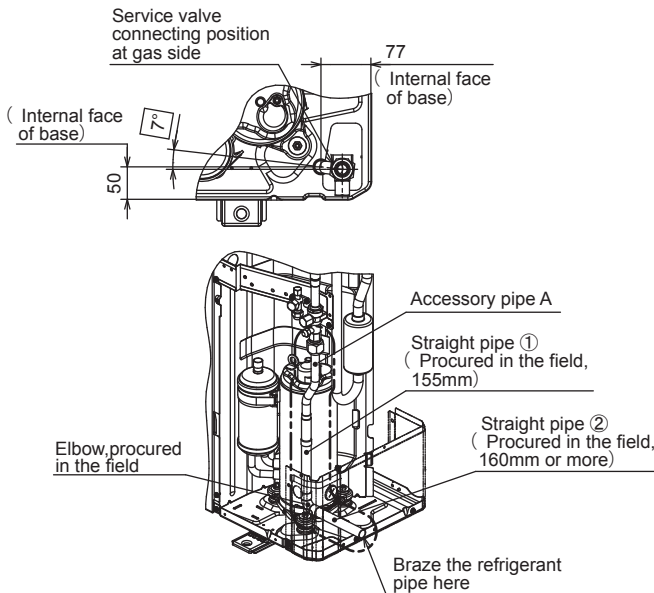
- The piping angle shown below is an example in case of 15mm of heat insulating material.
Adjust an angle, according to the thickness of heat insulating material.
Pass the connecting pipe in a hole after angle adjustment.



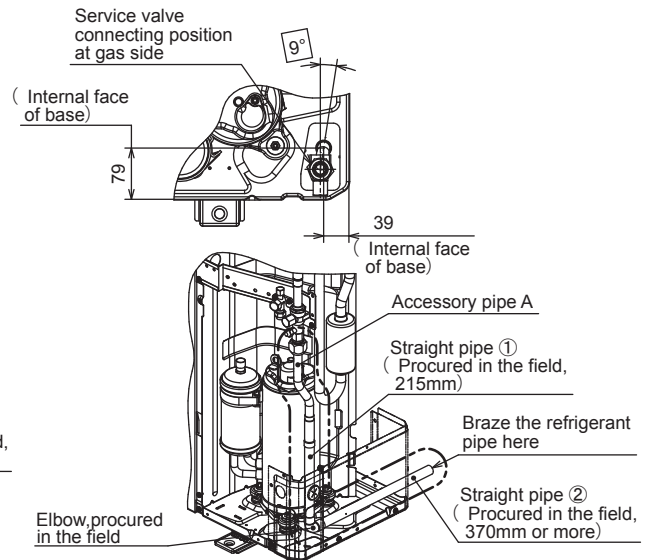
Connection example of refrigerant pipe-(A)
(Downward connection)



Connection example of refrigerant pipe-(B)
(Forward connection)

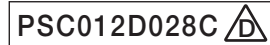


Connection example of refrigerant pipe-(C)
(Rightward connection)



Connection example of refrigerant pipe-(D)
(Backward connection)

Model FDC250VSA



- Be sure to use the accessory pipe to connect the service valve on the gas side with the field pipe.
- Be sure to use the straight pipe (Procured at the field) shown in the table 1 applicable to the model of outdoor unit.
- When tightening the flare, connect the pipe securely by pressing the flared face of pipe against the service valve.
- When brazing between the pipe in place and the attached pipe, confirm that no excessive force is applied to the flare joint. Otherwise gas could leak from the flare joint.

• Connect the attached pipe according to the following steps ① – ⑤.

- ① Referring to Table 2 and Table 3, prepare the straight pipe and the elbow in the field, which are used in the construction examples (A) – (D) applicable to the connecting direction.
- ② Firstly, use the accessory pipe to assemble the connecting pipe assembly outside the outdoor unit.
(As shown in the figure of connecting examples (A) – (D).)
- ③ After assembling the connecting pipe, connect it to the service valve on the gas side inside the outdoor unit. Tighten the flare nut with appropriate torque.

| Proper torque | |
|---------------|----------------|
| φ 19.05 | 100 – 120N · m |

- ④ After connection of the connecting pipe assembly to the service valve on the gas side, braze the connecting pipe assembly and the field pipe.
- ⑤ When connecting pipe contacts wiring, attach heat insulating material to the pipe in order to prevent from contacting of the pipe and wiring. (If the wiring is rubbed with the pipe and the cover of wiring is teared, there is a risk of a short circuit or an electric shock.)

About brazing

- Be sure to braze while supplying nitrogen gas.
If no nitrogen gas is supplied, a large amount of impurity (oxidized film) will be generated, which may clog the capillary tube and the expansion valve, resulting in fatal malfunction.

Table 1 Pipe specification

| | | Refrigerant line (one way) length (m) | |
|-------------|--------------|---------------------------------------|---------------------------------|
| Single type | FDC250V | ≤35 (m) | φ 22.22 x T1.0 |
| | | ≤70 (m) | φ 25.4 x T1.0 or φ 28.58 x T1.0 |
| Multi type | FDC224KXZPE1 | ≤90 (m) | φ 19.05 x T1.0 |
| | | ≤120 (m) | φ 22.22 x T1.0 |
| | FDC280KXZPE1 | ≤90 (m) | φ 22.22 x T1.0 |
| | | ≤120 (m) | φ 25.4 x T1.0 or φ 28.58 x T1.0 |

- Be sure to use pipes of 1/2H material, and wall thickness above 1mm. (Pressure resistance of O-type pipe is not enough)

Table 2 Parts used for the connecting pipe assembly

| No. | Name | Quantity | Remark |
|-----|------------------|----------|---|
| 1 | Accessory pipe A | 1 | Accessory |
| 2 | Straight pipe ① | 1 | Procured at the field |
| 3 | Straight pipe ② | 1 or 0 | Procured at the field (Not required for downward direction) |
| 4 | Elbow | 1 or 0 | Procured at the field (Not required for downward direction) |

Table 3 Length and specification of straight pipe (Procured in the field)

| | Ⓐ Downward | Ⓑ Forward | Ⓒ Rightward | Ⓓ Backward |
|-----------------|---------------|-----------------|-----------------|---------------|
| Straight pipe ① | 400mm or more | 192.5 – 202.5mm | 192.5 – 202.5mm | 210mm |
| Straight pipe ② | — | 105mm or more | 155mm or more | 370mm or more |

A

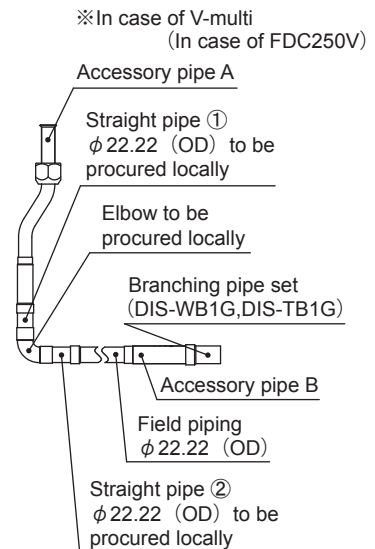
Accessory pipe A x 1 pc
(Except FDC224KXZPE1)

Heat insulating material is attached to the accessory pipe with band. When installing the heat insulating material, cut the band and retrieve it.

B

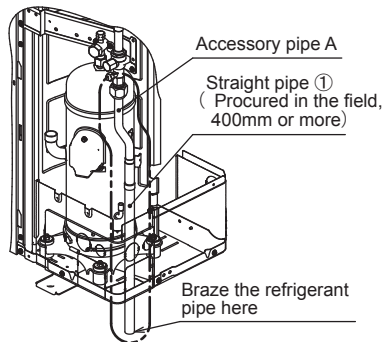
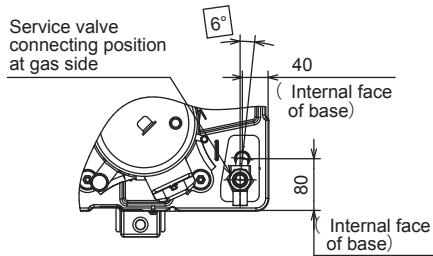
Accessory pipe B x 1 pc
(Only use for FDC250V)

- Branching pipe set can be used by using the accessory pipe B. When φ 22.22 (OD) size of the indoor unit gas pipe is used, the accessory pipe B is unnecessary.

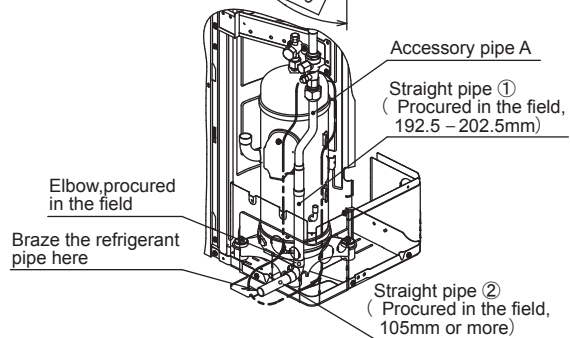
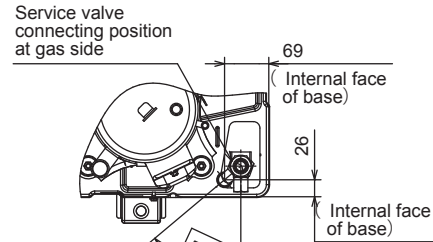


【 Connection example (A) – (D) applicable to the connecting direction.】

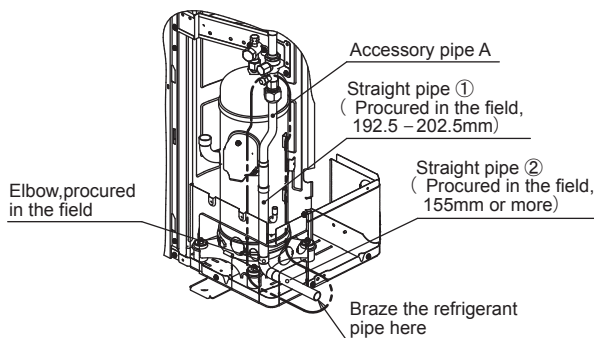
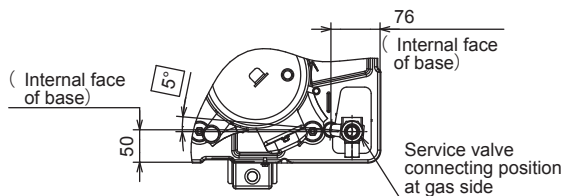
- The piping angle shown below is an example in case of 15mm of heat insulating material.
Adjust an angle, according to the thickness of heat insulating material.
Pass the connecting pipe in a hole after angle adjustment.



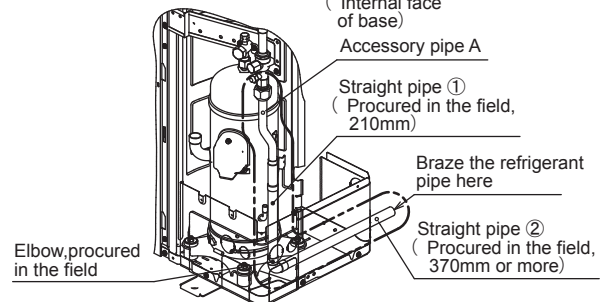
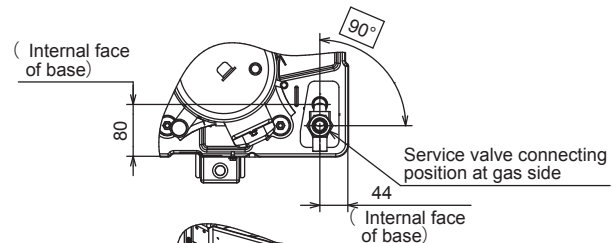
Connection example of refrigerant pipe-(A)
(Downward connection)



Connection example of refrigerant pipe-(B)
(Forward connection)



Connection example of refrigerant pipe-(C)
(Rightward connection)



Connection example of refrigerant pipe-(D)
(Backward connection)

2.10.6 Instructions for branching pipe set (DIS-WA1, WB1, TA1, TB1)


See page 201.

2.11 TECHNICAL INFORMATION

(1) Ceiling cassette-4 way compact type (FDTC)

FDTC100VNAPVH

| | | | |
|---|----------------------------|--|---------------------------------------|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDTC50VH (x2 units) | | |
| Outdoor unit model name | FDTC100VNA | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.4 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.4 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.17 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.43 | kW |
| Tj=2°C | Pdh | 4.52 | kW |
| Tj=7°C | Pdh | 2.91 | kW |
| Tj=12°C | Pdh | 2.60 | kW |
| Tj=bivalent temperature | Pdh | 6.20 | kW |
| Tj=operating limit | Pdh | 8.40 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcyc | - | kW |
| for heating | Pcyc | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto | 20 | W |
| crankcase heater mode | Pck | 8 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | Sound power level(indoor) | Lwa 59 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 70 dB(A) |
| variable | Yes | Global warming potential | GWP 2088 kgCO ₂ eq. |
| Contact details for obtaining more information | | Rated air flow(indoor) | |
| Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | Rated air flow(outdoor) | |
| | | - | |

PJF000Z585 

FDTC100VSAPVH

| | | | | | | | |
|---|--|---|--|--|--|---------------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDTC50VH (x2 units) | | Average (mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VSA | | Warmer (if designated) | | No | |
| Function (indicate if present) | | | | Colder (if designated) | | | |
| cooling | | Yes | | Colder (if designated) | | No | |
| heating | | Yes | | | | | |
| Item symbol value unit | | | | Item symbol value class | | | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 10.0 kW | | cooling | | SEER 6.00 A+ | |
| heating / Average | | Pdesignh 8.4 kW | | heating / Average | | SCOP/A 4.38 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 8.4 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 10.00 kW | | Tj=35°C | | EERd 3.03 - | |
| Tj=30°C | | Pdc 7.37 kW | | Tj=30°C | | EERd 5.08 - | |
| Tj=25°C | | Pdc 4.74 kW | | Tj=25°C | | EERd 7.52 - | |
| Tj=20°C | | Pdc 3.17 kW | | Tj=20°C | | EERd 10.06 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 7.43 kW | | Tj=-7°C | | COPd 3.10 - | |
| Tj=2°C | | Pdh 4.52 kW | | Tj=2°C | | COPd 4.43 - | |
| Tj=7°C | | Pdh 2.91 kW | | Tj=7°C | | COPd 5.29 - | |
| Tj=12°C | | Pdh 2.60 kW | | Tj=12°C | | COPd 5.71 - | |
| Tj=bivalent temperature | | Pdh 6.20 kW | | Tj=bivalent temperature | | COPd 2.37 - | |
| Tj=operating limit | | Pdh 8.40 kW | | Tj=operating limit | | COPd 2.80 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pcycc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pcyhc - kW | | for heating | | COPcyc - - | |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 8 W | | cooling | | Qce 584 kWh/a | |
| standby mode | | Psb 8 W | | heating / Average | | Qhe 2682 kWh/a | |
| thermostat-off mode | | Pto 20 W | | heating / Warmer | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 8 W | | heating / colder | | Qhe - kWh/a | |
| Capacity control (indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level (indoor) | | Lwa 59 dB(A) | |
| staged | | No | | Sound power level (outdoor) | | Lwa 70 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 2088 kgCO ₂ eq. | |
| | | | | Rated air flow (indoor) | | - 780 m ³ /h | |
| | | | | Rated air flow (outdoor) | | - 4500 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

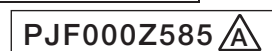
FDTC125VNAPVH

| Model(s) : FDC125VNA / FDTC60VH (x2 units) | | | |
|---|--------------------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| If applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.2 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 232 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 255 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 461 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 694 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1000 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4500 | m ³ /h |
| Contact details | | Mitsubishi heavy industries thermal systems.LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDTC60VH (x2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 169 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 294 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 432 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 526 | % |
| Tj=+12°C | Pdh | 2.6 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 572 | % |
| T _{biv} =bivalent temperature | Pdh | 9.8 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 263 | % |
| T _{OL} =operation limit | Pdh | 7.5 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 230 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _{ol} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDTC125VSAPVH

| Model(s) : FDC125VSA / FDTC60VH (x2 units) | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| If applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.2 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 232 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 255 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 461 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 694 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1000 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDTC60VH (x2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 169 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 294 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 432 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 526 | % |
| Tj=+12°C | Pdh | 2.6 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 572 | % |
| T _{biv} =bivalent temperature | Pdh | 9.8 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 263 | % |
| T _{OL} =operation limit | Pdh | 7.5 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 230 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps: Operation limit T _{ol} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDTC140VNATVH

| Model(s) : FDC140VNA / FDTC50VH (x3 units) | | | | | | | |
|---|------------------|---|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 253 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 482 | % |
| Tj=+25°C | Pdc | 6.5 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 772 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1078 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW | Crankcase heater mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.008 | kW |
| Other items | | | | Other items | | | |
| Capacity control | | variable | | For air-to-air air conditioner: air flow-rate,outdoor measured | | 4500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDTC50VH (x3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 178 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 310 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 456 | % |
| Tj=+7°C | Pdh | 3.6 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 554 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600 | % |
| T _{biv} =bivalent temperature | Pdh | 10.5 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 276 | % |
| T _{OL} =operation limit | Pdh | 7.8 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 236 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _{oi} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDTC140VSATVH

| Model(s) : FDC140VSA / FDTC50VH (x3 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| If applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 253 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 482 | % |
| Tj=+25°C | Pdc | 6.5 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 772 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1078 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.008 | kW | Crankcase heater mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.008 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems.LTD | | | | | | |
| <p>** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25.</p> <p>*** from 26 September 2018</p> <p>Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.</p> | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDTC50VH (x3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 178 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 310 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 456 | % |
| Tj=+7°C | Pdh | 3.6 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 554 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600 | % |
| T _{biv} =bivalent temperature | Pdh | 10.5 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 276 | % |
| T _{OL} =operation limit | Pdh | 7.8 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 236 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _{ol} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDTC200VSADVH

| Model(s) : FDC200VSA / FDTC50VH (x4 units) | | | |
|---|--------------------------------|---|----------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 19.0 | kW |
| Tj=+30°C | Pdc | 14.0 | kW |
| Tj=+25°C | Pdc | 9.0 | kW |
| Tj=+20°C | Pdc | 4.1 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2088 | kg CO ₂ eq (100years) |
| Seasonal space cooling energy efficiency η _{s,c} | | | |
| | | 250 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 273 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 446 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 825 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 986 | % |
| Crankcase heater mode P _{CK} | | | |
| | | 0.010 | kW |
| Standby mode P _{SB} | | | |
| | | 0.010 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 8100 | m ³ /h |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDTC50VH (x4 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 166 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 254 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 440 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 498 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 675 | % |
| T _{biv} =bivalent temperature | Pdh | 12.5 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 256 | % |
| T _{OL} =operation limit | Pdh | 10.3 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 224 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps: Operation limit T _{oi} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8100 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDTC250VSADVH

| Model(s) : FDC250VSA / FDTC60VH (x4 units) | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 24.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 199 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 24.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 225 | % |
| Tj=+30°C | Pdc | 17.7 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 385 | % |
| Tj=+25°C | Pdc | 11.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 625 | % |
| Tj=+20°C | Pdc | 6.4 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 775 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.010 | kW | Crankcase heater mode | P _{CK} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.010 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8580 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems.LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC250VSA / FDTC60VH (x4 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 27.0 | kW | Seasonal space heating energy efficiency η_s,h | | 160 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.6 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 270 | % |
| Tj=+2°C | Pdh | 7.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 407 | % |
| Tj=+7°C | Pdh | 5.6 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 513 | % |
| Tj=+12°C | Pdh | 6.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 632 | % |
| T _{biv} =bivalent temperature | Pdh | 14.2 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 252 | % |
| T _{OL} =operation limit | Pdh | 12.5 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 242 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} < -20°C) | Pdh | - | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _{ol} temperature | | - | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | - | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 9060 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 75.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

Models FDTC50VH, 60VH

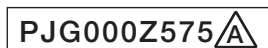
| Model(s) : FDTC50VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 59.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDTC60VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.9 | kW | Total electric power input | P_{elec} | 0.060 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.7 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

(2) Duct connected-High static pressure type (FDU)

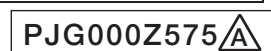
FDU100VNAVH

| | | | |
|---|------------------|--|--|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDU100VH | | |
| Outdoor unit model name | FDC100VNA | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.5 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.5 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.54 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.52 | kW |
| Tj=2°C | Pdh | 4.58 | kW |
| Tj=7°C | Pdh | 2.94 | kW |
| Tj=12°C | Pdh | 2.83 | kW |
| Tj=bivalent temperature | Pdh | 8.50 | kW |
| Tj=operating limit | Pdh | 6.77 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto(cooling) | 65 | W |
| crankcase heater mode | Pto(heating) | 70 | W |
| | Pck | 8 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 70 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. | |
| | | Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | |



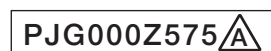
FDU100VSAVH

| | | | | | | | |
|---|--|--|--|--|--|---------------------------------|--|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDU100VH | | | | | |
| Outdoor unit model name | | FDC100VSA | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | | | | Item | | | |
| | | symbol value unit | | | | symbol value class | |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | | Pdesignc 10.0 kW | | cooling | | SEER 6.11 A++ | |
| heating / Average | | Pdesignh 8.5 kW | | heating / Average | | SCOP/A 4.19 A+ | |
| heating / Warmer | | Pdesignh - kW | | heating / Warmer | | SCOP/W - - | |
| heating / Colder | | Pdesignh - kW | | heating / Colder | | SCOP/C - - | |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | | Pdh 8.5 kW | | heating / Average (-10°C) | | elbu 0 kW | |
| heating / Warmer (2°C) | | Pdh - kW | | heating / Warmer (2°C) | | elbu - kW | |
| heating / Colder (-22°C) | | Pdh - kW | | heating / Colder (-22°C) | | elbu - kW | |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | | Pdc 10.00 kW | | Tj=35°C | | EERd 3.52 - | |
| Tj=30°C | | Pdc 7.37 kW | | Tj=30°C | | EERd 4.83 - | |
| Tj=25°C | | Pdc 4.74 kW | | Tj=25°C | | EERd 7.73 - | |
| Tj=20°C | | Pdc 3.54 kW | | Tj=20°C | | EERd 11.60 - | |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh 7.52 kW | | Tj=-7°C | | COPd 3.21 - | |
| Tj=2°C | | Pdh 4.58 kW | | Tj=2°C | | COPd 3.91 - | |
| Tj=7°C | | Pdh 2.94 kW | | Tj=7°C | | COPd 5.42 - | |
| Tj=12°C | | Pdh 2.83 kW | | Tj=12°C | | COPd 6.23 - | |
| Tj=bivalent temperature | | Pdh 8.50 kW | | Tj=bivalent temperature | | COPd 2.70 - | |
| Tj=operating limit | | Pdh 6.77 kW | | Tj=operating limit | | COPd 2.40 - | |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | | Pdh - kW | | Tj=-7°C | | COPd - - | |
| Tj=2°C | | Pdh - kW | | Tj=2°C | | COPd - - | |
| Tj=7°C | | Pdh - kW | | Tj=7°C | | COPd - - | |
| Tj=12°C | | Pdh - kW | | Tj=12°C | | COPd - - | |
| Tj=bivalent temperature | | Pdh - kW | | Tj=bivalent temperature | | COPd - - | |
| Tj=operating limit | | Pdh - kW | | Tj=operating limit | | COPd - - | |
| Tj=-15°C | | Pdh - kW | | Tj=-15°C | | COPd - - | |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | | Tbiv -10 °C | | heating / Average | | Tol -20 °C | |
| heating / Warmer | | Tbiv - °C | | heating / Warmer | | Tol - °C | |
| heating / Colder | | Tbiv - °C | | heating / Colder | | Tol - °C | |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | | Pccyc - kW | | for cooling | | EERcyc - - | |
| for heating | | Pchyc - kW | | for heating | | COPcyc - - | |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | | Cdc 0.25 - | | heating | | Cdh 0.25 - | |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | | Poff 8 W | | cooling | | Qce 573 kWh/a | |
| standby mode | | Psb 8 W | | heating / Average | | Qhe 2844 kWh/a | |
| thermostat-off mode | | Pto(cooling) 65 W | | heating / Warmer | | Qhe - kWh/a | |
| | | Pto(heating) 70 W | | heating / colder | | Qhe - kWh/a | |
| crankcase heater mode | | Pck 8 W | | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | | Lwa 65 dB(A) | |
| staged | | No | | Sound power level(outdoor) | | Lwa 70 dB(A) | |
| variable | | Yes | | Global warming potential | | GWP 1,975 kgCO ₂ eq. | |
| | | | | Rated air flow(indoor) | | - 2,160 m ³ /h | |
| | | | | Rated air flow(outdoor) | | - 4,500 m ³ /h | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

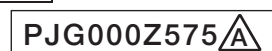


FDU125VNAVH

| Model(s) : FDC125VNA / FDU125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 207.3 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 287.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 409.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 650.0 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 865.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.010 | kW | Standby mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.075 | kW | | P _{SB} | 0.010 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 71.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

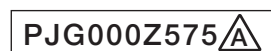


| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDU125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 162.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 311.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 530.0 | % |
| Tj=+12°C | Pdh | 2.9 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 260.0 | % |
| TOL=operation limit | Pdh | 7.8 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 231.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

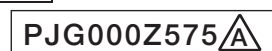


FDU125VSAVH

| Model(s) : FDC125VSA / FDU125VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW | Seasonal space cooling energy efficiency ηs,c | | 207.3 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 12.5 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 287.0 | % |
| Tj=+30°C | Pdc | 9.2 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 409.0 | % |
| Tj=+25°C | Pdc | 5.9 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 650.0 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 865.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.010 | kW | Standby mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.075 | kW | | P _{SB} | 0.010 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 71.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

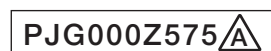


| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDU125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency $\eta_{s,h}$ | | 162.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 311.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 530.0 | % |
| Tj=+12°C | Pdh | 2.9 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600.0 | % |
| T _{biv} =bivalent temperature | Pdh | 9.8 | kW | T _{biv} =bivalent temperature | COPd or GUEh,bin / AEFh,bin | 260.0 | % |
| T _{OL} =operation limit | Pdh | 7.8 | kW | T _{OL} =operation limit | COPd or GUEh,bin / AEFh,bin | 231.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if T _{OL} <-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if T _{OL} <-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _a temperature | | — | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | elbu | — | — | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If C _{dh} is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

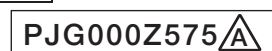


FDU140VNAVH

| Model(s) : FDC140VNA / FDU140VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 200.0 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 276.0 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 383.0 | % |
| Tj=+25°C | Pdc | 6.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 588.0 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 970.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.008 | kW | Standby mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | | P _{SB} | 0.008 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

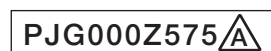


| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDU140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 157.4 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 300.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 380.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 518.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 567.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 256.0 | % |
| TOL=operation limit | Pdh | 7.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 229.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | elbu | — | — | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

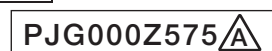


FDU140VSAVH

| Model(s) : FDC140VSA / FDU140VH | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 200.0 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 276.0 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 383.0 | % |
| Tj=+25°C | Pdc | 6.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 588.0 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 970.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.008 | kW | Standby mode | P _{SB} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

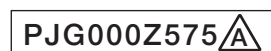


| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDU140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 157.4 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 300.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 380.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 518.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 567.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 256.0 | % |
| TOL=operation limit | Pdh | 7.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 229.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | elbu | — | kW | |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

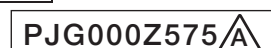


FDU200VSAVG

| Model(s) : FDC200VSA / FDU200VG | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 199.5 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 19.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 308.0 | % |
| Tj=+30°C | Pdc | 14.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 440.0 | % |
| Tj=+25°C | Pdc | 9.0 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 667.0 | % |
| Tj=+20°C | Pdc | 4.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 647.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.020 | kW | Standby mode | P _{CK} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.190 | kW | | P _{SB} | 0.020 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

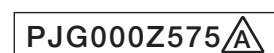


| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDU200VG | | | |
|---|---|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 137.6 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 310.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 327.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 440.0 | % |
| Tj=+12°C | Pdh | 3.9 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 438.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 263.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 239.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | - | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | - | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | - | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.020 | kW | elbu | | - | kW |
| Thermostat-off mode | P _{TO} | 0.210 | kW | Type of energy input | P _{SB} | 0.020 | kW |
| Crankcase heater mode | P _{CK} | 0.010 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | - | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

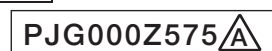


FDU250VSAVG

| Model(s) : FDC250VSA / FDU250VG | | | | | | | |
|---|---|----------|------------------------------------|---|--------------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 24.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 189.9 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 24.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 301.0 | % |
| Tj=+30°C | Pdc | 17.7 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 395.0 | % |
| Tj=+25°C | Pdc | 11.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 622.0 | % |
| Tj=+20°C | Pdc | 6.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 638.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.020 | kW | Standby mode | P _{SB} | 0.020 | kW |
| Thermostat-off mode | P _{TO} | 0.190 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,580 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC250VSA / FDU250VG | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 27.0 | kW | Seasonal space heating energy efficiency ηs,h | | 137.5 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.6 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 269.0 | % |
| Tj=+2°C | Pdh | 7.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 351.0 | % |
| Tj=+7°C | Pdh | 4.9 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 402.0 | % |
| Tj=+12°C | Pdh | 6.4 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 527.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.2 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 260.0 | % |
| TOL=operation limit | Pdh | 12.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 254.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Ta temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.020 | kW | elbu | | — | kW |
| Thermostat-off mode | P _{TO} | 0.210 | kW | Type of energy input | P _{SB} | 0.020 | kW |
| Crankcase heater mode | P _{CK} | 0.010 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 9,060 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 75.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



Models FDU100VH, 125VH, 140VH, 200VG, 250VG

| Model(s) : FDU100VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 7.7 | kW | Total electric power input | P_{elec} | 0.350 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.3 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 65.0 | dB |
| Heating capacity | $P_{rated,h}$ | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU125VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 10.5 | kW | Total electric power input | P_{elec} | 0.400 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.0 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 67.0 | dB |
| Heating capacity | $P_{rated,h}$ | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU140VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 11.2 | kW | Total electric power input | P_{elec} | 0.550 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 2.8 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 70.0 | dB |
| Heating capacity | $P_{rated,h}$ | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU200VG | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 14.2 | kW | Total electric power input | P_{elec} | 1.180 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 4.8 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 75.0 | dB |
| Heating capacity | $P_{rated,h}$ | 22.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDU250VG | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 20.0 | kW | Total electric power input | P_{elec} | 1.180 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 4.0 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 75.0 | dB |
| Heating capacity | $P_{rated,h}$ | 27.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

(3) Duct connected-Low/Middle static pressure type (FDUM)

FDUM100VNAVH

| | | | |
|---|---|--|--|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDUM100VH | | |
| Outdoor unit model name | FDC100VNA | | |
| Function(indicate if present) | | Average(mandatory) Yes | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.5 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.5 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.54 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.52 | kW |
| Tj=2°C | Pdh | 4.58 | kW |
| Tj=7°C | Pdh | 2.94 | kW |
| Tj=12°C | Pdh | 2.83 | kW |
| Tj=bivalent temperature | Pdh | 8.50 | kW |
| Tj=operating limit | Pdh | 6.77 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto(cooling) | 65 | W |
| crankcase heater mode | Pto(heating) | 70 | W |
| | Pck | 8 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 70 dB(A) |
| variable | No | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| | Yes | Rated air flow(indoor) | - 2,160 m ³ /h |
| | | Rated air flow(outdoor) | - 4,500 m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

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FDUM100VSAVH

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|---|--------------|---|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM100VH | | | | | |
| Outdoor unit model name | | FDC100VSA | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 6.11 | A++ |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 4.19 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.52 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 4.83 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 7.73 | - |
| Tj=20°C | Pdc | 3.54 | kW | Tj=20°C | EERd | 11.60 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 3.21 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 3.91 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 5.42 | - |
| Tj=12°C | Pdh | 2.83 | kW | Tj=12°C | COPd | 6.23 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.70 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.40 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 573 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 2844 | kWh/a |
| thermostat-off mode | Pto(cooling) | 65 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 70 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 2,160 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

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FDUM100VNAPVH

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|---|--------------|---|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM50VH x2 | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VNA | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.50 | A |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 3.94 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.08 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 4.24 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 6.60 | - |
| Tj=20°C | Pdc | 3.30 | kW | Tj=20°C | EERd | 11.05 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 2.93 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 3.74 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 4.93 | - |
| Tj=12°C | Pdh | 2.70 | kW | Tj=12°C | COPd | 6.18 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.47 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.23 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 637 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 3024 | kWh/a |
| thermostat-off mode | Pto(cooling) | 45 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 55 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |


FDUM100VSAPVH

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|---|---|-------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM50VH x2 | | | | | |
| Outdoor unit model name | | FDC100VSA | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.50 | A |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 3.94 | A |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.08 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 4.24 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 6.60 | - |
| Tj=20°C | Pdc | 3.30 | kW | Tj=20°C | EERd | 11.05 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 2.93 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 3.74 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 4.93 | - |
| Tj=12°C | Pdh | 2.70 | kW | Tj=12°C | COPd | 6.18 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.47 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.23 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 637 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 3024 | kWh/a |
| thermostat-off mode | Pto(cooling) | 45 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 55 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

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FDUM125VNAVH

| Model(s) : FDC125VNA / FDUM125VH | | | |
|---|------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.075 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

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| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDUM125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 162.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 311.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 530.0 | % |
| Tj=+12°C | Pdh | 2.9 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 260.0 | % |
| TOL=operation limit | Pdh | 7.8 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 231.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | Type of energy input | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-spilt air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

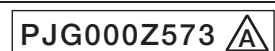
FDUM125VSAVH

| Model(s) : FDC125VSA / FDUM125VH | | | |
|---|-----------------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.075 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 207.3 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 287.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 409.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 650.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 865.0 | % |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.010 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDUM125VH | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 162.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 311.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 391.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 530.0 | % |
| Tj=+12°C | Pdh | 2.9 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 600.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 260.0 | % |
| TOL=operation limit | Pdh | 7.8 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 231.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM125VNAPVH


| Model(s) : FDC125VNA / FDUM60VH (2 units) | | | |
|---|-----------------------------|-----------------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 248.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 458.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 688.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,400.0 | % |
| Crankcase heater mode | | | |
| | | P _{CK} | 0.008 kW |
| Standby mode | | | |
| | | P _{SB} | 0.008 kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |



| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDUM60VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 188.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 333.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 459.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 605.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 771.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 276.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 248.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Toi temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM125VSAPVH

| Model(s) : FDC125VSA / FDUM60VH (2 units) | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 248.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 458.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 688.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,400.0 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

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| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDUM60VH (2 units) | | | |
|---|------------------|---|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 188.3 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 333.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 459.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 605.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 771.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 276.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 248.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

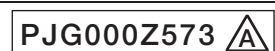
FDUM140VNAVH

| Model(s) : FDC140VNA / FDUM140VH | | | |
|---|-----------------------------|-----------------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 200.0 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 276.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 383.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 588.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 970.0 | % |
| Crankcase heater mode | | | |
| | | P _{CK} | 0.008 kW |
| Standby mode | | | |
| | | P _{SB} | 0.008 kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDUM140VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 157.4 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 300.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 380.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 518.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 567.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 256.0 | % |
| TOL=operation limit | Pdh | 7.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 229.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.100 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VSAVH

| Model(s) : FDC140VSA / FDUM140VH | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 200.0 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 276.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 383.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 588.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 970.0 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Crankcase heater mode P _{CK} 0.008 kW | | | |
| Standby mode P _{SB} 0.008 kW | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |



| Model(s) : FDC140VSA / FDUM140VH | | | | | | | |
|---|------------------|---|---------------------------------|---|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 200.0 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 276.0 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 383.0 | % |
| Tj=+25°C | Pdc | 6.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 588.0 | % |
| Tj=+20°C | Pdc | 3.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 970.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.008 | kW | Crankcase heater mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.090 | kW | Standby mode | P _{SB} | 0.008 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VNAPVH

| Model(s) : FDC140VNA / FDUM71VH (2 units) | | | | | | | |
|---|------------------|---|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW | Seasonal space cooling energy efficiency ηs,c | | 288.0 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 13.6 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286.0 | % |
| Tj=+30°C | Pdc | 10.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 504.0 | % |
| Tj=+25°C | Pdc | 6.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | Pdc | 3.6 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 2,400.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.008 | kW | Crankcase heater mode | P _{CK} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.008 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,500 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDUM71VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|---------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 208.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 329.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 507.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 702.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 1,037.0 | % |
| Tdiv=bivalent temperature | Pdh | 10.5 | kW | Tdiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 265.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 246.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tdiv | -10.0 | °C | For water-to-air heat pumps: Operation limit Tdi temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VSAPVH

| Model(s) : FDC140VSA / FDUM71VH (2 units) | | | |
|---|--------------------------------|----------|-------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.6 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO ₂ eq (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 288.0 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 504.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 2,400.0 | % |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0.25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDUM71VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|---------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 208.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 329.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 507.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 702.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 1,037.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 265.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 246.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VNATVH

| Model(s) : | | FDC140VNA / FDUM50VH (3 units) | |
|---|------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : | | air | |
| Indoor side heat exchanger of air conditioner : | | air | |
| Type : | | vapour compression | |
| if applicable : | | electric motor | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.6 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDUM50VH (3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|---------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 208.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 329.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 507.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 702.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 1,037.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 265.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 246.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM140VSATVH

| Model(s) : FDC140VSA / FDUM50VH (3 units) | | | |
|---|------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.6 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|--------------------------------|---------|------|
| Seasonal space cooling energy efficiency ηs,c | | 288.0 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 286.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 504.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 2,400.0 | % |

| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.008 | kW |
| Standby mode | P _{SB} | 0.008 | kW |

| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 4,500 | m ³ /h |
|---|--|-------|-------------------|

| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDUM50VH (3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|---------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 208.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 329.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 507.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 702.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 1,037.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 265.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 246.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate, outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-spilt air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM200VSAPVH

| Model(s) : FDC200VSA / FDUM100VH (2 units) | | | | | | | |
|---|------------------|---|------------------------------------|---|--------------------------------|---------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW | Seasonal space cooling energy efficiency $\eta_{s,c}$ | | 291.2 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 19.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 311.0 | % |
| Tj=+30°C | Pdc | 14.0 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 521.0 | % |
| Tj=+25°C | Pdc | 9.0 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 962.0 | % |
| Tj=+20°C | Pdc | 4.3 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,172.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | | | | |
| Off mode | P _{OFF} | 0.010 | kW | Crankcase heater mode | P _{CK} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | Standby mode | P _{SB} | 0.010 | kW |
| Other items | | | | For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 72.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0.25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDUM100VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 187.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 278.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 508.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 553.0 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 751.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 290.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 259.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit T _{oi} temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM200VSATVH

| Model(s) : FDC200VSA / FDUM71VH (3 units) | | | |
|---|------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 19.0 | kW |
| Tj=+30°C | Pdc | 14.0 | kW |
| Tj=+25°C | Pdc | 9.0 | kW |
| Tj=+20°C | Pdc | 4.3 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|--------------------------------|---------|------|
| Seasonal space cooling energy efficiency ηs,c | | 291.2 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 311.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 521.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 962.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,172.0 | % |


| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.010 | kW |
| Standby mode | P _{SB} | 0.010 | kW |

| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 8,100 | m ³ /h |
|---|--|-------|-------------------|

| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDUM71VH (3 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 187.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 278.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 508.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 553.0 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 751.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 290.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 259.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | Tol temperature | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-spilt air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDUM250VSAPVH

| Model(s) : FDC250VSA / FDUM125VH (2 units) | | | | | | | |
|---|------------------|---|---------------------------------|---|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of air conditioner : air | | | | | | | |
| Indoor side heat exchanger of air conditioner : air | | | | | | | |
| Type : vapour compression | | | | | | | |
| if applicable : electric motor | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 24.0 | kW | Seasonal space cooling energy efficiency ηs,c | | 243.0 | % |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | | Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | Pdc | 24.0 | kW | Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 304.0 | % |
| Tj=+30°C | Pdc | 17.7 | kW | Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 438.0 | % |
| Tj=+25°C | Pdc | 11.4 | kW | Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 795.0 | % |
| Tj=+20°C | Pdc | 6.5 | kW | Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 905.0 | % |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - | | | | |
| Power consumption in other than 'active mode' | | | | Crankcase heater mode | | | |
| Off mode | P _{OFF} | 0.010 | kW | Standby mode | P _{SB} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW | | | | |
| Other items | | | | For air-to-air air conditioner: | | | |
| Capacity control | | variable | | air flow-rate,outdoor measured | | 8,580 | m ³ /h |
| Sound power level, outdoor | L _{WA} | 73.0 | dB | | | | |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | | | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

PJG000Z573 

| Information to identify the model(s) to which the information relates : | | | | FDC250VSA / FDUM125VH (2 units) | | | |
|--|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 27.0 | kW | Seasonal space heating energy efficiency ηs,h | | 176.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.6 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 303.0 | % |
| Tj=+2°C | Pdh | 7.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 454.0 | % |
| Tj=+7°C | Pdh | 5.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 557.0 | % |
| Tj=+12°C | Pdh | 6.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 692.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.2 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 281.0 | % |
| TOL=operation limit | Pdh | 12.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 280.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL < -20°C) | Pdh | — | kW | For air-to-water heat pumps: Tj=-15°C (if TOL < -20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps: Operation limit T _{oi} temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate, outdoor measured | | | |
| Capacity control | | variable | | | | 9,060 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 75.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners, the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

Models FDUM50VH, 60VH, 71VH, 100VH, 125VH, 140VH

| Model(s) : FDUM50VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 3.7 | kW | Total electric power input | Pelec | 0.100 | kW |
| Cooling capacity (latent) | Prated,c | 1.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 60.0 | dB |
| Heating capacity | Prated,h | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM60VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 3.9 | kW | Total electric power input | Pelec | 0.160 | kW |
| Cooling capacity (latent) | Prated,c | 1.7 | kW | Sound power level (per speed setting,if applicable) | LWA | 60.0 | dB |
| Heating capacity | Prated,h | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM71VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 5.8 | kW | Total electric power input | Pelec | 0.200 | kW |
| Cooling capacity (latent) | Prated,c | 1.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 65.0 | dB |
| Heating capacity | Prated,h | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM100VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 7.7 | kW | Total electric power input | Pelec | 0.290 | kW |
| Cooling capacity (latent) | Prated,c | 2.3 | kW | Sound power level (per speed setting,if applicable) | LWA | 65.0 | dB |
| Heating capacity | Prated,h | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM125VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 10.5 | kW | Total electric power input | Pelec | 0.330 | kW |
| Cooling capacity (latent) | Prated,c | 2.0 | kW | Sound power level (per speed setting,if applicable) | LWA | 67.0 | dB |
| Heating capacity | Prated,h | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDUM140VH | | | | | | | |
|-----------------------------|---|-------|------|--|--------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | Prated,c | 11.2 | kW | Total electric power input | Pelec | 0.450 | kW |
| Cooling capacity (latent) | Prated,c | 2.8 | kW | Sound power level (per speed setting,if applicable) | LWA | 70.0 | dB |
| Heating capacity | Prated,h | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

(4) Ceiling suspended type (FDE)

FDE100VNAVH

| | | | |
|---|------------------|--|--|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDE100VH | | |
| Outdoor unit model name | FDC100VNA | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.5 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.5 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.48 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.52 | kW |
| Tj=2°C | Pdh | 4.58 | kW |
| Tj=7°C | Pdh | 2.94 | kW |
| Tj=12°C | Pdh | 2.78 | kW |
| Tj=bivalent temperature | Pdh | 8.50 | kW |
| Tj=operating limit | Pdh | 6.77 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto(cooling) | 30 | W |
| crankcase heater mode | Pto(heating) | 35 | W |
| | Pck | 8 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 64 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 70 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Rated air flow(indoor) | |
| Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | Rated air flow(outdoor) | |
| | | - | |

FDE100VSAVH

| | | | | | | | |
|---|--------------|---|------|--|--------|--------------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE100VH | | | | | |
| Outdoor unit model name | | FDC100VSA | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 6.35 | A++ |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 4.31 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.51 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 5.00 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 7.80 | - |
| Tj=20°C | Pdc | 3.48 | kW | Tj=20°C | EERd | 12.40 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 3.22 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 4.04 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 5.58 | - |
| Tj=12°C | Pdh | 2.78 | kW | Tj=12°C | COPd | 6.46 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.75 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.42 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pccyc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pchyc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 552 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 2763 | kWh/a |
| thermostat-off mode | Pto(cooling) | 30 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 64 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,920 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDE100VNAPVH

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|---|--------------|--|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE50VH x2 | | | | | |
| Outdoor unit model name | | FDC100VNA | | | | | |
| Function(indicate if present) | | | | Average(mandatory) | | | |
| cooling | | Yes | | Warmer(if designated) | | No | |
| heating | | Yes | | Colder(if designated) | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.71 | A+ |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 4.10 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.21 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 4.49 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 6.63 | - |
| Tj=20°C | Pdc | 3.30 | kW | Tj=20°C | EERd | 11.69 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 3.01 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 3.84 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 5.29 | - |
| Tj=12°C | Pdh | 2.70 | kW | Tj=12°C | COPd | 6.48 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.62 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.28 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyh | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 613 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 2905 | kWh/a |
| thermostat-off mode | Pto(cooling) | 30 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | |

FDE100VSAPVH

| | | | | | | | |
|---|--|------------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE50VH x2 | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC100VSA | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 10.0 | kW | cooling | SEER | 5.71 | A+ |
| heating / Average | Pdesignh | 8.5 | kW | heating / Average | SCOP/A | 4.10 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| | | | | unit | | | |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.5 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW | Tj=35°C | EERd | 3.21 | - |
| Tj=30°C | Pdc | 7.37 | kW | Tj=30°C | EERd | 4.49 | - |
| Tj=25°C | Pdc | 4.74 | kW | Tj=25°C | EERd | 6.63 | - |
| Tj=20°C | Pdc | 3.30 | kW | Tj=20°C | EERd | 11.69 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.52 | kW | Tj=-7°C | COPd | 3.01 | - |
| Tj=2°C | Pdh | 4.58 | kW | Tj=2°C | COPd | 3.84 | - |
| Tj=7°C | Pdh | 2.94 | kW | Tj=7°C | COPd | 5.29 | - |
| Tj=12°C | Pdh | 2.70 | kW | Tj=12°C | COPd | 6.48 | - |
| Tj=bivalent temperature | Pdh | 8.50 | kW | Tj=bivalent temperature | COPd | 2.62 | - |
| Tj=operating limit | Pdh | 6.77 | kW | Tj=operating limit | COPd | 2.28 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -20 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pccyc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pchyc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient cooling | | | | Degradation coefficient heating | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 8 | W | cooling | Qce | 613 | kWh/a |
| standby mode | Psb | 8 | W | heating / Average | Qhe | 2905 | kWh/a |
| thermostat-off mode | Pto(cooling) | 30 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 8 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 70 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 780 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

FDE125VNAVH

| Model(s) : FDC125VNA / FDE125VH | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.4 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.030 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 238.1 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 281.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 448.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 735.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,097.0 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Crankcase heater mode P _{CK} 0.008 kW | | | |
| Standby mode P _{SB} 0.008 kW | | | |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDE125VH | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 169.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 298.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 412.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 567.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 639.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 247.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 214.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.043 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE125VSAVH

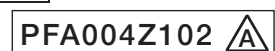
| Model(s) : FDC125VSA / FDE125VH | | | |
|---|-----------------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.4 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.030 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 238.1 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 281.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 448.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 735.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,097.0 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDE125VH | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 169.1 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 298.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 412.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 567.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 639.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 247.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 214.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.043 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE125VNAPVH

| Model(s) : FDC125VNA / FDE60VH (2 units) | | | |
|---|-----------------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 294.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 308.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 532.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 846.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,762.0 | % |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC125VNA / FDE60VH (2 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 198.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 343.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 467.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 692.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 871.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 275.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 248.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE125VSAPVH

| Model(s) : FDC125VSA / FDE60VH (2 units) | | | |
|---|------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 12.5 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 12.5 | kW |
| Tj=+30°C | Pdc | 9.2 | kW |
| Tj=+25°C | Pdc | 5.9 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 71.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|--------------------------------|---------|------|
| Seasonal space cooling energy efficiency ηs,c | | 294.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 308.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 532.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 846.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,762.0 | % |

| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.008 | kW |
| Standby mode | P _{SB} | 0.008 | kW |

| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 4,500 | m ³ /h |
|---|--|-------|-------------------|

| Information to identify the model(s) to which the information relates : | | | | FDC125VSA / FDE60VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 14.0 | kW | Seasonal space heating energy efficiency ηs,h | | 198.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 8.7 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 343.0 | % |
| Tj=+2°C | Pdh | 5.3 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 467.0 | % |
| Tj=+7°C | Pdh | 3.4 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 692.0 | % |
| Tj=+12°C | Pdh | 2.7 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 871.0 | % |
| Tbiv=bivalent temperature | Pdh | 9.8 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 275.0 | % |
| TOL=operation limit | Pdh | 7.7 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 248.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 71.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNAVH

| Model(s) : FDC140VNA / FDE140VH | | | |
|---|------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.4 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.030 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDE140VH | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 162.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 290.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 390.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 550.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 650.0 | % |
| Tbv=bivalent temperature | Pdh | 10.5 | kW | Tbv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 250.0 | % |
| TOL=operation limit | Pdh | 7.9 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 220.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | e _{bu} | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VSAVH

| Model(s) : FDC140VSA / FDE140VH | | | |
|---|-----------------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.4 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.030 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 227.6 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 261.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 435.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 635.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,230.0 | % |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|---------------------|----------|---------------------------------|--|---|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDE140VH | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency η _{s,h} | | 162.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature T _j | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures T _j | | | |
| T _j =-7°C | P _{dh} | 9.3 | kW | T _j =-7°C | COP _d or GUE _{h,bin} / AEF _{h,bin} | 290.0 | % |
| T _j =+2°C | P _{dh} | 5.7 | kW | T _j =+2°C | COP _d or GUE _{h,bin} / AEF _{h,bin} | 390.0 | % |
| T _j =+7°C | P _{dh} | 3.7 | kW | T _j =+7°C | COP _d or GUE _{h,bin} / AEF _{h,bin} | 550.0 | % |
| T _j =+12°C | P _{dh} | 2.8 | kW | T _j =+12°C | COP _d or GUE _{h,bin} / AEF _{h,bin} | 650.0 | % |
| T _{biv} =bivalent temperature | P _{dh} | 10.5 | kW | T _{biv} =bivalent temperature | COP _d or GUE _{h,bin} / AEF _{h,bin} | 250.0 | % |
| T _{oL} =operation limit | P _{dh} | 7.9 | kW | T _{oL} =operation limit | COP _d or GUE _{h,bin} / AEF _{h,bin} | 220.0 | % |
| For air-to-water heat pumps : T _j =-15°C (if T _{oL} <-20°C) | P _{dh} | — | kW | For air-to-water heat pumps:T _j =-15°C (if T _{oL} <-20°C) | COP _d or GUE _{h,bin} / AEF _{h,bin} | — | % |
| Bivalent temperature | T _{biv} | -10.0 | °C | For water-to-air heat pumps:Operation limit T _o temperature | | — | °C |
| Degradation coefficient heat pumps** | C _{dh} | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | e _{bu} | — | kW |
| Thermostat-off mode | P _{TO} | 0.045 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NO _x *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If C _{dh} is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNAPVH

| Model(s) : | | FDC140VNA / FDE71VH (2 units) | |
|---|--------------------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : | | air | |
| Indoor side heat exchanger of air conditioner : | | air | |
| Type : | | vapour compression | |
| if applicable : | | electric motor | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | 268.9 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 293.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 468.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,762.0 | % |
| Crankcase heater mode | | P _{CK} | 0.008 kW |
| Standby mode | | P _{SB} | 0.008 kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 4,500 | m ³ /h |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDE71VH (2 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 188.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 316.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 447.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 652.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 875.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 258.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 236.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VSAPVH

| Model(s) : FDC140VSA / FDE71VH (2 units) | | | |
|---|------------------|----------|---------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|-----------------------------|---------|------|
| Seasonal space cooling energy efficiency ηs,c | | 268.9 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 293.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 468.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,762.0 | % |

| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.008 | kW |
| Standby mode | P _{SB} | 0.008 | kW |

| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 4,500 | m ³ /h |
|---|--|-------|-------------------|

| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDE71VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 188.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 316.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 447.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 652.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 875.0 | % |
| Tbv=bivalent temperature | Pdh | 10.5 | kW | Tbv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 258.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 236.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VNATVH

| Model(s) : FDC140VNA / FDE50VH (3 units) | | | |
|---|--------------------------------|-----------------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency η _{s,c} | | | |
| | | 268.9 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 293.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 468.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 740.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,762.0 | % |
| Crankcase heater mode | | | |
| | | 0.008 | kW |
| Standby mode | | | |
| | | 0.008 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 4,500 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC140VNA / FDE50VH (3 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 188.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 316.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 447.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 652.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 875.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 258.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 236.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE140VSATVH

| Model(s) : | | FDC140VSA / FDE50VH (3 units) | |
|---|------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : | | air | |
| Indoor side heat exchanger of air conditioner : | | air | |
| Type : | | vapour compression | |
| if applicable : | | electric motor | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 13.6 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 13.6 | kW |
| Tj=+30°C | Pdc | 10.0 | kW |
| Tj=+25°C | Pdc | 6.4 | kW |
| Tj=+20°C | Pdc | 3.7 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.008 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC140VSA / FDE50VH (3 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 15.5 | kW | Seasonal space heating energy efficiency ηs,h | | 188.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 9.3 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 316.0 | % |
| Tj=+2°C | Pdh | 5.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 447.0 | % |
| Tj=+7°C | Pdh | 3.7 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 652.0 | % |
| Tj=+12°C | Pdh | 2.8 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 875.0 | % |
| Tbiv=bivalent temperature | Pdh | 10.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 258.0 | % |
| TOL=operation limit | Pdh | 8.3 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 236.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.008 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.015 | kW | Type of energy input Standby mode | P _{SB} | 0.008 | kW |
| Crankcase heater mode | P _{CK} | 0.008 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 4,380 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 73.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE200VSAPVH

| Model(s) : FDC200VSA / FDE100VH (2 units) | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 19.0 | kW |
| Tj=+30°C | Pdc | 14.0 | kW |
| Tj=+25°C | Pdc | 9.0 | kW |
| Tj=+20°C | Pdc | 4.3 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 296.4 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 311.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 531.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 981.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,204.0 | % |
| Crankcase heater mode | | | |
| | | 0.010 | kW |
| Standby mode | | | |
| | | 0.010 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 8,100 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDE100VH (2 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 184.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 280.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 498.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 546.0 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 722.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 275.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 244.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE200VSATVH

| Model(s) : | | FDC200VSA / FDE71VH (3 units) | |
|---|------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : | | air | |
| Indoor side heat exchanger of air conditioner : | | air | |
| Type : | | vapour compression | |
| if applicable : | | electric motor | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 19.0 | kW |
| Tj=+30°C | Pdc | 14.0 | kW |
| Tj=+25°C | Pdc | 9.0 | kW |
| Tj=+20°C | Pdc | 4.3 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|--------------------------------|---------|------|
| Seasonal space cooling energy efficiency ηs,c | | 296.4 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 311.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 531.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 981.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,204.0 | % |

| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.010 | kW |
| Standby mode | P _{SB} | 0.010 | kW |

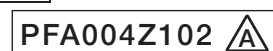
| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 8,100 | m ³ /h |
|---|--|-------|-------------------|

| | | | | | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|------|
| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDE71VH (3 units) | | | |
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 184.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 280.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 498.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 546.0 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 722.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 275.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 244.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m³/h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m³/h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

FDE200VSADVH

| Model(s) : FDC200VSA / FDE50VH (4 units) | | | |
|---|--------------------------------|----------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 19.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 19.0 | kW |
| Tj=+30°C | Pdc | 14.0 | kW |
| Tj=+25°C | Pdc | 9.0 | kW |
| Tj=+20°C | Pdc | 4.3 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 72.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency ηs,c | | | |
| | | 296.4 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 311.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 531.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 981.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 1,204.0 | % |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 8,100 | m ³ /h |
| Crankcase heater mode | | | |
| | | 0.010 | kW |
| Standby mode | | | |
| | | 0.010 | kW |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

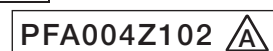
| Information to identify the model(s) to which the information relates : | | | | FDC200VSA / FDE50VH (4 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 22.4 | kW | Seasonal space heating energy efficiency ηs,h | | 184.9 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 11.1 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 280.0 | % |
| Tj=+2°C | Pdh | 6.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 498.0 | % |
| Tj=+7°C | Pdh | 4.3 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 546.0 | % |
| Tj=+12°C | Pdh | 3.5 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 722.0 | % |
| Tbiv=bivalent temperature | Pdh | 12.5 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 275.0 | % |
| TOL=operation limit | Pdh | 10.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 244.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 8,100 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 74.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE250VSAPVH

| Model(s) : FDC250VSA / FDE125VH (2 units) | | | |
|---|--------------------------------|-----------------|------------------------------------|
| Outdoor side heat exchanger of air conditioner : air | | | |
| Indoor side heat exchanger of air conditioner : air | | | |
| Type : vapour compression | | | |
| if applicable : electric motor | | | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 24.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 24.0 | kW |
| Tj=+30°C | Pdc | 17.7 | kW |
| Tj=+25°C | Pdc | 11.4 | kW |
| Tj=+20°C | Pdc | 6.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Seasonal space cooling energy efficiency η _{s,c} | | | |
| | | 229.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 290.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 426.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 730.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 862.0 | % |
| Crankcase heater mode | | | |
| | | 0.010 | kW |
| Standby mode | | | |
| | | 0.010 | kW |
| For air-to-air air conditioner: air flow-rate,outdoor measured | | | |
| | | 8,580 | m ³ /h |
| Contact details Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Information to identify the model(s) to which the information relates : | | | | FDC250VSA / FDE125VH (2 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 27.0 | kW | Seasonal space heating energy efficiency ηs,h | | 174.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.6 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 298.0 | % |
| Tj=+2°C | Pdh | 7.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 450.0 | % |
| Tj=+7°C | Pdh | 5.6 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 551.0 | % |
| Tj=+12°C | Pdh | 6.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 676.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.2 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 266.0 | % |
| TOL=operation limit | Pdh | 12.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 270.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit TOL temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | eibu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input Standby mode | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 9,060 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 75.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems.LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |



FDE250VSADVH

| Model(s) : | | FDC250VSA / FDE60VH (4 units) | |
|---|------------------|---|------------------------------------|
| Outdoor side heat exchanger of air conditioner : | | air | |
| Indoor side heat exchanger of air conditioner : | | air | |
| Type : | | vapour compression | |
| if applicable : | | electric motor | |
| Item | Symbol | Value | Unit |
| Rated cooling capacity | Prated,c | 24.0 | kW |
| Declared cooling capacity for part load at given outdoor temperatures Tj and indoor 27°C/19°C(dry/wet bulb) | | | |
| Tj=+35°C | Pdc | 24.0 | kW |
| Tj=+30°C | Pdc | 17.7 | kW |
| Tj=+25°C | Pdc | 11.4 | kW |
| Tj=+20°C | Pdc | 6.5 | kW |
| Degradation coefficient for air conditioners** | Cdc | 0.25 | - |
| Power consumption in other than 'active mode' | | | |
| Off mode | P _{OFF} | 0.010 | kW |
| Thermostat-off mode | P _{TO} | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, outdoor | L _{WA} | 73.0 | dB |
| If engine driven: Emissions of nitrogen oxides | NOx *** | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) |
| Contact details | | Mitsubishi heavy industries thermal systems,LTD | |
| ** If Cdc is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | |
| *** from 26 September 2018 | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | |

| Item | Symbol | Value | Unit |
|---|--------------------------------|-------|------|
| Seasonal space cooling energy efficiency ηs,c | | 229.7 | % |
| Declared energy efficiency ratio or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=+35°C | EERd or GUEc,bin / AEFc,bin | 290.0 | % |
| Tj=+30°C | EERd or GUEc,bin / AEFc,bin | 426.0 | % |
| Tj=+25°C | EERd or GUEc,bin / AEFc,bin | 730.0 | % |
| Tj=+20°C | EERd or GUEc,bin / AEFc,bin | 862.0 | % |

| | | | |
|-----------------------|-----------------|-------|----|
| Crankcase heater mode | P _{CK} | 0.010 | kW |
| Standby mode | P _{SB} | 0.010 | kW |

| | | | |
|---|--|-------|-------------------|
| For air-to-air air conditioner: air flow-rate,outdoor measured | | 8,580 | m ³ /h |
|---|--|-------|-------------------|

| Information to identify the model(s) to which the information relates : | | | | FDC250VSA / FDE60VH (4 units) | | | |
|---|------------------|----------|---------------------------------|--|-----------------------------|-------|-------------------|
| Outdoor side heat exchanger of heat pump : | | | | air | | | |
| Indoor side heat exchanger of heat pump : | | | | air | | | |
| Indication if the heater is equipped with a supplementary heater : | | | | No | | | |
| if applicable : | | | | electric motor | | | |
| Parameters shall be declared for the average heating season , parameters for the warmer and colder heating seasons are optional. | | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Rated heating capacity | Prated,h | 27.0 | kW | Seasonal space heating energy efficiency ηs,h | | 174.8 | % |
| Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance or gas utilization efficiency / auxiliary energy factor for part load at given outdoor temperatures Tj | | | |
| Tj=-7°C | Pdh | 12.6 | kW | Tj=-7°C | COPd or GUEh,bin / AEFh,bin | 298.0 | % |
| Tj=+2°C | Pdh | 7.7 | kW | Tj=+2°C | COPd or GUEh,bin / AEFh,bin | 450.0 | % |
| Tj=+7°C | Pdh | 5.6 | kW | Tj=+7°C | COPd or GUEh,bin / AEFh,bin | 551.0 | % |
| Tj=+12°C | Pdh | 6.0 | kW | Tj=+12°C | COPd or GUEh,bin / AEFh,bin | 676.0 | % |
| Tbiv=bivalent temperature | Pdh | 14.2 | kW | Tbiv=bivalent temperature | COPd or GUEh,bin / AEFh,bin | 266.0 | % |
| TOL=operation limit | Pdh | 12.5 | kW | TOL=operation limit | COPd or GUEh,bin / AEFh,bin | 270.0 | % |
| For air-to-water heat pumps : Tj=-15°C (if TOL<-20°C) | Pdh | — | kW | For air-to-water heat pumps:Tj=-15°C (if TOL<-20°C) | COPd or GUEh,bin / AEFh,bin | — | % |
| Bivalent temperature | Tbiv | -10.0 | °C | For water-to-air heat pumps:Operation limit Td temperature | | — | °C |
| Degradation coefficient heat pumps** | Cdh | 0.25 | - | | | | |
| Power consumption in modes other than 'active mode' | | | | Supplementary heater back-up heating capacity | | | |
| Off mode | P _{OFF} | 0.010 | kW | | elbu | — | kW |
| Thermostat-off mode | P _{TO} | 0.010 | kW | Type of energy input | P _{SB} | 0.010 | kW |
| Crankcase heater mode | P _{CK} | 0.015 | kW | Standby mode | | | |
| Other items | | | | For air-to-air heat pumps: air flow-rate,outdoor measured | | | |
| Capacity control | | variable | | | | 9,060 | m ³ /h |
| Sound power level, outdoor measured | L _{WA} | 75.0 | dB | For water-/brine-to-air heat pumps : Rated brine or water flow-rate, outdoor side heat exchanger | | — | m ³ /h |
| Emissions of nitrogen oxides(if applicable) | NOx *** | — | mg/kWh fuel input GCV | | | | |
| GWP of the refrigerant | | 2,088 | kg CO _{2eq} (100years) | | | | |
| Contact details | | | | Mitsubishi heavy industries thermal systems,LTD | | | |
| ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25. | | | | | | | |
| *** from 26 September 2018 | | | | | | | |
| Where information relates to multi-split air conditioners,the test result and performance data be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer. | | | | | | | |

Models FDE50VH, 60VH, 71VH, 100VH, 125VH, 140VH

| Model(s) : FDE50VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |


| Model(s) : FDE60VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.0 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE71VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.6 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.5 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE100VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 8.4 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE125VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 9.3 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 3.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE140VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 10.2 | kW | Total electric power input | P_{elec} | 0.140 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 3.8 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 65.0 | dB |
| Heating capacity | $P_{rated,h}$ | 16.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

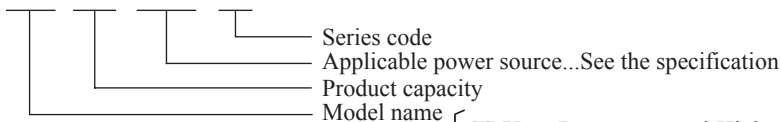
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3. STANDARD INVERTER PACKAGED AIR-CONDITIONERS

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Example: FDE 90 VNP1 VH



- FDU : Duct connected-High static pressure type
- FDUM : Duct connected-Low/Middle static pressure type
- FDE : Ceiling suspended type
- FDC : Outdoor unit

3.1 SPECIFICATIONS

(1) Duct connected-High static pressure type (FDU)
Single type

| Item | | Model | | FDU71VNPVH | | | |
|--|-----------------------------------|------------------------|--|---|---|---|-----------|
| | | | | Indoor unit FDU71VH | Outdoor unit FDC71VNP | | |
| Power source | | | | 1 phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 7.1 [1.4(Min.)-7.1(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 7.1 [1.0(Min.)-7.1(Max.)] | | | |
| | Power consumption | Cooling | kW | | 2.60 | | |
| | | Heating | kW | | 1.89 | | |
| | Max power consumption | kW | | 3.27 | | | |
| | Running current | Cooling | A | | 11.5 / 12.0 | | |
| | | Heating | A | | 8.5/ 8.9 | | |
| | Inrush current, max current | A | | 5, 14.5 | | | |
| | Power factor | Cooling | % | | 98 / 98 | | |
| | | Heating | % | | 97 / 97 | | |
| | EER | Cooling | | 2.73 | | | |
| | COP | Heating | | 3.76 | | | |
| | Sound power level | Cooling | dB(A) | | 65 | | |
| Heating | | dB(A) | | 67 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | | |
| | Heating | dB(A) | | 54 | | | |
| Silent mode sound pressure level | dB(A) | | 49 | | | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 950 x 635 | | 640x800(+71)x290 | | |
| Exterior appearance (Munsell color) (RAL color) | | | - | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 34 | | 45 | | |
| Compressor type & Q'ty | | | - | | RMT5113MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | kW | | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | - | | 0.45 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 1.6 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan x2 | | Propeller fan x1 | | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | | 34 < Direct line start > | | |
| Air flow | Cooling | m³/min | | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | | |
| | Heating | m³/min | | 36 | | | |
| Available external static pressure | Pa | | Standard : 35 Max : 200 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | - | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | W | | - | | - | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | | Thermostat by electronics | | | |
| | Operation display | | | - | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| | | Gas line | mm | | I/U φ 15.88 (5/8") Pipe φ 12.7(1/2")x0.8 O/U φ 12.7 (1/2") | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | m | | - | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.30 | | | |
| Vertical height diff. between O/U and I/U | m | | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 x 5 pcs | | |
| Drain pump, max lift height | mm | | Built-in Drain pump,600 | | - | | |
| Recommended breaker size | A | | - | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | 1.5mm²x4 cores(Including earth cable)/ Terminal block(Screw fixing type) | | | | |
| IP number | | | IPX0 | | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | |
| Option parts | | | Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | | |
| Operation | Cooling | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | 27°C | 19°C | 35°C | 24°C | 35Pa | | |
| Heating | 20°C | | 7°C | | 6°C | ISO5151-H1 | |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

| Item | | Model | | FDU90VNPVH | | | |
|---|-----------------------------------|--|--|---|---|---|-----------|
| | | | | Indoor unit FDU100VH | Outdoor unit FDC90VNP | | |
| Power source | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 9.0 [1.9(Min.)- 9.0(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 9.0 [1.5(Min.)- 9.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 2.65 | | | |
| | | Heating | | 2.25 | | | |
| | Max power consumption | | | 4.19 | | | |
| | Running current | Cooling | A | 11.8 / 12.3 | | | |
| | | Heating | | 10.1 / 10.6 | | | |
| | Inrush current, max current | | | 5, 18 | | | |
| | Power factor | Cooling | % | 97 / 97 | | | |
| | | Heating | | 96 / 96 | | | |
| | EER | Cooling | | 3.40 | | | |
| | COP | Heating | | 4.00 | | | |
| Sound power level | Cooling | dB(A) | 65 | | 69 | | |
| | Heating | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | 57 | | |
| Sound pressure level | Cooling | | — | | 55 | | |
| | Heating | | — | | Cooling:52 / Heating:50 | | |
| Silent mode sound pressure level | | | | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 1368 × 740 | | 750 × 880(+88) × 340 | | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4,2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | 57 | | |
| Compressor type & Q'ty | | | — | | RMT5118MDE2 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | 63 | | |
| | Heating | | | | 49.5 | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | 0 | | |
| Outside air intake | | | Possible | | — | | |
| Air filter, Quality / Quantity | | | Procure locally | | — | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | | Rubber sleeve (for fan motor & compressor) | | |
| Electric heater | W | | — | | — | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | — | | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")×0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | | φ 15.88 (5/8") φ 15.88(5/8")×1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | Flare piping | | |
| | Attached length of piping | m | — | | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | Max.30 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 × 3pcs | | | |
| Drain pump, max lift height | mm | Built-in drain pump , 600 | | — | | | |
| Recommended breaker size | A | — | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | | |
| Interconnecting wires | Size × Core number | 1.5mm²×4 cores(Including earth cable)/ Terminal block(Screw fixing type) | | | | | |
| IP number | | IPX0 | | IPX4 | | | |
| Standard accessories | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | | |
| Option parts | | Motion sensor : LB-KIT | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | | |

| Item | | Model | | FDU90VNP1VH | | | |
|---|---|---|--|-------------------------------------|--|--------------------------------|------|
| | | | | Indoor unit FDU100VH | Outdoor unit FDC90VNP1 | | |
| Power source | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 9.0 [1.9(Min.)-9.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | | 9.0 [1.5(Min.)-9.0(Max.)] | | | |
| | Power consumption | Cooling | kW | | 2.69 | | |
| | | Heating | kW | | 2.25 | | |
| | Max power consumption | kW | | 4.19 | | | |
| | Running current | Cooling | A | | 12.0 / 12.5 | | |
| | | Heating | A | | 10.1 / 10.6 | | |
| | Inrush current, max current | A | | 5, 18.0 | | | |
| | Power factor | Cooling | % | | 97 / 97 | | |
| | | Heating | % | | 97 / 97 | | |
| | EER | Cooling | | | 3.35 | | |
| | COP | Heating | | | 4.00 | | |
| | Sound power level | Cooling | dB(A) | | 65 | | |
| Heating | | dB(A) | | 69 | | | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | | |
| | Heating | dB(A) | | 57 | | | |
| Silent mode sound pressure level | | | | | Cooling:52 / Heating:50 | | |
| Exterior dimensions (Height x Width x Depth) | mm | | 280 x 1368 x 740 | | 750 x 880(+88) x 340 | | |
| Exterior appearance (Munsell color) | | | - | | Stucco white | | |
| Exterior appearance (RAL color) | | | - | | (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | kg | | 54 | | 57 | | |
| Compressor type & Q'ty | | | - | | RMT5118MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | kW | | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | ℓ | | - | | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan x3 | | Propeller fan x1 | | |
| Fan motor (Starting method) | W | | 100 + 130 < Direct line start > | | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | | |
| | Heating | m³/min | | 63 | | | |
| Available external static pressure | Pa | | Standard : 60 Max : 200 | | 0 | | |
| Outside air intake | | | Possible | | - | | |
| Air filter, Quality / Quantity | | | Procure locally | | - | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve (for fan motor & compressor) | | |
| Electric heater | W | | - | | - | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | | |
| | Room temperature control | Thermostat by electronics | | | | | |
| | Operation display | - | | | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | |
| | | Gas line | mm | | I/U φ 15.88 (5/8") Pipe φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | m | | - | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | | Max.30 | | | |
| | Vertical height diff. between O/U and I/U | m | | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | mm | | Built-in Drain pump,600 | | - | | |
| Recommended breaker size | A | | - | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | |
| Interconnecting wires | Size x Core number | | 1.5mm²x4 cores (Including earth cable)/ Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | |
| Option parts | | | Motion sensor : LB-KIT | | | | |
| Notes (1) The data are measured at the following conditions. | | | | The pipe length is 7.5m. | | | |
| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards | |
| | DB | WB | DB | WB | | | |
| | Cooling | 27°C | 19°C | 35°C | | | 24°C |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only. (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only) | | | | | | | |

| Item | | Model | | FDU100VNP1VH | | |
|---|-----------------------------------|--|--|-------------------------|---|--|
| | | | | Indoor unit FDU100VH | Outdoor unit FDC100VNP | |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | | kW | | 10.0 [2.8(Min.)-11.2(Max.)] | |
| | Nominal heating capacity (range) | | kW | | 11.2 [2.5(Min.)-12.5(Max.)] | |
| | Power consumption | Cooling | kW | | 3.00 | |
| | | Heating | kW | | 2.93 | |
| | Max power consumption | | kW | | 4.60 | |
| | Running current | Cooling | A | | 13.2 / 13.8 | |
| | | Heating | A | | 12.9 / 13.5 | |
| | Inrush current, max current | | A | | 5, 22.0 | |
| | Power factor | Cooling | % | | 99 | |
| | | Heating | % | | 99 | |
| | EER | Cooling | | | 3.33 | |
| | COP | Heating | | | 3.82 | |
| | Sound power level | Cooling | dB(A) | | 65 | |
| Heating | | dB(A) | | 70 | | |
| Sound pressure level | Cooling | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | 57 | | |
| | Heating | | | 61 | | |
| Silent mode sound pressure level | | | | Cooling:50 / Heating:49 | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 280 × 1368 × 740 | | 845×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | — | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 54 | | 70 | |
| Compressor type & Q'ty | | | — | | RMT5126MCE1 (Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | — | | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | — | | 0.90 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 2.55 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan ×3 | | Propeller fan ×1 | |
| Fan motor (Starting method) | | W | 100 + 130 < Direct line start > | | 86 < Direct line start > | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | 75 | |
| | Heating | m³/min | | | 79 | |
| Available external static pressure | | Pa | Standard : 60 Max : 200 | | 0 | |
| Outside air intake | | | Possible | | — | |
| Air filter, Quality / Quantity | | | Procure locally | | — | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve (for fan motor & compressor) | |
| Electric heater | | W | — | | — | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") |
| | | Gas line | mm | | | I/U φ 15.88 (5/8") Pipe φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") |
| | Connecting method | | | | Flare piping | Flare piping |
| | Attached length of piping | | m | — | | — |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | |
| Drain hose | | | Hose connectable VP25 (I.D.25,O.D.32) | | Hole size φ 20 × 3 pcs | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | | — |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size × Core number | | φ 1.6mm×3 cores + earth cable / Terminal block (Screw fixing type) | | | | |
| IP number | | IPX0 | | IPX4 | | |
| Standard accessories | | Mounting kit, Drain hose | | Edging | | |
| Option parts | | Motion sensor : LB-KIT | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 - 150 Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3A and RC-E5 only)

(2) Duct connected-Low / Middle static pressure type (FDUM)
Single type

| Item | | Model | | FDUM71VNPVH | | | | |
|---|-----------------------------------|---------------------|--|---|--|------------------------------|--|--|
| | | | | Indoor unit FDUM71VH | | Outdoor unit FDC71VNP | | |
| Power source | | | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 7.1 [1.4(Min.)-7.1(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | | 7.1 [1.0(Min.)-7.1(Max.)] | | | | |
| | Power consumption | Cooling | kW | | 2.60 | | | |
| | | Heating | kW | | 1.89 | | | |
| | Max power consumption | | | 3.27 | | | | |
| | Running current | Cooling | A | | 11.5 / 12.0 | | | |
| | | Heating | A | | 8.5 / 8.9 | | | |
| | Inrush current, max current | | | 5, 14.5 | | | | |
| | Power factor | Cooling | % | | 98 / 98 | | | |
| | | Heating | % | | 97 / 97 | | | |
| | EER | Cooling | | 2.73 | | | | |
| | COP | Heating | | 3.76 | | | | |
| Sound power level | Cooling | dB(A) | | 65 | | 67 | | |
| | Heating | dB(A) | | P-Hi : 38 Hi : 33 Me : 29 Lo : 25 | | 54 | | |
| Sound pressure level | Cooling | dB(A) | | — | | 49 | | |
| | Heating | dB(A) | | — | | 49 | | |
| Silent mode sound pressure level | | | — | | | | | |
| Exterior dimensions (Height × Width × Depth) | mm | | 280 × 950 × 635 | | 640×800(+71)×290 | | | |
| Exterior appearance (Munsell color) | | | — | | Stucco white | | | |
| (RAL color) | | | — | | (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | | 34 | | 45 | | | |
| Compressor type & Q'ty | | | — | | RMT5113MDE2 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | kW | | — | | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | | — | | 0.45 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | | R410A 1.6 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | | | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | | Propeller fan ×1 | | | |
| Fan motor (Starting method) | W | | 130 < Direct line start > | | 34 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | | P-Hi : 24 Hi : 19 Me : 15 Lo : 10 | | 36 | | |
| | Heating | m ³ /min | | — | | — | | |
| Available external static pressure | Pa | | Standard : 35 Max : 100 | | 0 | | | |
| Outside air intake | | | Possible | | — | | | |
| Air filter, Quality / Quantity | | | Procure locally | | — | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | | |
| Electric heater | W | | — | | — | | | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | |
| | Room temperature control | | | Thermostat by electronics | | | | |
| | Operation display | | | — | | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | mm | | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")×0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | mm | | I/U φ 15.88 (5/8") Pipe φ 12.7(1/2")×0.8 O/U φ 12.7 (1/2") | | | |
| | Connecting method | | | Flare piping | | Flare piping | | |
| | Attached length of piping | m | | — | | — | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | | |
| | Refrigerant line (one way) length | m | | Max.30 | | | | |
| Vertical height diff. between O/U and I/U | m | | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | | | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | | Hole size φ 20 x 5 pcs | | | |
| Drain pump, max lift height | mm | | Built-in Drain pump,600 | | — | | | |
| Recommended breaker size | A | | — | | | | | |
| L.R.A. (Locked rotor ampere) | A | | 5.0 | | | | | |
| Interconnecting wires | Size × Core number | | 1.5mm ² ×4 cores (including earth cable)/ Terminal block (Screw fixing type) | | | | | |
| IP number | | | IPX0 | | IPX4 | | | |
| Standard accessories | | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | | | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 35Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(4) Select the breaker size according to the own national standard.
(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
(6) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.
(7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

| Item | | | Model | FDUM90VNPVH | | |
|---|-----------------------------------|-------------|--|--|---|-----------|
| | | | | Indoor unit FDUM100VH | Outdoor unit FDC90VNP | |
| Power source | | | 1 phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | | kW | 9.0 [1.9(Min.)- 9.0(Max.)] | | |
| | Nominal heating capacity (range) | | kW | 9.0 [1.5(Min.)- 9.0(Max.)] | | |
| | Power consumption | Cooling | kW | 2.65 | | |
| | | Heating | | 2.25 | | |
| | Max power consumption | | | 4.19 | | |
| | Running current | Cooling | A | 11.8 / 12.3 | | |
| | | Heating | | 10.1 / 10.6 | | |
| | Inrush current, max current | | | 5, 18 | | |
| | Power factor | Cooling | % | 97 / 97 | | |
| | | Heating | | 96 / 96 | | |
| | EER | | Cooling | 3.40 | | |
| | COP | | Heating | 4.00 | | |
| | Sound power level | Cooling | dB(A) | 65 | | |
| Heating | | 69 | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | | |
| | Heating | | 57 | | | |
| Silent mode sound pressure level | | | Cooling:52 / Heating:50 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 280 x 1368 x 740 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 54 | | | |
| Compressor type & Q'ty | | | RMT5118MDE2 (Twin rotary type)x1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.675 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan x3 | Propeller fan x1 | | |
| Fan motor (Starting method) | | W | 100 + 130 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | | |
| | Heating | | 63 | | | |
| Available external static pressure | | Pa | Standard : 60 Max : 100 | | | |
| Outside air intake | | | Possible | | | |
| Air filter, Quality / Quantity | | | Procure locally | | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for fan motor & compressor) | | |
| Electric heater | | W | - | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3A Wireless : RCN-KIT4-E2 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | | m | - | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) | Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable VP25 (I.D.25, O.D.32) | Hole size φ 20 x 3pcs | | |
| Drain pump, max lift height | | mm | Built-in drain pump , 600 | | | |
| Recommended breaker size | | A | - | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires Size x Core number | | | 1.5mm²x4 cores (Including earth cable)/ Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | Drain elbow, Drain hole grommet | | |
| Option parts | | | Filter set : UM-FL2EF, Motion sensor : LB-KIT | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | |
| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | | |
| Heating | 20°C | - | 7°C | 6°C | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (6) Static pressure of option air filter "UM-FL2EF" is 5Pa initially. (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only) | | | | | | |

| Item | | Model | | FDUM90VNP1VH | | | |
|---|-----------------------------------|--|--|--|-------------------------|---|-----------|
| | | | | Indoor unit | FDUM100VH | Outdoor unit | FDC90VNP1 |
| Power source | | 1 phase 220-240V 50Hz / 220V 60Hz | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 9.0 [1.9(Min.)-9.0(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 9.0 [1.5(Min.)-9.0(Max.)] | | | | |
| | Power consumption | Cooling | kW | 2.69 | | | |
| | | Heating | | 2.25 | | | |
| | Max power consumption | | 4.19 | | | | |
| | Running current | Cooling | A | 12.0 / 12.5 | | | |
| | | Heating | | 10.1 / 10.6 | | | |
| | Inrush current, max current | | 5, 18.0 | | | | |
| | Power factor | Cooling | % | 97 / 97 | | | |
| | | Heating | | 97 / 97 | | | |
| | EER | Cooling | 3.35 | | | | |
| | COP | Heating | 4.00 | | | | |
| Sound power level | Cooling | dB(A) | 65 | | 69 | | |
| | Heating | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | | 57 | | |
| Sound pressure level | Cooling | | | | 55 | | |
| | Heating | | | | Cooling:52 / Heating:50 | | |
| Silent mode sound pressure level | | | | | | | |
| Exterior dimensions (Height x Width x Depth) | mm | 280 x 1368 x 740 | | 750 x 880(+88) x 340 | | | |
| Exterior appearance (Munsell color) | | - | | Stucco white | | | |
| (RAL color) | | | | (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | kg | 54 | | 57 | | | |
| Compressor type & Q'ty | | - | | RMT5118MDE2 (Twin rotary type)x1 | | | |
| Compressor motor (Starting method) | kW | - | | Direct line start | | | |
| Refrigerant oil (Amount, type) | ℓ | - | | 0.675 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | kg | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | | |
| Heat exchanger | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | Capillary tubes + Electronic expansion valve | | | | | |
| Fan type & Q'ty | | Centrifugal fan x3 | | Propeller fan x1 | | | |
| Fan motor (Starting method) | W | 100 + 130 < Direct line start > | | 86 < Direct line start > | | | |
| Air flow | Cooling | m³/min | P-Hi : 36 Hi : 28 Me : 25 Lo : 19 | | 63 | | |
| | Heating | | | | 49.5 | | |
| Available external static pressure | Pa | Standard : 60 Max : 100 | | 0 | | | |
| Outside air intake | | Possible | | - | | | |
| Air filter, Quality / Quantity | | Procure locally | | - | | | |
| Shock & vibration absorber | | Rubber sleeve(for fan motor) | | Rubber sleeve (for fan motor & compressor) | | | |
| Electric heater | W | - | | - | | | |
| Operation control | Remote control | (Option) Wired : RC-EX3A, RC-E5,RCH-E3 Wireless : RCN-KIT4-E2 | | | | | |
| | Room temperature control | Thermostat by electronics | | | | | |
| | Operation display | - | | | | | |
| Safety equipments | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | | |
| | | Gas line | I/U φ 15.88 (5/8") Pipe φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") | | | | |
| | Connecting method | Flare piping | | Flare piping | | | |
| | Attached length of piping | m | - | | - | | |
| | Insulation for piping | Necessary (both Liquid & Gas lines) | | | | | |
| | Refrigerant line (one way) length | m | Max.30 | | | | |
| Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | | | |
| Drain hose | | Hose connectable VP25(I.D.25, O.D.32) | | Hole size φ 20 x 3 pcs | | | |
| Drain pump, max lift height | mm | Built-in Drain pump,600 | | - | | | |
| Recommended breaker size | A | - | | | | | |
| L.R.A. (Locked rotor ampere) | A | 5.0 | | | | | |
| Interconnecting wires | Size x Core number | 1.5mm²x4 cores (Including earth cable)/ Terminal block (Screw fixing type) | | | | | |
| IP number | | IPX0 | | IPX4 | | | |
| Standard accessories | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | | |
| Option parts | | Filter set : UM-FL3EF, Motion sensor : LB-KIT | | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | |
| Heating | 20°C | - | 7°C | 6°C | | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. (4) Select the breaker size according to the own national standard. (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially. (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only) | | | | | | | |

| Item | | Model | | FDUM100VNP1VH | |
|--|----------------------------------|-----------------------------------|---------|--|------------------------------|
| | | | | Indoor unit | FDUM100VH |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | | kW | | 10.0 [2.8(Min.)-11.2(Max.)] |
| | Nominal heating capacity (range) | | kW | | 11.2 [2.5(Min.)-12.5(Max.)] |
| | Power consumption | Cooling | kW | | 3.00 |
| | | Heating | kW | | 2.93 |
| | Max power consumption | | kW | | 4.60 |
| | Running current | Cooling | A | | 13.2 / 13.8 |
| | | Heating | A | | 12.9 / 13.5 |
| | Inrush current, max current | | A | | 5, 22.0 |
| | Power factor | Cooling | % | | 99 |
| | | Heating | % | | 99 |
| | EER | | Cooling | | 3.33 |
| | COP | | Heating | | 3.82 |
| | Sound power level | Cooling | dB(A) | | 65 |
| | | Heating | dB(A) | | 70 |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 44 Hi : 38 Me : 36 Lo : 30 | |
| | Heating | dB(A) | | 57 | |
| Silent mode sound pressure level | | dB(A) | | 61 | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 280 × 1368 × 740 | |
| Exterior appearance (Munsell color) (RAL color) | | mm | | 845×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | mm | | Stucco white (4.2Y7.5/1.1)near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | | 54 | |
| Compressor type & Q'ty | | kg | | 70 | |
| Compressor motor (Starting method) | | kW | | — | |
| Refrigerant oil (Amount, type) | | ℓ | | — | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | — | |
| Heat exchanger | | kg | | R410A 2.55 in outdoor unit (Incl. the amount for the piping of : 15m) | |
| Refrigerant control | | kg | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | kg | | M shape fin & inner grooved tubing | |
| Fan motor (Starting method) | | W | | Capillary tubes + Electronic expansion valve | |
| Air flow | | W | | Centrifugal fan ×3 | |
| Available external static pressure | | W | | Propeller fan ×1 | |
| Outside air intake | | W | | 100 + 130 < Direct line start > | |
| Air filter, Quality / Quantity | | W | | 86 < Direct line start > | |
| Shock & vibration absorber | | W | | 75 | |
| Electric heater | | W | | 79 | |
| Operation control | | W | | 0 | |
| Safety equipments | | W | | — | |
| Installation data | | W | | — | |
| Refrigerant piping size (O.D.) | | mm | | (Option) Wired : RC-EX3 , RC-E5 , RCH-E3 Wireless : RCN-KIT4-E2 | |
| Connecting method | | mm | | Thermostat by electronics | |
| Attached length of piping | | mm | | — | |
| Insulation for piping | | mm | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | |
| Refrigerant line (one way) length | | mm | | — | |
| Vertical height diff. between O/U and I/U | | mm | | — | |
| Drain hose | | mm | | — | |
| Drain pump, max lift height | | mm | | — | |
| Recommended breaker size | | A | | — | |
| L.R.A. (Locked rotor ampere) | | A | | 5.0 | |
| Interconnecting wires | | A | | — | |
| IP number | | A | | — | |
| Standard accessories | | A | | — | |
| Option parts | | A | | — | |
| Notes | | A | | — | |
| Notes (1) The data are measured at the following conditions. | | A | | — | |
| Notes (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | A | | — | |
| Notes (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | A | | — | |
| Notes (4) Select the breaker size according to the own national standard. | | A | | — | |
| Notes (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | A | | — | |
| Notes (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially. | | A | | — | |
| Notes (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only) | | A | | — | |

| Operation | Indoor air temperature | | Outdoor air temperature | | External static pressure of indoor unit | Standards |
|-----------|------------------------|------|-------------------------|------|---|------------|
| | DB | WB | DB | WB | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | 60Pa | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3A and RC-E5 only)

(3) Ceiling suspended type (FDE)
Single type

| Item | | Model | FDE71VNPVH | | | | |
|--|---|--|--|---|---|--------------------------------|------------|
| | | | Indoor unit FDE71VH | | Outdoor unit FDC71VNP | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 [1.4(Min.)-7.1(Max.)] | | | | |
| | Nominal heating capacity (range) | kW | 7.1 [1.0(Min.)-7.1(Max.)] | | | | |
| | Power consumption | Cooling | kW | 2.50 | | | |
| | | Heating | | 1.96 | | | |
| | Max power consumption | | 3.27 | | | | |
| | Running current | Cooling | A | 11.3 / 11.8 | | | |
| | | Heating | | 8.8 / 9.2 | | | |
| | Inrush current, max current | | | 5 , 14.5 | | | |
| | Power factor | Cooling | % | 96 | | | |
| | | Heating | | 97 | | | |
| | EER | Cooling | | 2.84 | | | |
| | COP | Heating | | 3.62 | | | |
| | Sound power level | Cooling | dB(A) | 60 | | 67 | |
| | | Heating | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | 54 | |
| Sound pressure level | Cooling | | - | | 49 | | |
| | Heating | | - | | - | | |
| Silent mode sound pressure level | | | - | | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 x 1320 x 690 | | 640x800(+71)x290 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 33 | | 45 | | |
| Compressor type & Q'ty | | | - | | RMT5113MCE2 (Twin rotary type) x1 | | |
| Compressor motor (Starting method) | | kW | - | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | - | | 0.45 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 1.6 in outdoor unit (Incl. the amount for the piping of : 15m) | | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | | |
| Fan type & Q'ty | | | Centrifugal fan x4 | | Propeller fan x1 | | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | | 34 < Direct line start > | | |
| Air flow | Cooling/Heating | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | 36 | | |
| Available external static pressure | | Pa | 0 | | 0 | | |
| Outside air intake | | | Not possible | | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x2(Washable) | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | | Rubber sleeve(for compressor) | | |
| Electric heater | | W | - | | - | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | |
| | Room temperature control | | Thermostat by electronics | | | | |
| | Operation display | | - | | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line/Gas line | mm | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | Connecting method | | | Flare piping | | Flare piping | |
| | Attached length of piping | | m | - | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | | m | Max.30 | | | |
| | Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) | | Max.20 (Outdoor unit is lower) | |
| | Drain hose | | | Hose connectable with VP20(O.D.26) | | Hole size φ 20 x 5 pcs | |
| Drain pump, max lift height | | mm | - | | - | | |
| Recommended breaker size | | A | - | | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | | |
| Interconnecting wires | | Size x Core number | 1.5mm²x4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | | |
| IP number | | | IPX0 | | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | | Drain elbow, Drain hole grommet | | |
| Option parts | | | Motion sensor : LB-E | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards | |
| | | DB | WB | DB | WB | | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | | ISO5151-T1 |
| | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | | |

| Item | | Model | FDE90VNPVH | | | |
|--|-----------------------------------|------------------------|--|---|--------------|------------|
| | | | Indoor unit FDE100VH | Outdoor unit FDC90VNP | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 9.0 [1.9(Min.)- 9.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 9.0 [1.5(Min.)- 9.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.75 | | |
| | | Heating | | 2.22 | | |
| | Max power consumption | | 4.19 | | | |
| | Running current | Cooling | A | 12.3 / 12.9 | | |
| | | Heating | | 10.0 / 10.4 | | |
| | Inrush current, max current | | 5, 18 | | | |
| | Power factor | Cooling | % | 97 | | |
| | | Heating | | 97 | | |
| | EER | Cooling | | 3.27 | | |
| | COP | Heating | | 4.05 | | |
| | Sound power level | Cooling | dB(A) | 64 | 69 | |
| | | Heating | | | | |
| Sound pressure level | Cooling | dB(A) | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | 57 | | |
| | Heating | | | 55 | | |
| Silent mode sound pressure level | | | | Cooling:52 / Heating:50 | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 250 x 1620 x 690 | 750 x 880(+88) x 340 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster White (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 43 | 57 | | |
| Compressor type & Q'ty | | | — | RMT5118MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | | kW | — | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan x4 | Propeller fan x1 | | |
| Fan motor (Starting method) | | W | 80 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | 63 | | |
| | Heating | | | 49.5 | | |
| Available external static pressure | | Pa | 0 | 0 | | |
| Outside air intake | | | Not possible | — | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x2(Washable) | — | | |
| Shock & vibration absorber | | | Rubber sleeve (for fan motor) | Rubber sleeve (for fan motor & compressor) | | |
| Electric heater | | W | — | — | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A,RC-E5,RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | φ 15.88 (5/8") φ 15.88(5/8")x1.0 φ 15.88 (5/8") | | | |
| | Connecting method | | | Flare piping | Flare piping | |
| | Attached length of piping | | m | — | — | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.30 | | |
| Vertical height diff. between O/U and I/U | | m | Max.20 (Outdoor unit is higher) | Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP20 (O.D.26) | Hole size φ 20 x 3pcs | | |
| Drain pump, max lift height | | mm | — | — | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | 1.5mm²x4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | Drain elbow, Drain hole grommet | | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | FDE90VNP1VH | | | |
|--|---|--|--|---|------------|-----------|
| | | | Indoor unit FDE100VH | Outdoor unit FDC90VNP1 | | |
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 9.0 [1.9(Min.)-9.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 9.0 [1.5(Min.)-9.0(Max.)] | | | |
| | Power consumption | Cooling | kW | 2.75 | | |
| | | Heating | | 2.22 | | |
| | Max power consumption | | 4.19 | | | |
| | Running current | Cooling | A | 12.3 / 12.9 | | |
| | | Heating | | 10.0 / 10.5 | | |
| | Inrush current, max current | | 5 , 18.0 | | | |
| | Power factor | Cooling | % | 97 | | |
| | | Heating | | 97 | | |
| | EER | Cooling | | 3.27 | | |
| | COP | Heating | | 4.05 | | |
| | Sound power level | Cooling | dB(A) | 64 | 69 | |
| | | Heating | | | | |
| Sound pressure level | Cooling | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | 57 | | | |
| | Heating | | 55 | | | |
| Silent mode sound pressure level | | — | Cooling:52 / Heating:50 | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 250 x 1620 x 690 | 750 x 880(+88) x 340 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 43 | 57 | | |
| Compressor type & Q'ty | | | — | RMT5118MDE2 (Twin rotary type)x1 | | |
| Compressor motor (Starting method) | | kW | — | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | — | 0.675 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 2.1 in outdoor unit (Incl. the amount for the piping of : 15m) | | | |
| Heat exchanger | | | Louver fin & inner grooved tubing | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Capillary tubes + Electronic expansion valve | | | |
| Fan type & Q'ty | | | Centrifugal fan x4 | Propeller fan x1 | | |
| Fan motor (Starting method) | | W | 80 < Direct line start > | 86 < Direct line start > | | |
| Air flow | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | 63 | | |
| | Heating | | | 49.5 | | |
| Available external static pressure | | Pa | 0 | 0 | | |
| Outside air intake | | | Not possible | | | |
| Air filter, Quality / Quantity | | | Pocket plastic net x2(Washable) | | | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | Rubber sleeve (for fan motor & compressor) | | |
| Electric heater | | W | — | — | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | — | | | |
| Safety equipments | | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | | |
| Installation data | Refrigerant piping size (O.D.) | Liquid line | I/U φ 9.52 (3/8") Pipe φ 6.35(1/4")x0.8 O/U φ 6.35 (1/4") | | | |
| | | Gas line | I/U φ 15.88 (5/8") Pipe φ 15.88 (5/8")x1.0 O/U φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | Flare piping | | |
| | Attached length of piping | m | — | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.30 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.20 (Outdoor unit is higher) | Max.20 (Outdoor unit is lower) | | |
| Drain hose | | | Hose connectable with VP20(O.D.26) | Hole size φ 20 x 3 pcs | | |
| Drain pump, max lift height | | mm | — | — | | |
| Recommended breaker size | | A | — | | | |
| L.R.A. (Locked rotor ampere) | | A | 5.0 | | | |
| Interconnecting wires | | Size x Core number | 1.5mm ² x4 cores (Including earth cable) / Terminal block (Screw fixing type) | | | |
| IP number | | | IPX0 | IPX4 | | |
| Standard accessories | | | Mounting kit, Drain hose | Drain elbow, Drain hole grommet | | |
| Option parts | | | Motion sensor : LB-E | | | |
| Notes | | (1) The data are measured at the following | | | | |
| | | The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | | FDE100VNP1VH | | |
|--|----------------------------------|-----------------------------------|-------|--|-------------------------|--|
| | | Indoor unit FDE100VH | | Outdoor unit FDC100VNP | | |
| Power source | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | |
| Operation data | Nominal cooling capacity (range) | kW | | 10.0 [2.8(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | | 11.2 [2.5(Min.)-12.5(Max.)] | | |
| | Power consumption | Cooling | kW | | 2.66 | |
| | | Heating | kW | | 2.94 | |
| | Max power consumption | kW | | 4.28 | | |
| | Running current | Cooling | A | | 11.7 / 12.2 | |
| | | Heating | A | | 12.9 / 13.5 | |
| | Inrush current, max current | A | | 5, 21.0 | | |
| | Power factor | Cooling | % | | 99 | |
| | | Heating | % | | 99 | |
| | EER | Cooling | | | 3.76 | |
| | COP | Heating | | | 3.81 | |
| | Sound power level | Cooling | dB(A) | | 64 | |
| | | Heating | dB(A) | | 70 | |
| Sound pressure level | Cooling | dB(A) | | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | | |
| | Heating | dB(A) | | 57 | | |
| Silent mode sound pressure level | | | | | Cooling:50 / Heating:49 | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 250 × 1620 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2)near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | | 43 | | |
| Compressor type & Q'ty | | | | RMT5126MCE1 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | | 0.90 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | | R410A 2.55 in outdoor unit (Incl. the amount for the piping of : 15m) | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Refrigerant control | | | | M shape fin & inner grooved tubing | | |
| Fan type & Q'ty | | | | Capillary tubes + Electronic expansion valve | | |
| Fan motor (Starting method) | | W | | Centrifugal fan ×4 | | |
| Air flow | | m³/min | | Propeller fan ×1 | | |
| Available external static pressure | | Pa | | 80 < Direct line start > | | |
| Outside air intake | | | | 75 | | |
| Air filter, Quality / Quantity | | | | 79 | | |
| Shock & vibration absorber | | | | 0 | | |
| Electric heater | | W | | Not possible | | |
| Operation control | | | | Pocket plastic net ×2(Washable) | | |
| Remote control | | | | Rubber sleeve(for fan motor) | | |
| Room temperature control | | | | Rubber sleeve (for fan motor & compressor) | | |
| Operation display | | | | Wireless : RCN-E-E3 | | |
| Safety equipments | | | | Thermostat by electronics | | |
| Refrigerant piping size (O.D.) | | mm | | Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Indoor fan motor error protection, Heating overload protection(High pressure control), Cooling overload protection | | |
| Connecting method | | | | Liquid line | | |
| Attached length of piping | | m | | I/U φ 9.52 (3/8") Pipe φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") | | |
| Insulation for piping | | | | Gas line | | |
| Refrigerant line (one way) length | | m | | I/U φ 15.88 (5/8") Pipe φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8") | | |
| Vertical height diff. between O/U and I/U | | m | | Flare piping | | |
| Drain hose | | mm | | Flare piping | | |
| Drain pump, max lift height | | mm | | Necessary (both Liquid & Gas lines) | | |
| Recommended breaker size | | A | | Max.30 | | |
| L.R.A. (Locked rotor ampere) | | A | | Max.20 (Outdoor unit is higher) | | |
| Interconnecting wires | | Size × Core number | | Max.20 (Outdoor unit is lower) | | |
| IP number | | | | Hose connectable with VP20 (O.D.26) | | |
| Standard accessories | | | | Hole size φ 20 × 3 pcs | | |
| Option parts | | | | Motion sensor : LB-E | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| Item | | Indoor air temperature | | Outdoor air temperature | | |
| Operation | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | |
| Heating | | 20°C | — | 7°C | 6°C | |
| | | | | Standards | | |
| | | | | ISO5151-T1 | | |
| | | | | ISO5151-H1 | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) Select the breaker size according to the own national standard. | | | | | | |
| (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

3.2 EXTERIOR DIMENSIONS

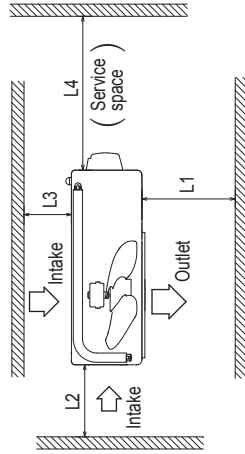
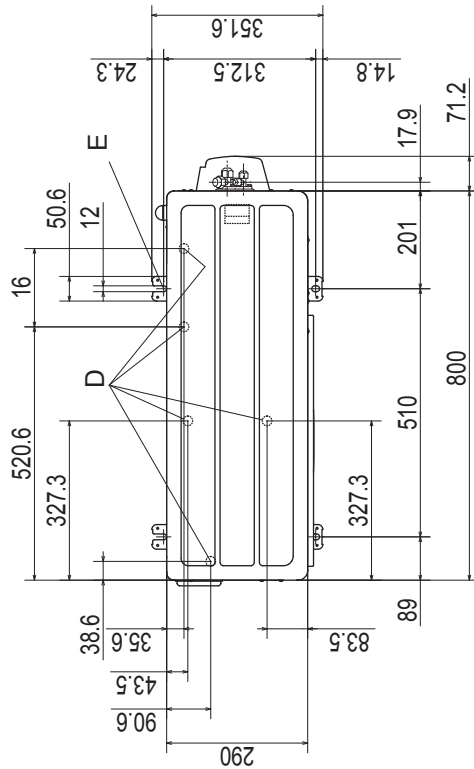
- (1) Indoor units See page 58.
- (2) Outdoor units

Model FDC71VNP

Notes

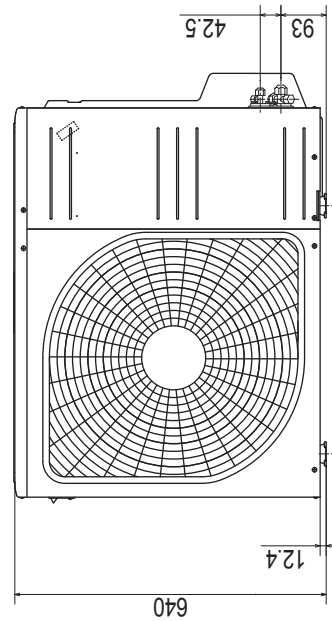
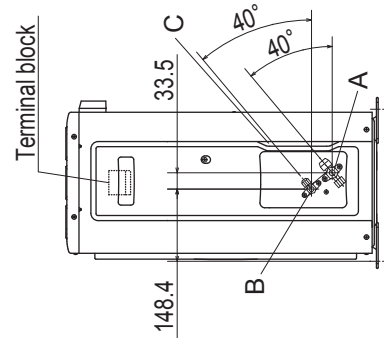
- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.

| Symbol | Content |
|--------|--|
| A | Service valve connection (gas side) $\phi 12.7(1/2")$ (Flare) |
| B | Service valve connection (liquid side) $\phi 6.35(1/4")$ (Flare) |
| C | Pipe / cable draw-out hole |
| D | Drain discharge hole $\phi 20 \times 5$ places |
| E | Anchor bolt hole $M10 \times 4$ places |



Minimum installation space

| Examples of installation | I | II | III | IV |
|--------------------------|------|------|------|------|
| Dimensions | Open | 280 | 280 | 180 |
| L1 | Open | 280 | Open | Open |
| L2 | 100 | 75 | Open | Open |
| L3 | 100 | 80 | 80 | 80 |
| L4 | 250 | Open | 250 | Open |

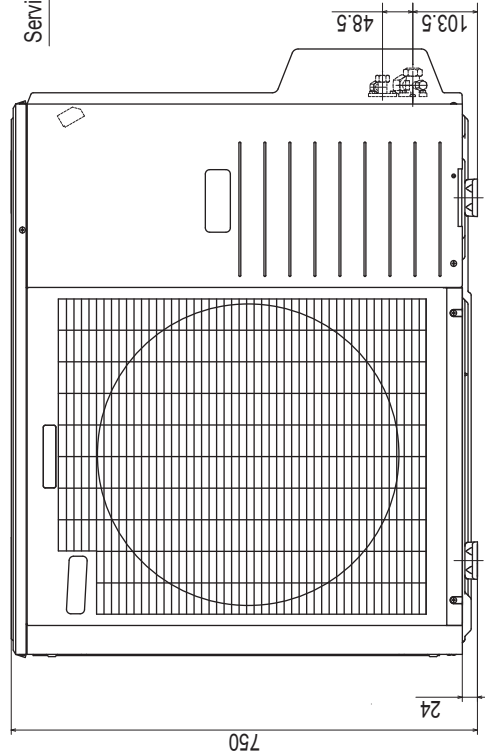
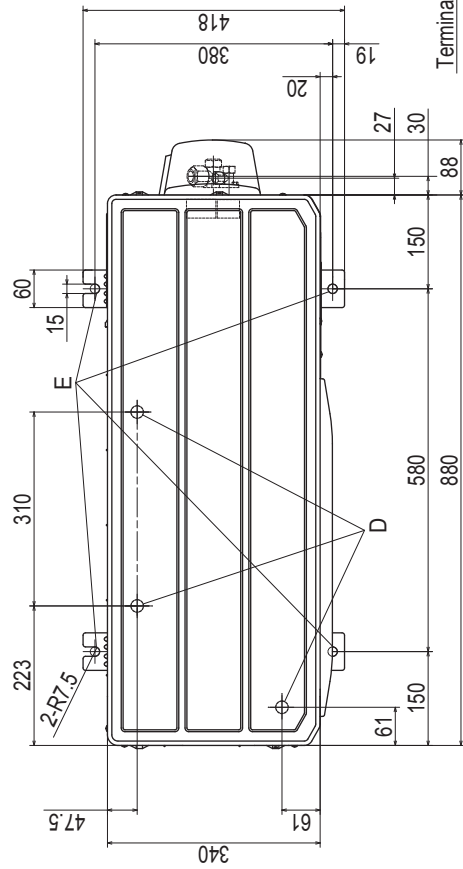


Unit:mm

PCA001Z713

Models FDC90VNP, 90VNP1

| Symbol | Content |
|--------|--|
| A | Service valve connection (gas side) $\phi 15.88(5/8")$ (Flare) |
| B | Service valve connection (liquid side) $\phi 6.35(1/4")$ (Flare) |
| C | Pipe / cable draw-out hole |
| D | Drain discharge hole |
| E | Anchor bolt hole |



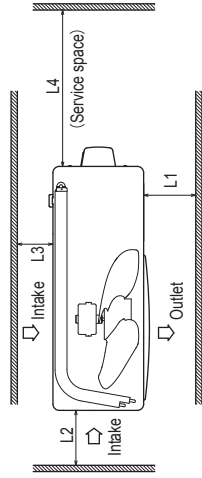
Terminal block

Service panel

Unit:mm

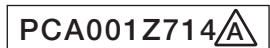
Notes

- (1) It must not be surrounded by walls on four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subjected to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the unit's height.
- (6) The model name label is attached on the lower right corner of the front panel.



Minimum installation space

| Examples of installation | I | II | III |
|--------------------------|------|------|------|
| Dimensions | Open | Open | 500 |
| L1 | 300 | 250 | Open |
| L2 | 100 | 150 | 100 |
| L3 | 250 | 250 | 250 |
| L4 | 250 | 250 | 250 |

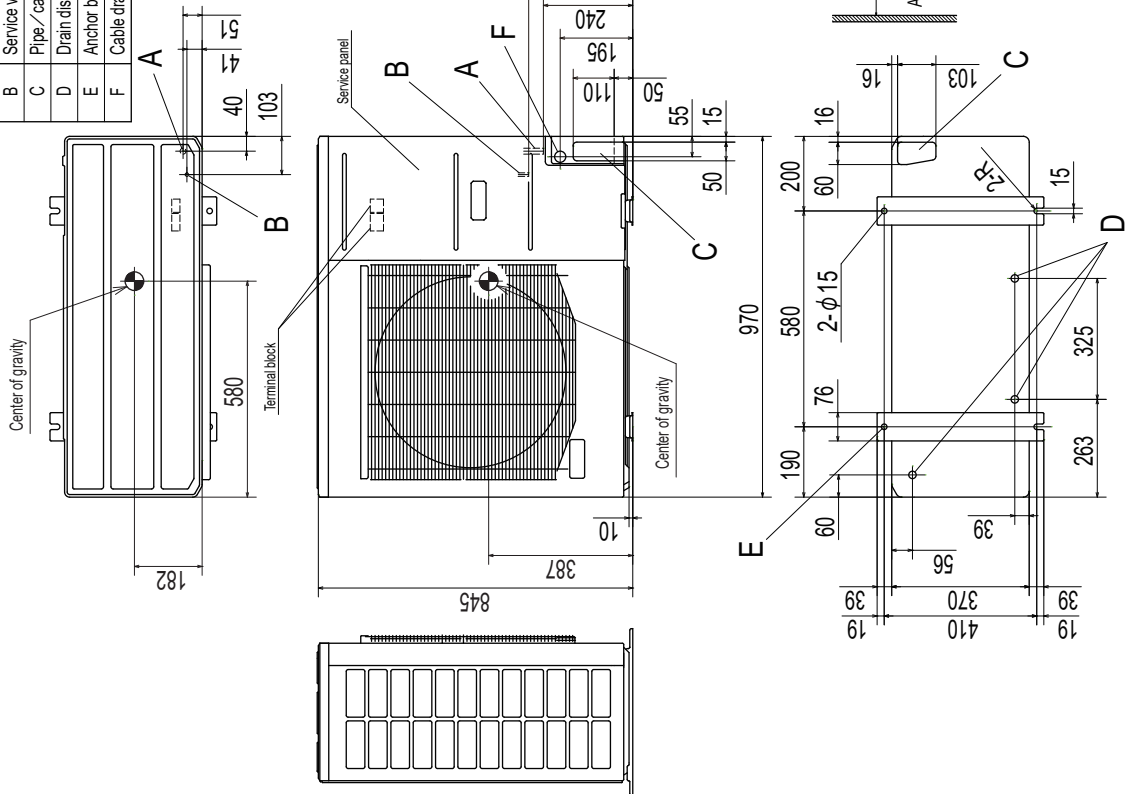


Model FDC100VNP

Notes

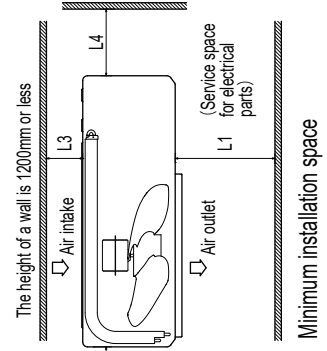
- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet face is perpendicular to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the service panel.

| Symbol | Content |
|--------|---|
| A | Service valve connection (gas side) $\phi 15.88 (5/8")$ (Flare) |
| B | Service valve connection (liquid side) $\phi 9.52 (3/8")$ (Flare) |
| C | Pipe/cable draw-out hole $\phi 20 \times 3$ places |
| D | Drain discharge hole M10x4 places |
| E | Anchor bolt hole $\phi 30 \times 3$ places |
| F | Cable draw-out hole $\phi 30 \times 3$ places |



| Examples of Dimensions | I | II | III |
|------------------------|------|------|------|
| L1 | Open | Open | 500 |
| L2 | 300 | 250 | Open |
| L3 | 100 | 150 | 100 |
| L4 | 250 | 250 | 250 |

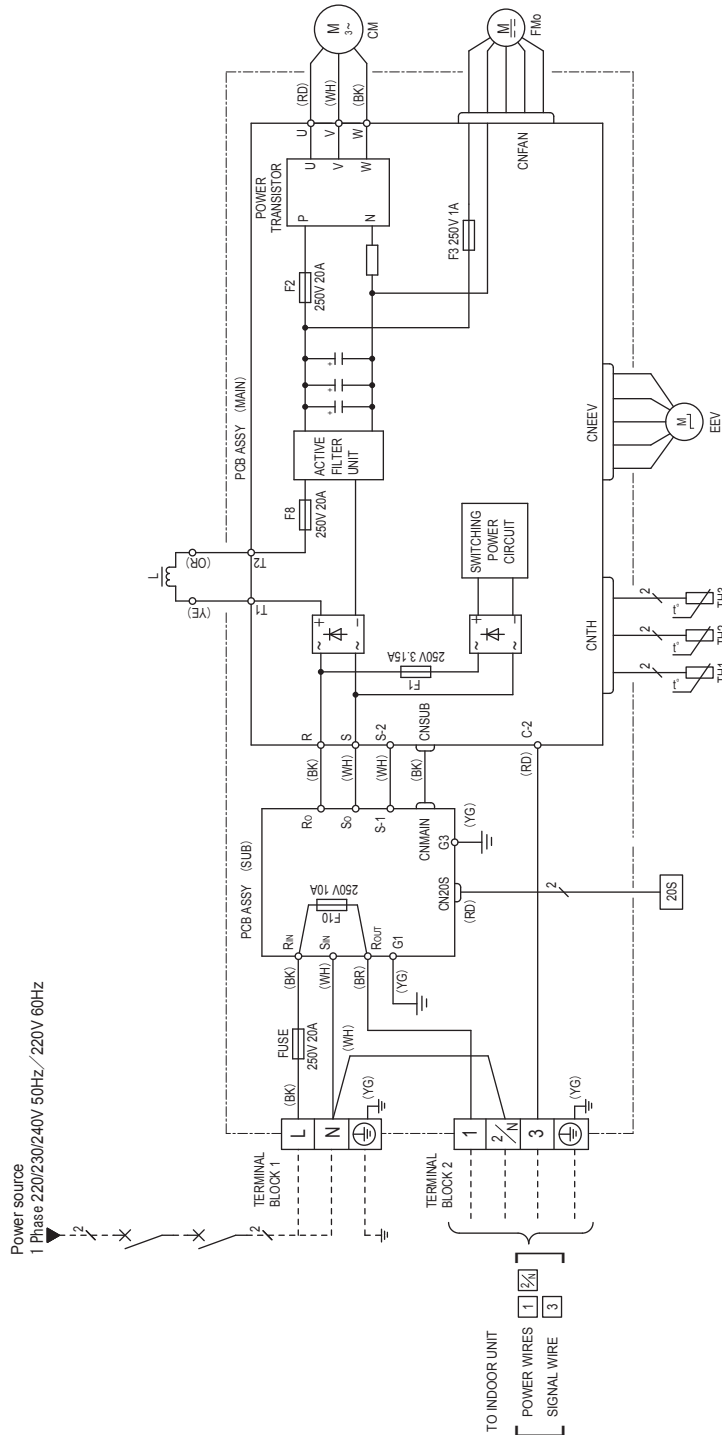
Unit:mm



PCA001Z787

3.3 ELECTRICAL WIRING

- (1) Indoor units See page 73.
 - (2) Outdoor units
- Model FDC71VNP



Power cable, indoor-outdoor connecting wires

| Model | MAX running current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm ²) |
|-------|-------------------------|-------------------------------------|------------------------|-----------------------------------|------------------------------------|
| FDC71 | 14.5 | 2.0 | 15 | 1.5mm ² x 4 | 1.5 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

Meaning of marks

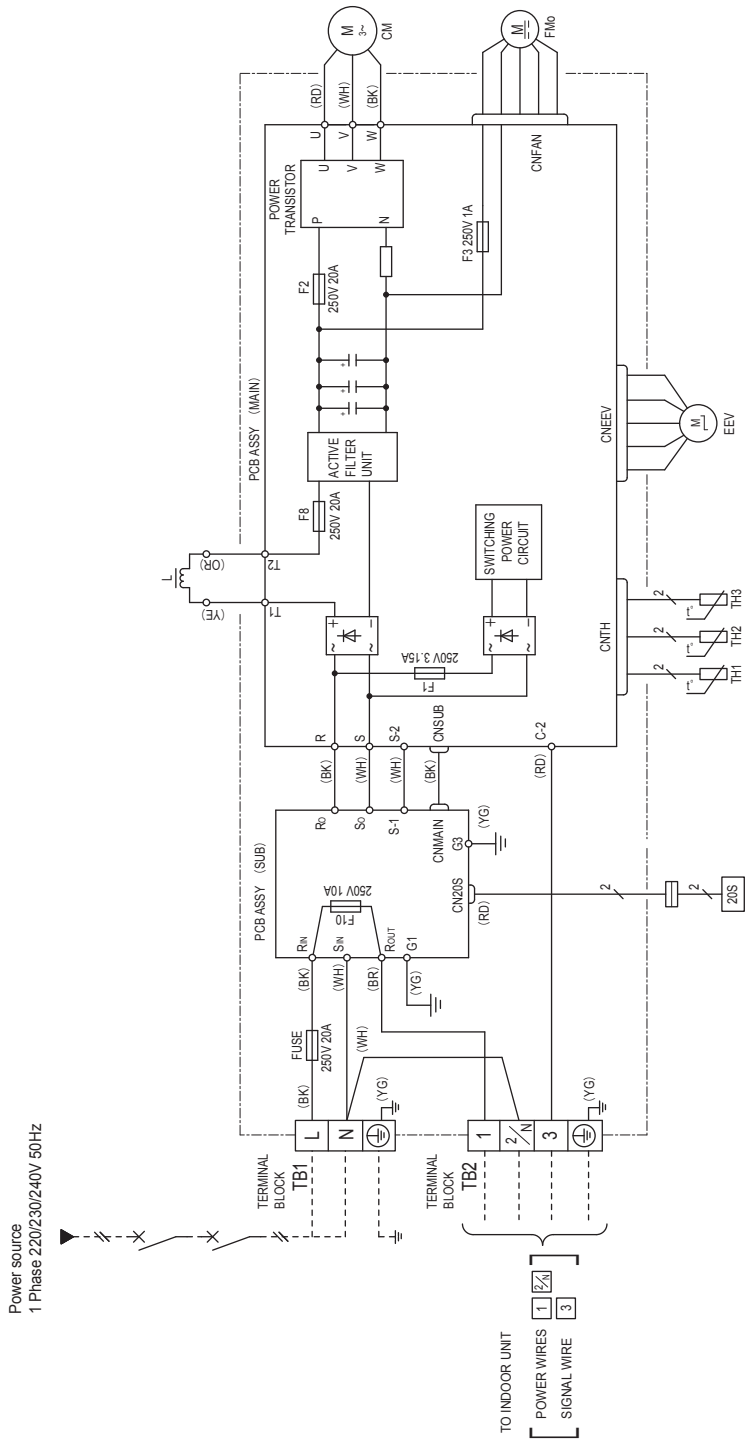
| Item | Description |
|-------|-----------------------------------|
| CM | Compressor motor |
| CN20S | Connector |
| CNTH | Outdoor air temperature sensor |
| CNEEV | Discharge pipe temperature sensor |
| CNFAN | Solenoid coil for 4-way valve |
| EEV | Electric expansion valve (coil) |
| FMo | Fan motor |
| L | Reactor |
| TH1 | Heat exchanger temperature sensor |
| TH2 | Outdoor air temperature sensor |
| TH3 | Discharge pipe temperature sensor |
| ZOS | Solenoid coil for 4-way valve |

Color marks

| Mark | Color |
|------|--------------|
| BK | Black |
| BR | Brown |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow/Green |

PCA001Z715

Model FDC90VNP



Power cable, indoor-outdoor connecting wires

| Model | MAX running current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number | Earth wire size (mm ²) |
|-------|-------------------------|-------------------------------------|------------------------|-----------------------------------|------------------------------------|
| FDC90 | 18 | 2.5 | 15 | 1.5mm ² x 4 | 1.5 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

Meaning of marks

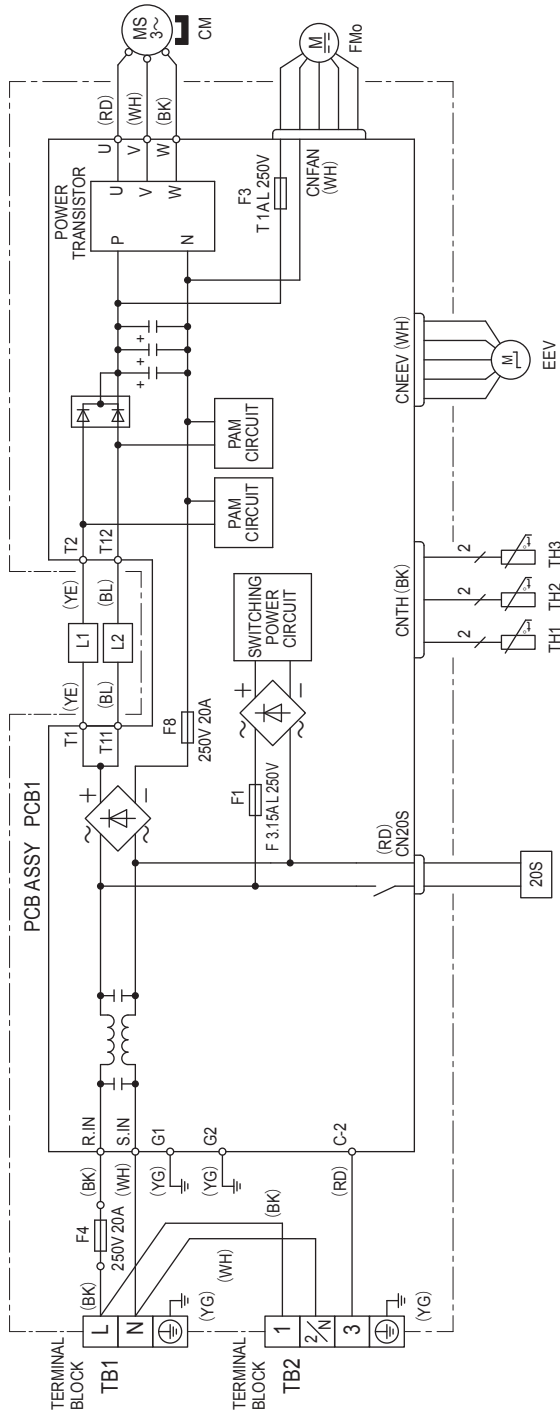
| Item | Description |
|-------|-----------------------------------|
| CM | Compressor motor |
| CN20S | Connector |
| CNTH | |
| CNEEV | |
| CNFAN | |
| EEV | Electric expansion valve (coil) |
| FMo | Fan motor |
| L | Reactor |
| TH1 | Heat exchanger temperature sensor |
| TH2 | Outdoor air temperature sensor |
| TH3 | Discharge pipe temperature sensor |
| Z0S | Solenoid coil for 4-way valve |

Color marks

| Mark | Color |
|------|--------------|
| BK | Black |
| BR | Brown |
| OR | Orange |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow/Green |

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Model FDC90VNP1



Power cable, indoor-outdoor connecting wires

| Model | MAX running current (A) | Power cable size (mm ²) | Power cable length (m) | indoor-outdoor wire size x number | Earth wire size (mm ²) |
|-------|-------------------------|-------------------------------------|------------------------|-----------------------------------|------------------------------------|
| 71 | 14.5 | 2.0 | 15 | 1.5mm ² x 4 | 1.5 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

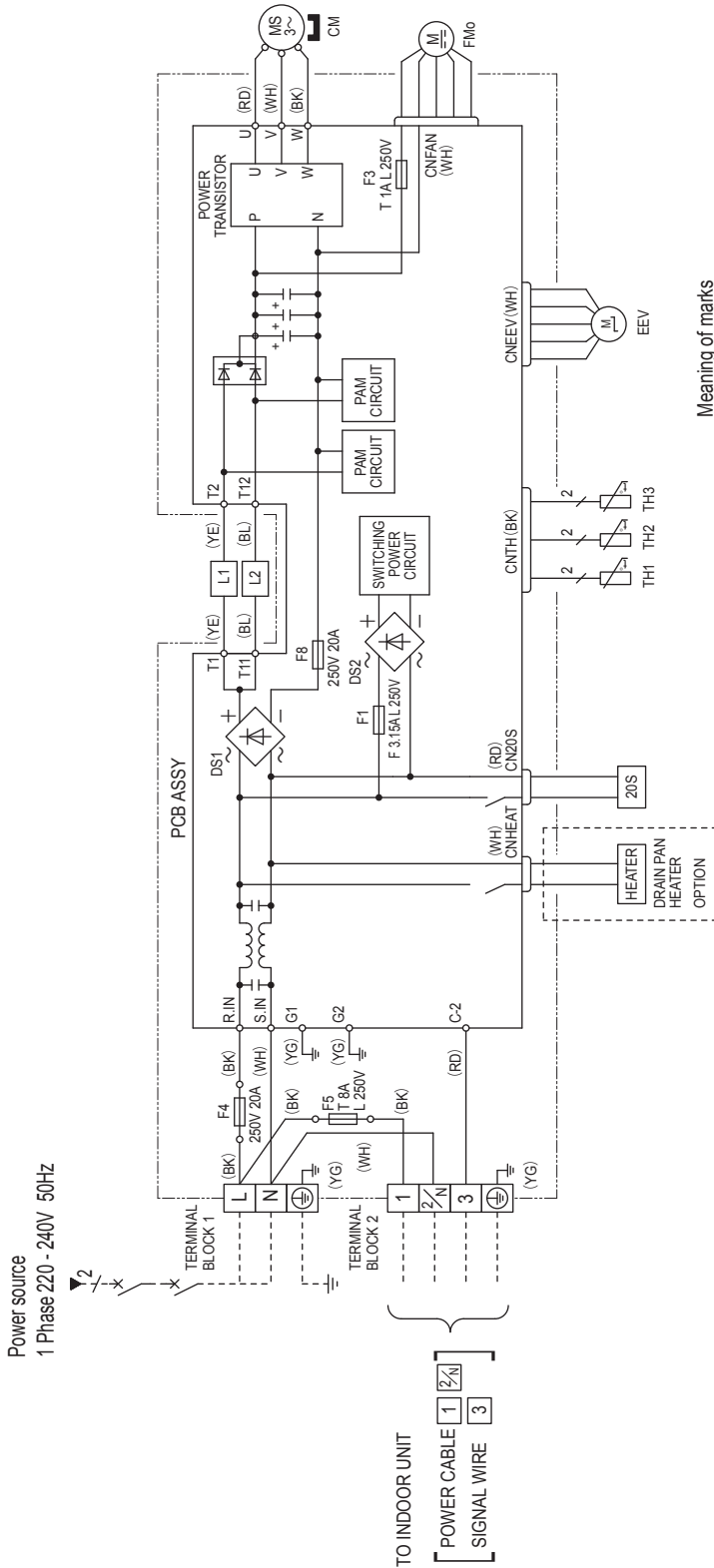
Meaning of marks

| | |
|------|-----------------------------------|
| 20S | 4-way valve (coil) |
| CM | Compressor motor |
| EEV | Electric expansion valve (coil) |
| FMO | Fan motor |
| L1,2 | Reactor |
| TH1 | Heat exchanger temperature sensor |
| TH2 | Outdoor air temperature sensor |
| TH3 | Discharge pipe temperature sensor |

Color marks

| Mark | Color | Mark | Color |
|------|-------|------|------------------|
| BK | Black | YE | Yellow |
| BL | Blue | YG | Yellow/ Green |
| RD | Red | | |
| WH | White | | |

Model FDC100VNP



Meaning of marks

| Item | Description |
|--------|-----------------------------------|
| 20S | Solenoid coil for 4-way valve |
| CN20S | Connector |
| CNVEE | |
| CNFAN | |
| CNHEAT | |
| CNTH | |
| CM | Compressor motor |
| DS1.2 | Diode stack |
| EEV | Electric expansion valve (coil) |
| FMo | Fan motor |
| L1.2 | Reactor |
| TH1 | Heat exchanger temperature sensor |
| TH2 | Outdoor air temperature sensor |
| TH3 | Discharge pipe temperature sensor |
| J2 | Jumper (※) |

Note(1) ※ By cutting J2, the operation of cooling start in heating mode is disablement.

Color marks

| Mark | Color |
|------|----------------|
| BK | Black |
| BL | Blue |
| RD | Red |
| WH | White |
| YE | Yellow |
| YG | Yellow / Green |

Power cable, indoor-outdoor connecting wires

| MODEL NAME | MAX running current (A) | Power cable size (mm ²) | Power cable length (m) | Indoor-outdoor wire size x number (mm) | Earth wire size (mm) |
|------------|-------------------------|-------------------------------------|------------------------|--|----------------------|
| FDC100VNP | 21 | 5.5 | 25 | φ1.6 × 3 | φ1.6 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

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3.4 NOISE LEVEL

Notes(1) The data are based on the following conditions.

Ambient air temperature: Indoor unit 27°CWB. Outdoor unit 35°CDB.

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

(1) Indoor units See page 84.

(2) Outdoor units

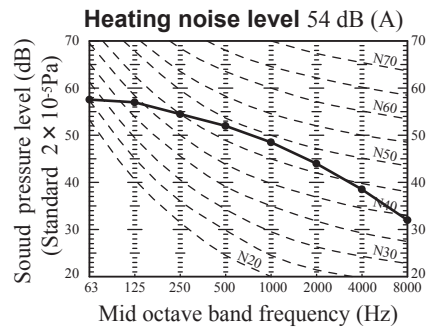
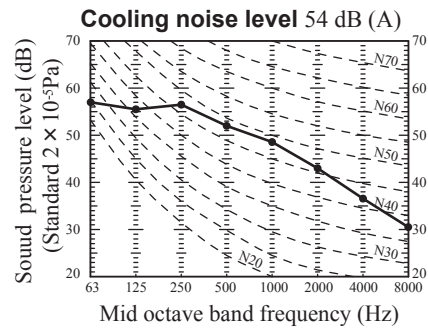
Measured based on ISO-T1, JIS B 8616

Mike position: at highest noise level in position as mentined below

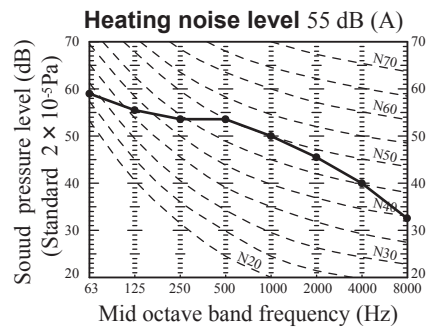
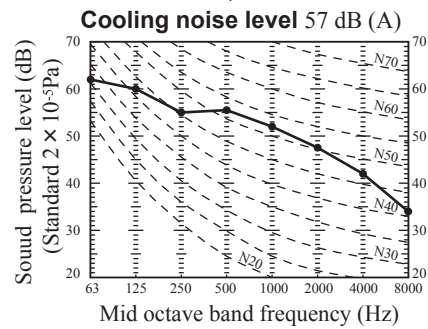
Distance from front side 1m

Height 1m

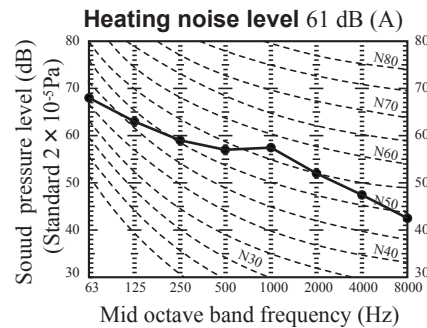
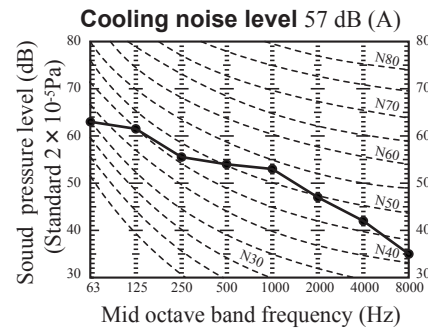
Model FDC71VNP



Models FDC90VNP, 90VNP1



Model FDC100VNP



3.5 CHARACTERISTIC OF FAN

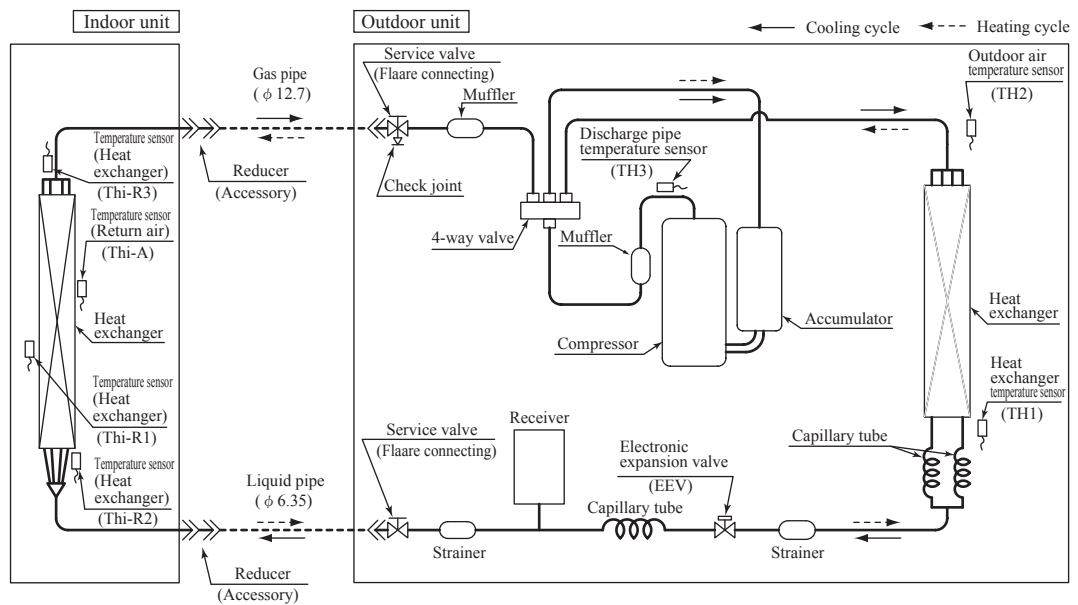
See page 88 of 1.5 chapter.

3.6 TEMPERATURE AND VELOCITY DISTRIBUTION

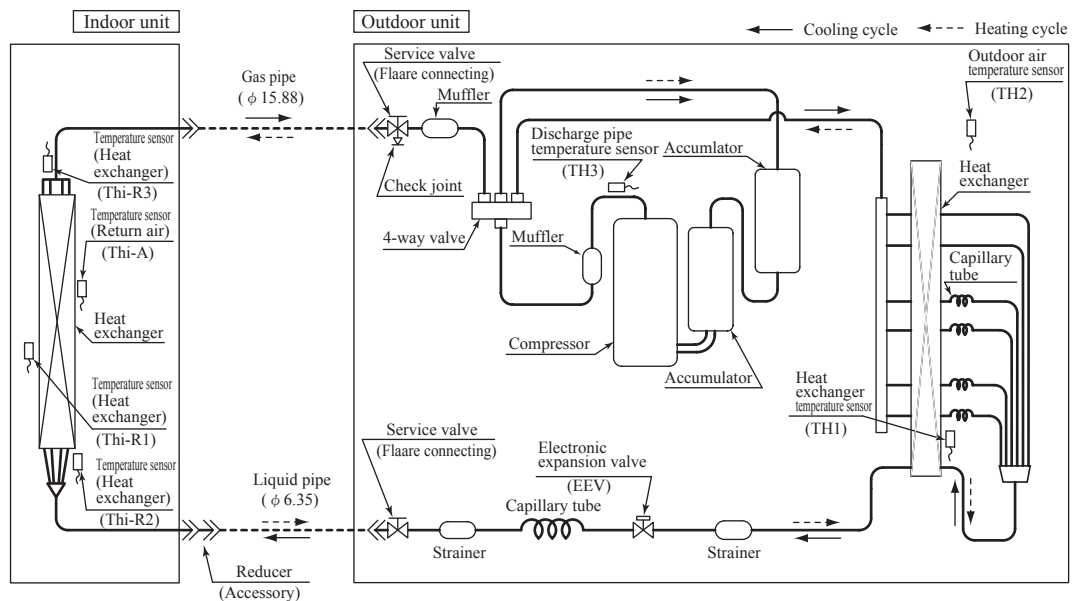
See page 95 of 1.6 chapter.

3.7 PIPING SYSTEM

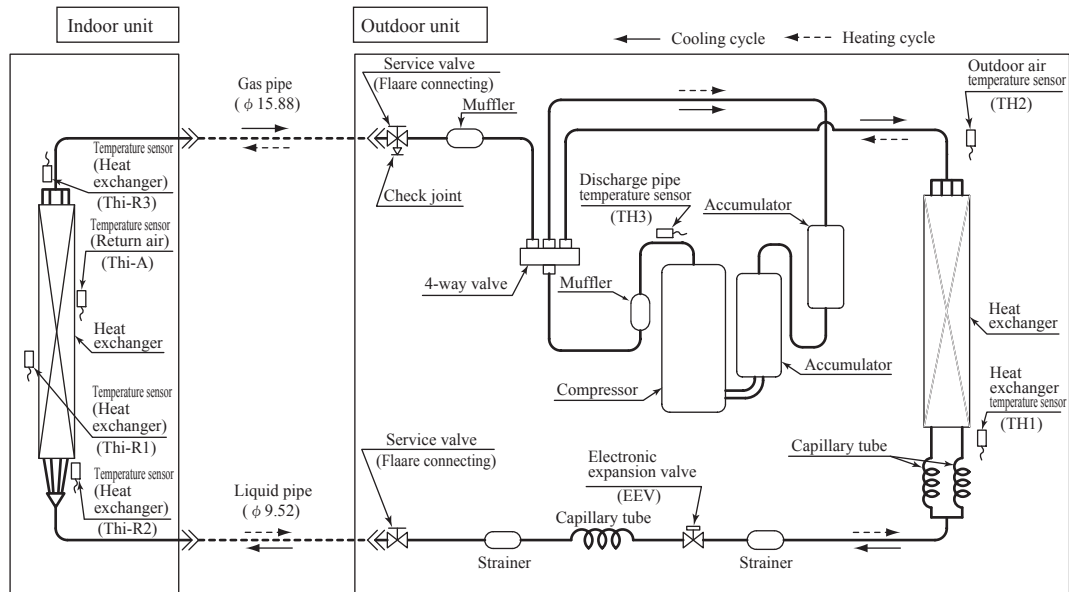
Model 71



Model 90



Model 100



Preset point of the protective devices

| Parts name | Mark | Equipped unit | All models |
|---|-------|---------------|---------------------|
| Temperature sensor (for protection overloading in heating) | Thi-R | Indoor unit | OFF 63°C , ON 56°C |
| Temperature sensor (for frost prevention) | | | OFF 1.0°C , ON 10°C |
| Temperature sensor (for protection high pressure in cooling) | TH1 | Outdoor unit | OFF 63°C , ON 53°C |
| Temperature sensor (for detecting discharge pipe temperature) | TH3 | | OFF 115°C , ON 95°C |

3.8. RANGE OF USAGE & LIMITATIONS

| | | |
|--|--------------------------|--|
| Operating temperature range | | See next page. |
| | | When used below -5°C, install a snow hood (prepared on site). |
| Recommendable area to install | | Considering to get sufficient heating capacity, the area where the averaged lowest ambient air temperature in day time during winter is above 0°C, and it has no accumulation of snow. |
| Installation site | | The limitations of installation space are shown in the page for exterior dimensions. Install the indoor unit at least 2.5m higher than the floor surface. |
| Temperature and humidity conditions surrounding the indoor unit (Note 2) | | Model FDE : Dew point temperature : 23°C or less, relative humidity : 80% or less Other models : Dew point temperature : 28°C or less, relative humidity : 80% or less |
| Limitations on unit and piping installation | | See page 549. |
| Compressor ON-OFF cycling | Cycle Time | 10 minutes or more (from OFF to OFF) or (from ON to ON) |
| | Stop Time | 3 minutes or more |
| Power source | Voltage range | Rating ±10% |
| | Voltage drop at start-up | Min.85% of rating |
| | Phase-to-phase imbalance | 3% or less |

Note 1. Do not install the unit in places which :

- 1) Flammable gas may leak.
- 2) Carbon fiber, metal particles, powder, etc. are floating.
- 3) Cosmetic or special sprays are used frequently.
- 4) Exposed to oil splashes or steam (e.g. kitchen and machine plant).
- 5) Exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent).
- 6) Exposed to ammonia substance (e.g. organic fertilizer).
- 7) Matters affecting devices, such as sulfuric gas, chlorine gas, acid, alkali, etc. may generate or accumulate.
- 8) Chimney smoke is hanging.
- 9) Sucking the exhaust gas from heat exchanger.
- 10) Adjacent to equipment generating electromagnetic waves or high frequency waves.
- 11) There is light beams that affect the receiving device of indoor unit in case of the wireless specification.
- 12) Snow falls heavily.
- 13) At an elevation of 1000 meters or higher.
- 14) On mobile machine (e.g. vehicle, ship, etc.)
- 15) Splashed with water to indoor unit (e.g. laundry room).

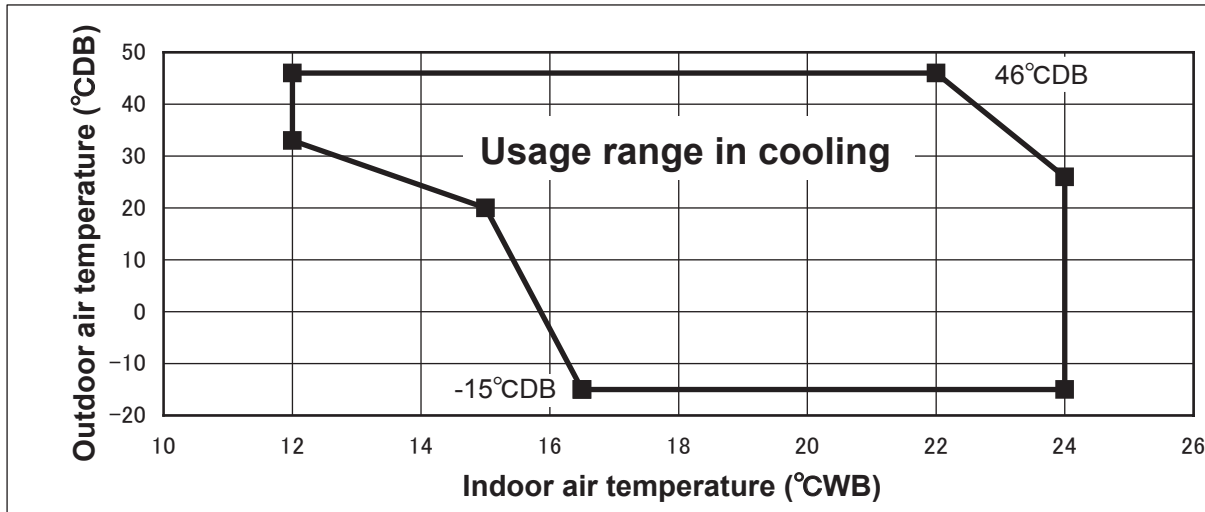
Note 2. If ambient temperature and humidity exceed the above conditions, add polyurethane foam insulation on the outer plate (10mm or thicker) of indoor unit.

Note 3. Both gas and liquid pipes need to be covered with 20mm or thicker heat insulation materials at the place where humidity exceeds 70%.

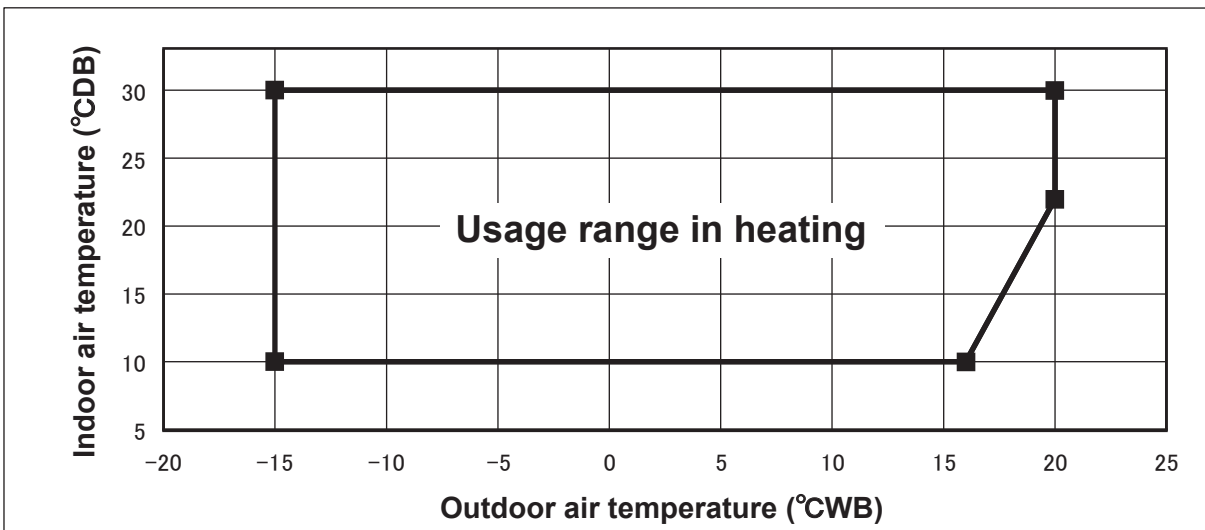
PJF000Z317

Operating temperature range

■ Cooling



■ Heating



Decline in cooling and heating capacity or operation stop may occur when the outdoor unit is installed in places where natural wind can increase or decrease its design air flow rate.

PJF000Z317

“CAUTION” Cooling operation under low outdoor air temperature conditions

PAC models can be operated in cooling mode at low outdoor air temperature condition within above temperature range. However in case of severely low temperature conditions if the following precaution is not observed, it may not be operated in spite of operable temperature range mentioned above and cooling capacity may not be established under certain conditions.

[Precaution]

In case of severely low temperature condition

- 1) Install the outdoor unit at the place where strong wind cannot blow directly into the outdoor unit.
- 2) If there is no installation place where can prevent strong wind from directly blowing into the outdoor unit, mount the flex flow adapter (prepared as option part) or like such devices onto the outdoor unit in order to divert the strong wind.

[Reason]

Under the low outdoor air temperature conditions of -5°C or lower, the outdoor fan is controlled at lower or lowest speed by outdoor fan control, but if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop more.

This makes high and low pressures to drop as well. This low pressure drop makes the indoor heat exchanger temperature to drop and will activate anti-frost control at indoor heat exchanger at frequent intervals, that cooling operation may not be established for any given time.

| Limitation on unit and piping installation | | | | |
|--|--|---|-------------------------|--------------------------------|
| Descriptions | | Model for outdoor unit | Dimensional limitations | Marks appearing in the drawing |
| One-way pipe length | | FDC71VNP FDC90VNP, VNP1 FDC100VNP | ≤ 30m | L |
| Elevation difference between indoor and outdoor unit | When the outdoor unit is positioned higher | | ≤ 20m | H |
| | When the outdoor unit is positioned lower | | ≤ 20m | |

The diagram illustrates the piping installation between an indoor unit and an outdoor unit. The indoor unit is located at a higher elevation than the outdoor unit. A vertical pipe of length L connects the indoor unit to the outdoor unit. A horizontal pipe of length H connects the outdoor unit to the indoor unit. The total one-way pipe length is the sum of H and L.

PJF000Z317

3.9 SELECTION CHART

Correct the cooling and heating capacity in accordance with the operating conditions. The net cooling and heating capacity can be obtained in the following way.

Net capacity = Capacity shown in the capacity tables (3.9.1) × Correction factors shown in the table (3.9.2) (3.9.3) (3.9.4).

Caution: In case that the cooling operation during low outdoor air temperature below -5°C is expected, install the outdoor unit where it is not influenced by natural wind. Otherwise protection control by low pressure will be activated much more frequently and it will cause insufficient capacity or breakdown of the compressor in worst case.

3.9.1 Capacity tables

(1) Duct connected-High static pressure type (FDU)

Model **FDU71VNPVH** Indoor unit **FDU71VH** Outdoor unit **FDC71VNP**
Cooling mode

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|------------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|------|--------|------|--------|------|--------|------|--|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | 4.71 | 4.62 | 5.34 | 5.23 | 5.65 | 5.38 | 5.78 | 5.32 | 6.04 | 5.66 | 6.30 | 5.52 | | |
| 13 | | | | 5.00 | 4.89 | 5.58 | 5.46 | 5.87 | 5.45 | 5.99 | 5.38 | 6.23 | 5.71 | 6.48 | 5.56 | | |
| 15 | | | | 5.30 | 5.00 | 5.83 | 5.54 | 6.09 | 5.52 | 6.20 | 5.44 | 6.43 | 5.76 | 6.66 | 5.60 | | |
| 17 | | | | 5.59 | 5.10 | 6.07 | 5.62 | 6.31 | 5.58 | 6.41 | 5.50 | 6.62 | 5.81 | 6.83 | 5.64 | | |
| 19 | | | | 5.73 | 5.15 | 6.13 | 5.64 | 6.34 | 5.59 | 6.48 | 5.52 | 6.76 | 5.84 | 7.04 | 5.69 | | |
| 21 | | | | 5.80 | 5.18 | 6.20 | 5.66 | 6.36 | 5.60 | 6.54 | 5.54 | 6.89 | 5.88 | 7.25 | 5.74 | | |
| 23 | | | | 6.23 | 5.34 | 6.63 | 5.80 | 6.81 | 5.74 | 6.96 | 5.67 | 7.26 | 5.98 | 7.56 | 5.82 | | |
| 25 | | | 6.26 | 5.68 | 6.67 | 5.50 | 7.07 | 5.95 | 7.26 | 5.89 | 7.38 | 5.80 | 7.63 | 6.08 | 7.88 | 5.89 | |
| 27 | | | 6.72 | 5.87 | 7.11 | 5.67 | 7.51 | 6.10 | 7.71 | 6.03 | 7.91 | 5.96 | 8.31 | 6.27 | | | |
| 29 | | | 6.60 | 5.82 | 6.98 | 5.62 | 7.36 | 6.05 | 7.56 | 5.98 | 7.75 | 5.91 | 8.13 | 6.22 | | | |
| 31 | | | 6.47 | 5.76 | 6.85 | 5.57 | 7.22 | 6.00 | 7.40 | 5.93 | 7.59 | 5.86 | 7.95 | 6.17 | | | |
| 33 | 6.01 | 5.33 | 6.27 | 5.68 | 6.72 | 5.52 | 7.08 | 5.96 | 7.25 | 5.88 | 7.43 | 5.81 | 7.77 | 6.12 | | | |
| 35 | 5.89 | 5.27 | 6.15 | 5.63 | 6.59 | 5.47 | 6.94 | 5.91 | 7.10 | 5.83 | 7.26 | 5.76 | 7.59 | 6.07 | | | |
| 37 | 5.62 | 5.15 | 5.86 | 5.51 | 6.27 | 5.35 | 6.59 | 5.79 | 6.75 | 5.72 | 6.91 | 5.65 | 7.23 | 5.97 | | | |
| 39 | 5.35 | 5.04 | 5.57 | 5.40 | 5.95 | 5.23 | 6.25 | 5.68 | 6.40 | 5.61 | 6.55 | 5.55 | 6.86 | 5.87 | | | |
| 41 | 5.08 | 4.92 | 5.29 | 5.18 | 5.62 | 5.11 | 5.90 | 5.56 | 6.05 | 5.50 | 6.20 | 5.44 | 6.50 | 5.77 | | | |
| 43 | 4.99 | 4.88 | 5.18 | 5.07 | 5.47 | 5.06 | 5.73 | 5.51 | 5.88 | 5.45 | 6.04 | 5.39 | 6.35 | 5.74 | | | |

(kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|------------------------|------|-----------------------------|------|------|------|------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| -14.5 | -15 | 4.17 | 4.15 | 4.13 | 4.11 | 4.09 | |
| -13.5 | -14 | 4.23 | 4.21 | 4.19 | 4.17 | 4.14 | |
| -11.5 | -12 | 4.35 | 4.33 | 4.31 | 4.29 | 4.26 | |
| -9.5 | -10 | 4.47 | 4.45 | 4.43 | 4.40 | 4.38 | |
| -7.5 | -8 | 4.59 | 4.57 | 4.55 | 4.52 | 4.50 | |
| -5.5 | -6 | 4.94 | 4.92 | 4.89 | 4.87 | 4.84 | |
| -3.0 | -4 | 5.29 | 5.26 | 5.24 | 5.21 | 5.18 | |
| -1.0 | -2 | 5.64 | 5.61 | 5.58 | 5.55 | 5.52 | |
| 1.0 | 0 | 5.99 | 5.96 | 5.93 | 5.89 | 5.86 | |
| 2.0 | 1 | 6.16 | 6.13 | 6.10 | 6.06 | 6.03 | |
| 3.0 | 2 | 6.37 | 6.33 | 6.30 | 6.26 | 6.22 | |
| 5.0 | 4 | 6.77 | 6.74 | 6.70 | 6.66 | 6.62 | |
| 7.0 | 6 | 7.18 | 7.14 | 7.10 | 7.05 | 7.01 | |
| 9.0 | 8 | 7.28 | 7.24 | 7.19 | 7.14 | 7.09 | |
| 11.5 | 10 | 7.38 | 7.33 | 7.29 | 7.23 | 7.17 | |
| 13.5 | 12 | 7.34 | 7.29 | 7.24 | 7.18 | 7.12 | |
| 15.5 | 14 | 7.30 | 7.25 | 7.19 | 7.13 | 7.07 | |
| 16.5 | 16 | 7.28 | 7.23 | 7.17 | 7.10 | 7.04 | |

PJG00Z190 

Model **FDU90VNPVH** Indoor unit **FDU100VH** Outdoor unit **FDC90VNP**
Cooling mode

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | |
|------------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|------|--------|-------|--------|-------|--------|------|--|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | |
| | 12°CWB | 14°CWB | 16°CWB | 18°CWB | 19°CWB | 20°CWB | 22°CWB | 24°CWB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | 8.35 | 7.08 | 8.93 | 7.59 | 9.21 | 7.47 | 9.59 | 7.37 | 10.34 | 7.83 | 11.09 | 7.56 | | |
| 13 | | | | 8.42 | 7.10 | 8.94 | 7.59 | 9.20 | 7.47 | 9.55 | 7.36 | 10.25 | 7.82 | 10.96 | 7.54 | | |
| 15 | | | | 8.48 | 7.12 | 8.96 | 7.59 | 9.19 | 7.47 | 9.52 | 7.35 | 10.17 | 7.80 | 10.83 | 7.53 | | |
| 17 | | | | 8.54 | 7.14 | 8.97 | 7.60 | 9.18 | 7.46 | 9.49 | 7.35 | 10.09 | 7.79 | 10.70 | 7.51 | | |
| 19 | | | | 8.51 | 7.13 | 8.96 | 7.60 | 9.19 | 7.47 | 9.48 | 7.35 | 10.06 | 7.78 | 10.63 | 7.50 | | |
| 21 | | | | 8.32 | 7.07 | 8.96 | 7.59 | 9.20 | 7.47 | 9.47 | 7.34 | 10.02 | 7.78 | 10.57 | 7.49 | | |
| 23 | | | | 8.52 | 7.13 | 9.04 | 7.62 | 9.21 | 7.47 | 9.47 | 7.34 | 10.00 | 7.77 | 10.52 | 7.48 | | |
| 25 | | | 8.10 | 7.36 | 8.72 | 7.19 | 9.13 | 7.64 | 9.23 | 7.48 | 9.48 | 7.35 | 9.97 | 7.77 | 10.47 | 7.47 | |
| 27 | | | 8.38 | 7.45 | 8.92 | 7.25 | 9.22 | 7.66 | 9.24 | 7.48 | 9.27 | 7.30 | 9.31 | 7.65 | | | |
| 29 | | | 8.25 | 7.41 | 8.77 | 7.20 | 9.11 | 7.63 | 9.18 | 7.46 | 9.26 | 7.30 | 9.41 | 7.67 | | | |
| 31 | | | 8.11 | 7.36 | 8.62 | 7.16 | 9.00 | 7.60 | 9.12 | 7.45 | 9.25 | 7.30 | 9.50 | 7.68 | | | |
| 33 | 7.53 | 6.79 | 7.88 | 7.29 | 8.46 | 7.11 | 8.88 | 7.58 | 9.06 | 7.44 | 9.24 | 7.29 | 9.59 | 7.70 | | | |
| 35 | 7.41 | 6.74 | 7.74 | 7.24 | 8.31 | 7.07 | 8.77 | 7.55 | 9.00 | 7.42 | 9.23 | 7.29 | 9.68 | 7.72 | | | |
| 37 | 7.15 | 6.65 | 7.47 | 7.16 | 8.00 | 6.98 | 8.44 | 7.47 | 8.66 | 7.35 | 8.88 | 7.22 | 9.33 | 7.65 | | | |
| 39 | 6.89 | 6.55 | 7.20 | 7.05 | 7.70 | 6.90 | 8.11 | 7.39 | 8.32 | 7.27 | 8.54 | 7.15 | 8.97 | 7.59 | | | |
| 41 | 6.63 | 6.46 | 6.92 | 6.78 | 7.39 | 6.81 | 7.77 | 7.31 | 7.98 | 7.20 | 8.20 | 7.08 | 8.62 | 7.53 | | | |
| 43 | 6.36 | 6.24 | 6.65 | 6.52 | 7.08 | 6.73 | 7.44 | 7.23 | 7.65 | 7.12 | 7.85 | 7.01 | 8.26 | 7.48 | | | |

(kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|------------------------|------|-----------------------------|-------|-------|-------|-------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| -14.5 | -15 | 5.26 | 5.24 | 5.21 | 5.18 | 5.15 | |
| -13.5 | -14 | 5.38 | 5.35 | 5.32 | 5.29 | 5.26 | |
| -11.5 | -12 | 5.61 | 5.58 | 5.55 | 5.52 | 5.49 | |
| -9.5 | -10 | 5.84 | 5.81 | 5.78 | 5.74 | 5.71 | |
| -7.5 | -8 | 6.07 | 6.04 | 6.00 | 5.97 | 5.93 | |
| -5.5 | -6 | 6.25 | 6.21 | 6.17 | 6.13 | 6.09 | |
| -3.0 | -4 | 6.42 | 6.37 | 6.33 | 6.29 | 6.25 | |
| -1.0 | -2 | 6.59 | 6.54 | 6.50 | 6.45 | 6.41 | |
| 1.0 | 0 | 6.76 | 6.71 | 6.66 | 6.61 | 6.56 | |
| 2.0 | 1 | 6.84 | 6.79 | 6.74 | 6.69 | 6.64 | |
| 3.0 | 2 | 7.30 | 7.25 | 7.19 | 7.14 | 7.08 | |
| 5.0 | 4 | 8.22 | 8.16 | 8.10 | 8.04 | 7.97 | |
| 7.0 | 6 | 9.13 | 9.07 | 9.00 | 8.93 | 8.86 | |
| 9.0 | 8 | 9.61 | 9.54 | 9.47 | 9.39 | 9.32 | |
| 11.5 | 10 | 10.09 | 10.01 | 9.93 | 9.85 | 9.77 | |
| 13.5 | 12 | 10.26 | 10.18 | 10.10 | 10.01 | 9.93 | |
| 15.5 | 14 | 10.42 | 10.34 | 10.26 | 10.17 | 10.08 | |
| 16.5 | 16 | 10.51 | 10.42 | 10.34 | 10.25 | 10.16 | |

PJG00Z190 

- Notes (1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is same as nominal condition frequency or follows the protection controls.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference : 0m
Indoor fan speed : PHi
- (3) Symbols are as follows.
TC : Total cooling capacity (kW), SHC : Sensible heat capacity (kW), HC : Heating capacity (kW)

Model **FDU100VNP1VH** Indoor unit FDU100VH Outdoor unit FDC100VNP
 Cooling mode (kW) Heating mode : HC (kW)

| Outdoor air temperature | Indoor air temperature | | | | | | | | | | | | | | Outdoor air temperature | Indoor air temperature | | | | | | | |
|-------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|-------------------------|------------------------|-------|------|-------|-------|-------|-------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | | 33°CDB | | °CDB | | | | | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | | 24°CWB | | °CDB | °CWB | 16 | 18 | 20 | 22 |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | |
| 11 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 | -14.5 | -15 | 6.20 | 6.18 | 6.16 | 6.14 | 6.11 |
| 13 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 | -13.5 | -14 | 6.26 | 6.23 | 6.21 | 6.19 | 6.16 |
| 15 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 | -11.5 | -12 | 6.36 | 6.34 | 6.31 | 6.29 | 6.26 |
| 17 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 | -9.5 | -10 | 6.47 | 6.44 | 6.42 | 6.39 | 6.36 |
| 19 | | | | | 9.65 | 7.47 | 10.18 | 7.91 | 10.45 | 7.77 | 10.66 | 7.61 | 11.08 | 7.97 | 11.51 | 7.63 | -7.5 | -8 | 6.58 | 6.55 | 6.52 | 6.49 | 6.46 |
| 21 | | | | | 9.59 | 7.45 | 10.16 | 7.90 | 10.44 | 7.77 | 10.67 | 7.61 | 11.11 | 7.98 | 11.56 | 7.63 | -5.5 | -6 | 7.16 | 7.13 | 7.10 | 7.06 | 7.02 |
| 23 | | | | | 9.60 | 7.45 | 10.17 | 7.91 | 10.46 | 7.77 | 10.69 | 7.61 | 11.14 | 7.98 | 11.60 | 7.64 | -3.0 | -4 | 7.75 | 7.71 | 7.67 | 7.63 | 7.59 |
| 25 | | | 9.03 | 7.67 | 9.60 | 7.45 | 10.19 | 7.91 | 10.48 | 7.78 | 10.71 | 7.62 | 11.17 | 7.99 | 11.63 | 7.65 | -1.0 | -2 | 8.33 | 8.29 | 8.24 | 8.20 | 8.15 |
| 27 | | | 9.02 | 7.67 | 9.61 | 7.45 | 10.20 | 7.92 | 10.51 | 7.78 | 10.81 | 7.64 | 11.41 | 8.03 | | | 1.0 | 0 | 8.92 | 8.87 | 8.81 | 8.77 | 8.72 |
| 29 | | | 8.92 | 7.63 | 9.49 | 7.42 | 10.08 | 7.88 | 10.38 | 7.75 | 10.68 | 7.61 | 11.28 | 8.01 | | | 2.0 | 1 | 9.21 | 9.15 | 9.10 | 9.05 | 9.00 |
| 31 | | | 8.81 | 7.60 | 9.38 | 7.38 | 9.96 | 7.85 | 10.25 | 7.72 | 10.55 | 7.58 | 11.14 | 7.98 | | | 3.0 | 2 | 9.63 | 9.58 | 9.52 | 9.47 | 9.41 |
| 33 | 8.24 | 7.05 | 8.61 | 7.53 | 9.26 | 7.35 | 9.83 | 7.82 | 10.13 | 7.69 | 10.42 | 7.55 | 11.01 | 7.96 | | | 5.0 | 4 | 10.48 | 10.42 | 10.36 | 10.30 | 10.24 |
| 35 | 8.08 | 6.99 | 8.47 | 7.48 | 9.14 | 7.31 | 9.71 | 7.79 | 10.00 | 7.66 | 10.29 | 7.52 | 10.87 | 7.93 | | | 7.0 | 6 | 11.33 | 11.26 | 11.20 | 11.14 | 11.07 |
| 37 | 7.85 | 6.90 | 8.23 | 7.40 | 8.84 | 7.23 | 9.37 | 7.70 | 9.67 | 7.58 | 9.96 | 7.45 | 10.54 | 7.87 | | | 9.0 | 8 | 11.49 | 11.42 | 11.36 | 11.29 | 11.22 |
| 39 | 7.62 | 6.82 | 7.98 | 7.32 | 8.54 | 7.14 | 9.03 | 7.61 | 9.33 | 7.50 | 9.62 | 7.38 | 10.21 | 7.81 | | | 11.5 | 10 | 11.64 | 11.58 | 11.51 | 11.44 | 11.36 |
| 41 | 7.39 | 6.73 | 7.74 | 7.24 | 8.24 | 7.05 | 8.70 | 7.53 | 8.99 | 7.42 | 9.29 | 7.31 | 9.89 | 7.75 | | | 13.5 | 12 | 10.42 | 10.35 | 10.29 | 10.22 | 10.14 |
| 43 | 7.16 | 6.65 | 7.10 | 6.96 | 7.54 | 6.85 | 7.93 | 6.34 | 8.66 | 7.34 | 8.47 | 7.13 | 9.00 | 7.60 | | | 15.5 | 14 | 9.20 | 9.13 | 9.06 | 8.99 | 8.92 |
| | | | | | | | | | | | | | | | | | 16.5 | 16 | 8.58 | 8.52 | 8.45 | 8.38 | 8.31 |

- Notes (1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is same as nominal condition frequency or follows the protection controls.
- (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference : 0m
 Indoor fan speed : PHi
- (3) Symbols are as follows.
 TC : Total cooling capacity (kW), SHC : Sensible heat capacity (kW), HC : Heating capacity (kW)



(2) Duct connected-Low/Middle static pressure type (FDUM)

Model **FDUM71VNPVH** Indoor unit **FDUM71VH** Outdoor unit **FDC71VNP**
 Cooling mode

(kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 4.71 | 4.62 | 5.34 | 5.23 | 5.65 | 5.38 | 5.78 | 5.32 | 6.04 | 5.66 | 6.30 | 5.52 |
| 13 | | | | | 5.00 | 4.89 | 5.58 | 5.46 | 5.87 | 5.45 | 5.99 | 5.38 | 6.23 | 5.71 | 6.48 | 5.56 |
| 15 | | | | | 5.30 | 5.00 | 5.83 | 5.54 | 6.09 | 5.52 | 6.20 | 5.44 | 6.43 | 5.76 | 6.66 | 5.60 |
| 17 | | | | | 5.59 | 5.10 | 6.07 | 5.62 | 6.31 | 5.58 | 6.41 | 5.50 | 6.62 | 5.81 | 6.83 | 5.64 |
| 19 | | | | | 5.73 | 5.15 | 6.13 | 5.64 | 6.34 | 5.59 | 6.48 | 5.52 | 6.76 | 5.84 | 7.04 | 5.69 |
| 21 | | | | | 5.80 | 5.18 | 6.20 | 5.66 | 6.36 | 5.60 | 6.54 | 5.54 | 6.89 | 5.88 | 7.25 | 5.74 |
| 23 | | | | | 6.23 | 5.34 | 6.63 | 5.80 | 6.81 | 5.74 | 6.96 | 5.67 | 7.26 | 5.98 | 7.56 | 5.82 |
| 25 | | | 6.26 | 5.68 | 6.67 | 5.50 | 7.07 | 5.95 | 7.26 | 5.89 | 7.38 | 5.80 | 7.63 | 6.08 | 7.88 | 5.89 |
| 27 | | | 6.72 | 5.87 | 7.11 | 5.67 | 7.51 | 6.10 | 7.71 | 6.03 | 7.91 | 5.96 | 8.31 | 6.27 | | |
| 29 | | | 6.60 | 5.82 | 6.98 | 5.62 | 7.36 | 6.05 | 7.56 | 5.98 | 7.75 | 5.91 | 8.13 | 6.22 | | |
| 31 | | | 6.47 | 5.76 | 6.85 | 5.57 | 7.22 | 6.00 | 7.40 | 5.93 | 7.59 | 5.86 | 7.95 | 6.17 | | |
| 33 | 6.01 | 5.33 | 6.27 | 5.68 | 6.72 | 5.52 | 7.08 | 5.96 | 7.25 | 5.88 | 7.43 | 5.81 | 7.77 | 6.12 | | |
| 35 | 5.89 | 5.27 | 6.15 | 5.63 | 6.59 | 5.47 | 6.94 | 5.91 | 7.10 | 5.83 | 7.26 | 5.76 | 7.59 | 6.07 | | |
| 37 | 5.62 | 5.15 | 5.86 | 5.51 | 6.27 | 5.35 | 6.59 | 5.79 | 6.75 | 5.72 | 6.91 | 5.65 | 7.23 | 5.97 | | |
| 39 | 5.35 | 5.04 | 5.57 | 5.40 | 5.95 | 5.23 | 6.25 | 5.68 | 6.40 | 5.61 | 6.55 | 5.55 | 6.86 | 5.87 | | |
| 41 | 5.08 | 4.92 | 5.29 | 5.18 | 5.62 | 5.11 | 5.90 | 5.56 | 6.05 | 5.50 | 6.20 | 5.44 | 6.50 | 5.77 | | |
| 43 | 4.99 | 4.88 | 5.18 | 5.07 | 5.47 | 5.06 | 5.73 | 5.51 | 5.88 | 5.45 | 6.04 | 5.39 | 6.35 | 5.74 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|------------------------|------|-----------------------------|------|------|------|------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| -14.5 | -15 | 4.17 | 4.15 | 4.13 | 4.11 | 4.09 | |
| -13.5 | -14 | 4.23 | 4.21 | 4.19 | 4.17 | 4.14 | |
| -11.5 | -12 | 4.35 | 4.33 | 4.31 | 4.29 | 4.26 | |
| -9.5 | -10 | 4.47 | 4.45 | 4.43 | 4.40 | 4.38 | |
| -7.5 | -8 | 4.59 | 4.57 | 4.55 | 4.52 | 4.50 | |
| -5.5 | -6 | 4.94 | 4.92 | 4.89 | 4.87 | 4.84 | |
| -3.0 | -4 | 5.29 | 5.26 | 5.24 | 5.21 | 5.18 | |
| -1.0 | -2 | 5.64 | 5.61 | 5.58 | 5.55 | 5.52 | |
| 1.0 | 0 | 5.99 | 5.96 | 5.93 | 5.89 | 5.86 | |
| 2.0 | 1 | 6.16 | 6.13 | 6.10 | 6.06 | 6.03 | |
| 3.0 | 2 | 6.37 | 6.33 | 6.30 | 6.26 | 6.22 | |
| 5.0 | 4 | 6.77 | 6.74 | 6.70 | 6.66 | 6.62 | |
| 7.0 | 6 | 7.18 | 7.14 | 7.10 | 7.05 | 7.01 | |
| 9.0 | 8 | 7.28 | 7.24 | 7.19 | 7.14 | 7.09 | |
| 11.5 | 10 | 7.38 | 7.33 | 7.29 | 7.23 | 7.17 | |
| 13.5 | 12 | 7.34 | 7.29 | 7.24 | 7.18 | 7.12 | |
| 15.5 | 14 | 7.30 | 7.25 | 7.19 | 7.13 | 7.07 | |
| 16.5 | 16 | 7.28 | 7.23 | 7.17 | 7.10 | 7.04 | |

PJG00Z189

Model **FDUM90VNPVH** Indoor unit **FDUM100VH** Outdoor unit **FDC90VNP**
 Cooling mode

(kW) Heating mode : HC (kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | 12°CWB | | 14°CWB | | 16°CWB | | 18°CWB | | 19°CWB | | 20°CWB | | 22°CWB | | 24°CWB | |
| °CDB | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 8.35 | 7.08 | 8.93 | 7.59 | 9.21 | 7.47 | 9.59 | 7.37 | 10.34 | 7.83 | 11.09 | 7.56 |
| 13 | | | | | 8.42 | 7.10 | 8.94 | 7.59 | 9.20 | 7.47 | 9.55 | 7.36 | 10.25 | 7.82 | 10.96 | 7.54 |
| 15 | | | | | 8.48 | 7.12 | 8.96 | 7.59 | 9.19 | 7.47 | 9.52 | 7.35 | 10.17 | 7.80 | 10.83 | 7.53 |
| 17 | | | | | 8.54 | 7.14 | 8.97 | 7.60 | 9.18 | 7.46 | 9.49 | 7.35 | 10.09 | 7.79 | 10.70 | 7.51 |
| 19 | | | | | 8.51 | 7.13 | 8.96 | 7.60 | 9.19 | 7.47 | 9.48 | 7.35 | 10.06 | 7.78 | 10.63 | 7.50 |
| 21 | | | | | 8.32 | 7.07 | 8.96 | 7.59 | 9.20 | 7.47 | 9.47 | 7.34 | 10.02 | 7.78 | 10.57 | 7.49 |
| 23 | | | | | 8.52 | 7.13 | 9.04 | 7.62 | 9.21 | 7.47 | 9.47 | 7.34 | 10.00 | 7.77 | 10.52 | 7.48 |
| 25 | | | 8.10 | 7.36 | 8.72 | 7.19 | 9.13 | 7.64 | 9.23 | 7.48 | 9.48 | 7.35 | 9.97 | 7.77 | 10.47 | 7.47 |
| 27 | | | 8.38 | 7.45 | 8.92 | 7.25 | 9.22 | 7.66 | 9.24 | 7.48 | 9.27 | 7.30 | 9.31 | 7.65 | | |
| 29 | | | 8.25 | 7.41 | 8.77 | 7.20 | 9.11 | 7.63 | 9.18 | 7.46 | 9.26 | 7.30 | 9.41 | 7.67 | | |
| 31 | | | 8.11 | 7.36 | 8.62 | 7.16 | 9.00 | 7.60 | 9.12 | 7.45 | 9.25 | 7.30 | 9.50 | 7.68 | | |
| 33 | 7.53 | 6.79 | 7.88 | 7.29 | 8.46 | 7.11 | 8.88 | 7.58 | 9.06 | 7.44 | 9.24 | 7.29 | 9.59 | 7.70 | | |
| 35 | 7.41 | 6.74 | 7.74 | 7.24 | 8.31 | 7.07 | 8.77 | 7.55 | 9.00 | 7.42 | 9.23 | 7.29 | 9.68 | 7.72 | | |
| 37 | 7.15 | 6.65 | 7.47 | 7.16 | 8.00 | 6.98 | 8.44 | 7.47 | 8.66 | 7.35 | 8.88 | 7.22 | 9.33 | 7.65 | | |
| 39 | 6.89 | 6.55 | 7.20 | 7.05 | 7.70 | 6.90 | 8.11 | 7.39 | 8.32 | 7.27 | 8.54 | 7.15 | 8.97 | 7.59 | | |
| 41 | 6.63 | 6.46 | 6.92 | 6.78 | 7.39 | 6.81 | 7.77 | 7.31 | 7.98 | 7.20 | 8.20 | 7.08 | 8.62 | 7.53 | | |
| 43 | 6.36 | 6.24 | 6.65 | 6.52 | 7.08 | 6.73 | 7.44 | 7.23 | 7.65 | 7.12 | 7.85 | 7.01 | 8.26 | 7.48 | | |

| Outdoor air temp. °CDB | °CWB | Indoor air temperature °CDB | | | | | |
|------------------------|------|-----------------------------|-------|-------|-------|-------|--|
| | | 16 | 18 | 20 | 22 | 24 | |
| -14.5 | -15 | 5.26 | 5.24 | 5.21 | 5.18 | 5.15 | |
| -13.5 | -14 | 5.38 | 5.35 | 5.32 | 5.29 | 5.26 | |
| -11.5 | -12 | 5.61 | 5.58 | 5.55 | 5.52 | 5.49 | |
| -9.5 | -10 | 5.84 | 5.81 | 5.78 | 5.74 | 5.71 | |
| -7.5 | -8 | 6.07 | 6.04 | 6.00 | 5.97 | 5.93 | |
| -5.5 | -6 | 6.25 | 6.21 | 6.17 | 6.13 | 6.09 | |
| -3.0 | -4 | 6.42 | 6.37 | 6.33 | 6.29 | 6.25 | |
| -1.0 | -2 | 6.59 | 6.54 | 6.50 | 6.45 | 6.41 | |
| 1.0 | 0 | 6.76 | 6.71 | 6.66 | 6.61 | 6.56 | |
| 2.0 | 1 | 6.84 | 6.79 | 6.74 | 6.69 | 6.64 | |
| 3.0 | 2 | 7.30 | 7.25 | 7.19 | 7.14 | 7.08 | |
| 5.0 | 4 | 8.22 | 8.16 | 8.10 | 8.04 | 7.97 | |
| 7.0 | 6 | 9.13 | 9.07 | 9.00 | 8.93 | 8.86 | |
| 9.0 | 8 | 9.61 | 9.54 | 9.47 | 9.39 | 9.32 | |
| 11.5 | 10 | 10.09 | 10.01 | 9.93 | 9.85 | 9.77 | |
| 13.5 | 12 | 10.26 | 10.18 | 10.10 | 10.01 | 9.93 | |
| 15.5 | 14 | 10.42 | 10.34 | 10.26 | 10.17 | 10.08 | |
| 16.5 | 16 | 10.51 | 10.42 | 10.34 | 10.25 | 10.16 | |

PJG00Z189

- Notes (1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is same as nominal condition frequency or follows the protection controls.
 (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length : 7.5m
 Level difference : 0m
 Indoor fan speed : PHi
 (3) Symbols are as follows.
 TC : Total cooling capacity (kW), SHC : Sensible heat capacity (kW), HC : Heating capacity (kW)

Model **FDUM100VNP1VH** Indoor unit **FDUM100VH** Outdoor unit **FDC100VNP**

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temperature °CDB | Indoor air temperature | | | | | | | | | | | | | | | |
|---------------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC |
| 11 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 |
| 13 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 |
| 15 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 |
| 17 | | | | | 9.71 | 7.49 | 10.21 | 7.92 | 10.46 | 7.77 | 10.66 | 7.61 | 11.06 | 7.97 | 11.46 | 7.62 |
| 19 | | | | | 9.65 | 7.47 | 10.18 | 7.91 | 10.45 | 7.77 | 10.66 | 7.61 | 11.08 | 7.97 | 11.51 | 7.63 |
| 21 | | | | | 9.59 | 7.45 | 10.16 | 7.90 | 10.44 | 7.77 | 10.67 | 7.61 | 11.11 | 7.98 | 11.56 | 7.63 |
| 23 | | | | | 9.60 | 7.45 | 10.17 | 7.91 | 10.46 | 7.77 | 10.69 | 7.61 | 11.14 | 7.98 | 11.60 | 7.64 |
| 25 | | | 9.03 | 7.67 | 9.60 | 7.45 | 10.19 | 7.91 | 10.48 | 7.78 | 10.71 | 7.62 | 11.17 | 7.99 | 11.63 | 7.65 |
| 27 | | | 9.02 | 7.67 | 9.61 | 7.45 | 10.20 | 7.92 | 10.51 | 7.78 | 10.81 | 7.64 | 11.41 | 8.03 | | |
| 29 | | | 8.92 | 7.63 | 9.49 | 7.42 | 10.08 | 7.88 | 10.38 | 7.75 | 10.68 | 7.61 | 11.28 | 8.01 | | |
| 31 | | | 8.81 | 7.60 | 9.38 | 7.38 | 9.96 | 7.85 | 10.25 | 7.72 | 10.55 | 7.58 | 11.14 | 7.98 | | |
| 33 | 8.24 | 7.05 | 8.61 | 7.53 | 9.26 | 7.35 | 9.83 | 7.82 | 10.13 | 7.69 | 10.42 | 7.55 | 11.01 | 7.96 | | |
| 35 | 8.08 | 6.99 | 8.47 | 7.48 | 9.14 | 7.31 | 9.71 | 7.79 | 10.00 | 7.66 | 10.29 | 7.52 | 10.87 | 7.93 | | |
| 37 | 7.85 | 6.90 | 8.23 | 7.40 | 8.84 | 7.23 | 9.37 | 7.70 | 9.67 | 7.58 | 9.96 | 7.45 | 10.54 | 7.87 | | |
| 39 | 7.62 | 6.82 | 7.98 | 7.32 | 8.54 | 7.14 | 9.03 | 7.61 | 9.33 | 7.50 | 9.62 | 7.38 | 10.21 | 7.81 | | |
| 41 | 7.39 | 6.73 | 7.74 | 7.24 | 8.24 | 7.05 | 8.70 | 7.53 | 8.99 | 7.42 | 9.29 | 7.31 | 9.89 | 7.75 | | |
| 43 | 7.16 | 6.65 | 7.10 | 6.96 | 7.54 | 6.85 | 7.93 | 6.34 | 8.66 | 7.34 | 8.47 | 7.13 | 9.00 | 7.60 | | |

| Outdoor air temperature °CDB | °CWB | Indoor air temperature °CDB | | | | |
|---------------------------------|------|--------------------------------|-------|-------|-------|-------|
| | | 16 | 18 | 20 | 22 | 24 |
| -14.5 | -15 | 6.20 | 6.18 | 6.16 | 6.14 | 6.11 |
| -13.5 | -14 | 6.26 | 6.23 | 6.21 | 6.19 | 6.16 |
| -11.5 | -12 | 6.36 | 6.34 | 6.31 | 6.29 | 6.26 |
| -9.5 | -10 | 6.47 | 6.44 | 6.42 | 6.39 | 6.36 |
| -7.5 | -8 | 6.58 | 6.55 | 6.52 | 6.49 | 6.46 |
| -5.5 | -6 | 7.16 | 7.13 | 7.10 | 7.06 | 7.02 |
| -3.0 | -4 | 7.75 | 7.71 | 7.67 | 7.63 | 7.59 |
| -1.0 | -2 | 8.33 | 8.29 | 8.24 | 8.20 | 8.15 |
| 1.0 | 0 | 8.92 | 8.87 | 8.81 | 8.77 | 8.72 |
| 2.0 | 1 | 9.21 | 9.15 | 9.10 | 9.05 | 9.00 |
| 3.0 | 2 | 9.63 | 9.58 | 9.52 | 9.47 | 9.41 |
| 5.0 | 4 | 10.48 | 10.42 | 10.36 | 10.30 | 10.24 |
| 7.0 | 6 | 11.33 | 11.26 | 11.20 | 11.14 | 11.07 |
| 9.0 | 8 | 11.49 | 11.42 | 11.36 | 11.29 | 11.22 |
| 11.5 | 10 | 11.64 | 11.58 | 11.51 | 11.44 | 11.36 |
| 13.5 | 12 | 10.42 | 10.35 | 10.29 | 10.22 | 10.14 |
| 15.5 | 14 | 9.20 | 9.13 | 9.06 | 8.99 | 8.92 |
| 16.5 | 16 | 8.58 | 8.52 | 8.45 | 8.38 | 8.31 |

- Notes (1) These data show average statuses.
 Depending on the system control, there may be ranges where the operation is not conducted continuously.
 These data show the case where the operation frequency of a compressor is fixed.(Cooling only)
- (2) Capacities are based on the following conditions.
 Corresponding refrigerant piping length :7.5m
 Level difference of Zero.
- (3) Symbols are as follows.
 TC : Total cooling capacity (kW)
 SHC : Sensible heat capacity (kW)
 HC : Heating capacity (kW)



(3) Ceiling suspended type (FDE)

Model **FDE71VNPVH** Indoor unit **FDE71VH** Outdoor unit **FDC71VNP**

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | | |
|---------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|---------------------------|--------------------------------|------|------|------|------|------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | | |
| 11 | | | | | | 4.71 | 4.37 | 5.34 | 4.89 | 5.65 | 4.90 | 5.78 | 4.85 | 6.04 | 5.12 | 6.30 | 5.00 | -14.5 | -15 | 4.17 | 4.15 | 4.13 | 4.11 | 4.09 |
| 13 | | | | | | 5.00 | 4.48 | 5.58 | 4.98 | 5.87 | 4.98 | 5.99 | 4.92 | 6.23 | 5.18 | 6.48 | 5.05 | -13.5 | -14 | 4.23 | 4.21 | 4.19 | 4.17 | 4.14 |
| 15 | | | | | | 5.30 | 4.59 | 5.83 | 5.06 | 6.09 | 5.05 | 6.20 | 4.99 | 6.43 | 5.24 | 6.66 | 5.10 | -11.5 | -12 | 4.35 | 4.33 | 4.31 | 4.29 | 4.26 |
| 17 | | | | | | 5.59 | 4.71 | 6.07 | 5.15 | 6.31 | 5.13 | 6.41 | 5.06 | 6.62 | 5.29 | 6.83 | 5.14 | -9.5 | -10 | 4.47 | 4.45 | 4.43 | 4.40 | 4.38 |
| 19 | | | | | | 5.73 | 4.76 | 6.13 | 5.17 | 6.34 | 5.14 | 6.48 | 5.08 | 6.76 | 5.33 | 7.04 | 5.20 | -7.5 | -8 | 4.59 | 4.57 | 4.55 | 4.52 | 4.50 |
| 21 | | | | | | 5.80 | 4.79 | 6.20 | 5.20 | 6.36 | 5.15 | 6.54 | 5.10 | 6.89 | 5.37 | 7.25 | 5.25 | -5.5 | -6 | 4.94 | 4.92 | 4.89 | 4.87 | 4.84 |
| 23 | | | | | | 6.23 | 4.96 | 6.63 | 5.36 | 6.81 | 5.30 | 6.96 | 5.24 | 7.26 | 5.49 | 7.56 | 5.34 | -3.0 | -4 | 5.29 | 5.26 | 5.24 | 5.21 | 5.18 |
| 25 | | | 6.26 | 5.28 | 6.67 | 5.14 | 7.07 | 5.52 | 7.26 | 5.47 | 7.38 | 5.38 | 7.63 | 5.60 | 7.88 | 5.43 | -1.0 | -2 | 5.64 | 5.61 | 5.58 | 5.55 | 5.52 | |
| 27 | | | 6.72 | 5.49 | 7.11 | 5.33 | 7.51 | 5.69 | 7.71 | 5.63 | 7.91 | 5.57 | 8.31 | 5.82 | | | 1.0 | 0 | 5.99 | 5.96 | 5.93 | 5.89 | 5.86 | |
| 29 | | | 6.60 | 5.44 | 6.98 | 5.27 | 7.36 | 5.64 | 7.56 | 5.57 | 7.75 | 5.51 | 8.13 | 5.76 | | | 2.0 | 1 | 6.16 | 6.13 | 6.10 | 6.06 | 6.03 | |
| 31 | | | 6.47 | 5.38 | 6.85 | 5.22 | 7.22 | 5.58 | 7.40 | 5.52 | 7.59 | 5.45 | 7.95 | 5.70 | | | 3.0 | 2 | 6.37 | 6.33 | 6.30 | 6.26 | 6.22 | |
| 33 | 6.01 | 5.00 | 6.27 | 5.29 | 6.72 | 5.16 | 7.08 | 5.53 | 7.25 | 5.46 | 7.43 | 5.40 | 7.77 | 5.65 | | | 4.0 | 3 | 6.77 | 6.74 | 6.70 | 6.66 | 6.62 | |
| 35 | 5.89 | 4.94 | 6.15 | 5.23 | 6.59 | 5.11 | 6.94 | 5.47 | 7.10 | 5.41 | 7.26 | 5.34 | 7.59 | 5.59 | | | 5.0 | 4 | 7.00 | 6.97 | 6.93 | 6.89 | 6.85 | |
| 37 | 5.62 | 4.81 | 5.86 | 5.11 | 6.27 | 4.98 | 6.59 | 5.34 | 6.75 | 5.28 | 6.91 | 5.22 | 7.23 | 5.48 | | | 6.0 | 5 | 7.18 | 7.14 | 7.10 | 7.05 | 7.01 | |
| 39 | 5.35 | 4.69 | 5.57 | 4.98 | 5.95 | 4.85 | 6.25 | 5.22 | 6.40 | 5.16 | 6.55 | 5.10 | 6.86 | 5.37 | | | 7.0 | 6 | 7.18 | 7.14 | 7.10 | 7.05 | 7.01 | |
| 41 | 5.08 | 4.56 | 5.29 | 4.86 | 5.62 | 4.72 | 5.90 | 5.09 | 6.05 | 5.04 | 6.20 | 4.98 | 6.50 | 5.26 | | | 8.0 | 7 | 7.28 | 7.24 | 7.20 | 7.16 | 7.12 | |
| 43 | 4.99 | 4.52 | 5.18 | 4.81 | 5.47 | 4.66 | 5.73 | 5.03 | 5.88 | 4.98 | 6.04 | 4.93 | 6.35 | 5.21 | | | 9.0 | 8 | 7.28 | 7.24 | 7.20 | 7.16 | 7.12 | |
| | | | | | | | | | | | | | | | | | | 10.0 | 9 | 7.34 | 7.29 | 7.24 | 7.18 | 7.12 |
| | | | | | | | | | | | | | | | | | | 11.5 | 10 | 7.38 | 7.33 | 7.29 | 7.23 | 7.17 |
| | | | | | | | | | | | | | | | | | | 13.5 | 12 | 7.34 | 7.29 | 7.24 | 7.18 | 7.12 |
| | | | | | | | | | | | | | | | | | | 15.5 | 14 | 7.30 | 7.25 | 7.19 | 7.13 | 7.07 |
| | | | | | | | | | | | | | | | | | | 16.5 | 16 | 7.28 | 7.23 | 7.17 | 7.10 | 7.04 |

PFA004Z049

Model **FDE90VNPVH** Indoor unit **FDE100VH** Outdoor unit **FDC90VNP1**

Cooling mode

(kW)

Heating mode : HC

(kW)

| Outdoor air temp. °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temp. °CDB | Indoor air temperature °CDB | | | | | | |
|---------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|-------|--------|-------|---------------------------|--------------------------------|-------|-------|-------|-------|-------|------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | °CWB | 16 | 18 | 20 | 22 | 24 | |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | | |
| 11 | | | | | | 8.35 | 7.46 | 8.93 | 8.14 | 9.21 | 8.09 | 9.59 | 8.07 | 10.34 | 8.62 | 11.09 | 8.52 | -14.5 | -15 | 5.26 | 5.24 | 5.21 | 5.18 | 5.15 |
| 13 | | | | | | 8.42 | 7.49 | 8.94 | 8.14 | 9.20 | 8.09 | 9.55 | 8.06 | 10.25 | 8.59 | 10.96 | 8.48 | -13.5 | -14 | 5.38 | 5.35 | 5.32 | 5.29 | 5.26 |
| 15 | | | | | | 8.48 | 7.51 | 8.96 | 8.15 | 9.19 | 8.08 | 9.52 | 8.04 | 10.17 | 8.57 | 10.83 | 8.45 | -11.5 | -12 | 5.61 | 5.58 | 5.55 | 5.52 | 5.49 |
| 17 | | | | | | 8.54 | 7.54 | 8.97 | 8.15 | 9.18 | 8.08 | 9.49 | 8.03 | 10.09 | 8.54 | 10.70 | 8.41 | -9.5 | -10 | 5.84 | 5.81 | 5.78 | 5.74 | 5.71 |
| 19 | | | | | | 8.51 | 7.52 | 8.96 | 8.15 | 9.19 | 8.08 | 9.48 | 8.03 | 10.06 | 8.53 | 10.63 | 8.39 | -7.5 | -8 | 6.07 | 6.04 | 6.00 | 5.97 | 5.93 |
| 21 | | | | | | 8.32 | 7.45 | 8.96 | 8.15 | 9.20 | 8.09 | 9.47 | 8.03 | 10.02 | 8.52 | 10.57 | 8.37 | -5.5 | -6 | 6.25 | 6.21 | 6.17 | 6.13 | 6.09 |
| 23 | | | | | | 8.52 | 7.53 | 9.04 | 8.18 | 9.21 | 8.09 | 9.47 | 8.03 | 10.00 | 8.51 | 10.52 | 8.36 | -3.0 | -4 | 6.42 | 6.37 | 6.33 | 6.29 | 6.25 |
| 25 | | | 8.10 | 7.77 | 8.72 | 7.61 | 9.13 | 8.22 | 9.23 | 8.10 | 9.48 | 8.03 | 9.97 | 8.51 | 10.47 | 8.35 | -1.0 | -2 | 6.59 | 6.54 | 6.50 | 6.45 | 6.41 | |
| 27 | | | 8.38 | 7.89 | 8.92 | 7.69 | 9.22 | 8.25 | 9.24 | 8.10 | 9.27 | 7.96 | 9.31 | 8.30 | | | 1.0 | 0 | 6.76 | 6.71 | 6.66 | 6.61 | 6.56 | |
| 29 | | | 8.25 | 7.83 | 8.77 | 7.63 | 9.11 | 8.21 | 9.18 | 8.08 | 9.26 | 7.96 | 9.41 | 8.33 | | | 2.0 | 1 | 6.84 | 6.79 | 6.74 | 6.69 | 6.64 | |
| 31 | | | 8.11 | 7.77 | 8.62 | 7.57 | 9.00 | 8.16 | 9.12 | 8.06 | 9.25 | 7.95 | 9.50 | 8.36 | | | 3.0 | 2 | 7.30 | 7.25 | 7.19 | 7.14 | 7.08 | |
| 33 | 7.53 | 7.16 | 7.88 | 7.67 | 8.46 | 7.51 | 8.88 | 8.12 | 9.06 | 8.04 | 9.24 | 7.95 | 9.59 | 8.39 | | | 4.0 | 3 | 8.22 | 8.16 | 8.10 | 8.04 | 7.97 | |
| 35 | 7.41 | 7.10 | 7.74 | 7.59 | 8.31 | 7.44 | 8.77 | 8.08 | 9.00 | 8.02 | 9.23 | 7.95 | 9.68 | 8.41 | | | 5.0 | 4 | 9.13 | 9.07 | 9.00 | 8.93 | 8.86 | |
| 37 | 7.15 | 6.98 | 7.47 | 7.32 | 8.00 | 7.32 | 8.44 | 7.96 | 8.66 | 7.90 | 8.88 | 7.83 | 9.33 | 8.30 | | | 6.0 | 5 | 9.61 | 9.54 | 9.47 | 9.39 | 9.32 | |
| 39 | 6.89 | 6.75 | 7.20 | 7.05 | 7.70 | 7.20 | 8.11 | 7.84 | 8.32 | 7.78 | 8.54 | 7.71 | 8.97 | 8.20 | | | 7.0 | 6 | 10.09 | 10.01 | 9.93 | 9.85 | 9.77 | |
| 41 | 6.63 | 6.49 | 6.92 | 6.78 | 7.39 | 7.08 | 7.77 | 7.62 | 7.98 | 7.66 | 8.20 | 7.60 | 8.62 | 8.09 | | | 8.0 | 7 | 10.42 | 10.34 | 10.26 | 10.17 | 10.08 | |
| 43 | 6.36 | 6.24 | 6.65 | 6.52 | 7.08 | 6.94 | 7.44 | 7.29 | 7.65 | 7.49 | 7.85 | 7.48 | 8.26 | 7.98 | | | 9.0 | 8 | 10.51 | 10.42 | 10.34 | 10.25 | 10.16 | |

PFA004Z049

- Notes (1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.
- (2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.
- (3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model **FDE100VNP1VH** Indoor unit **FDE100VH** Outdoor unit **FDC100VNP**

Cooling mode

(kW) Heating mode : HC (kW)

| Outdoor air temperature °CDB | Indoor air temperature | | | | | | | | | | | | | | | | Outdoor air temperature °CDB | Indoor air temperature °CDB | | | | | |
|---------------------------------|------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|---------------------------------|--------------------------------|-------|-------|-------|-------|-------|
| | 18°CDB | | 21°CDB | | 23°CDB | | 26°CDB | | 27°CDB | | 28°CDB | | 31°CDB | | 33°CDB | | | °CWB | 16 | 18 | 20 | 22 | 24 |
| | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | TC | SHC | | | | | | | |
| 11 | | | | | 9.71 | 8.14 | 10.21 | 8.62 | 10.46 | 8.54 | 10.66 | 8.44 | 11.06 | 8.85 | 11.46 | 8.63 | -14.5 | -15 | 6.20 | 6.18 | 6.16 | 6.14 | 6.11 |
| 13 | | | | | 9.71 | 8.14 | 10.21 | 8.62 | 10.46 | 8.54 | 10.66 | 8.44 | 11.06 | 8.85 | 11.46 | 8.63 | -13.5 | -14 | 6.26 | 6.23 | 6.21 | 6.19 | 6.16 |
| 15 | | | | | 9.71 | 8.14 | 10.21 | 8.62 | 10.46 | 8.54 | 10.66 | 8.44 | 11.06 | 8.85 | 11.46 | 8.63 | -11.5 | -12 | 6.36 | 6.34 | 6.31 | 6.29 | 6.26 |
| 17 | | | | | 9.71 | 8.14 | 10.21 | 8.62 | 10.46 | 8.54 | 10.66 | 8.44 | 11.06 | 8.85 | 11.46 | 8.63 | -9.5 | -10 | 6.47 | 6.44 | 6.42 | 6.39 | 6.36 |
| 19 | | | | | 9.65 | 8.11 | 10.18 | 8.61 | 10.45 | 8.54 | 10.66 | 8.44 | 11.08 | 8.86 | 11.51 | 8.64 | -7.5 | -8 | 6.58 | 6.55 | 6.52 | 6.49 | 6.46 |
| 21 | | | | | 9.59 | 8.09 | 10.16 | 8.60 | 10.44 | 8.54 | 10.67 | 8.44 | 11.11 | 8.87 | 11.56 | 8.66 | -5.5 | -6 | 7.16 | 7.13 | 7.10 | 7.06 | 7.02 |
| 23 | | | | | 9.60 | 8.09 | 10.17 | 8.61 | 10.46 | 8.55 | 10.69 | 8.45 | 11.14 | 8.88 | 11.60 | 8.67 | -3.0 | -4 | 7.75 | 7.71 | 7.67 | 7.63 | 7.59 |
| 25 | | | 9.03 | 8.18 | 9.60 | 8.09 | 10.19 | 8.62 | 10.48 | 8.55 | 10.71 | 8.46 | 11.17 | 8.89 | 11.63 | 8.68 | -1.0 | -2 | 8.33 | 8.29 | 8.24 | 8.20 | 8.15 |
| 27 | | | 9.02 | 8.18 | 9.61 | 8.10 | 10.20 | 8.62 | 10.51 | 8.56 | 10.81 | 8.49 | 11.41 | 8.96 | | | 1.0 | 0 | 8.92 | 8.87 | 8.81 | 8.77 | 8.72 |
| 29 | | | 8.92 | 8.13 | 9.49 | 8.05 | 10.08 | 8.57 | 10.38 | 8.51 | 10.68 | 8.45 | 11.28 | 8.92 | | | 2.0 | 1 | 9.21 | 9.15 | 9.10 | 9.05 | 9.00 |
| 31 | | | 8.81 | 8.08 | 9.38 | 8.00 | 9.96 | 8.53 | 10.25 | 8.47 | 10.55 | 8.40 | 11.14 | 8.88 | | | 3.0 | 2 | 9.63 | 9.58 | 9.52 | 9.47 | 9.41 |
| 33 | 8.24 | 7.49 | 8.61 | 7.99 | 9.26 | 7.95 | 9.83 | 8.48 | 10.13 | 8.42 | 10.42 | 8.36 | 11.01 | 8.83 | | | 4.0 | 4 | 10.48 | 10.42 | 10.36 | 10.30 | 10.24 |
| 35 | 8.08 | 7.41 | 8.47 | 7.93 | 9.14 | 7.90 | 9.71 | 8.43 | 10.00 | 8.38 | 10.29 | 8.31 | 10.87 | 8.79 | | | 5.0 | 6 | 11.33 | 11.26 | 11.20 | 11.14 | 11.07 |
| 37 | 7.85 | 7.31 | 8.23 | 7.83 | 8.84 | 7.78 | 9.37 | 8.31 | 9.67 | 8.25 | 9.96 | 8.20 | 10.54 | 8.68 | | | 6.0 | 8 | 11.49 | 11.42 | 11.36 | 11.29 | 11.22 |
| 39 | 7.62 | 7.20 | 7.98 | 7.72 | 8.54 | 7.66 | 9.03 | 8.18 | 9.33 | 8.13 | 9.62 | 8.08 | 10.21 | 8.58 | | | 7.0 | 10 | 11.64 | 11.58 | 11.51 | 11.44 | 11.36 |
| 41 | 7.39 | 7.09 | 7.74 | 7.58 | 8.24 | 7.54 | 8.70 | 8.05 | 8.99 | 8.01 | 9.29 | 7.97 | 9.89 | 8.48 | | | 8.0 | 12 | 10.42 | 10.35 | 10.29 | 10.22 | 10.14 |
| 43 | 7.16 | 6.98 | 7.10 | 6.96 | 7.54 | 7.26 | 7.93 | 7.77 | 8.66 | 7.89 | 8.47 | 7.69 | 9.00 | 8.20 | | | 9.0 | 14 | 9.20 | 9.13 | 9.06 | 8.99 | 8.92 |
| | | | | | | | | | | | | | | | | | 10.0 | 16 | 8.58 | 8.52 | 8.45 | 8.38 | 8.31 |

Notes (1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
These data show the case where the operation frequency of a compressor is fixed.

(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length : 7.5m
Level difference of Zero.

(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

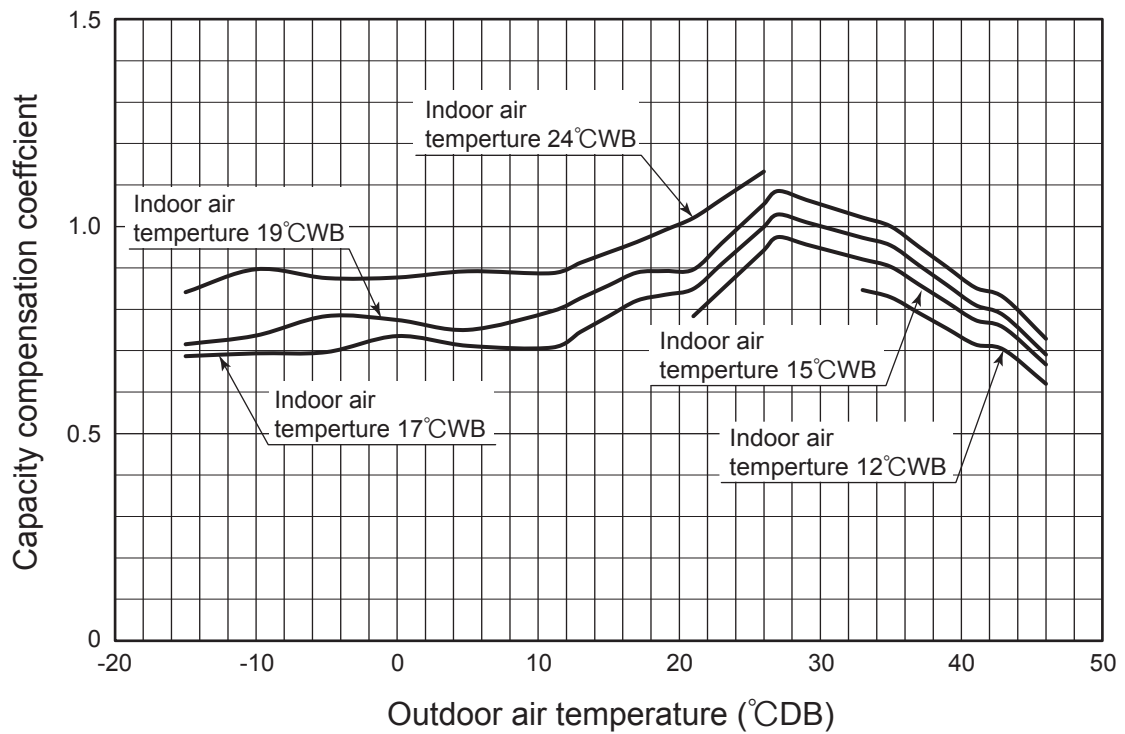


[References data]

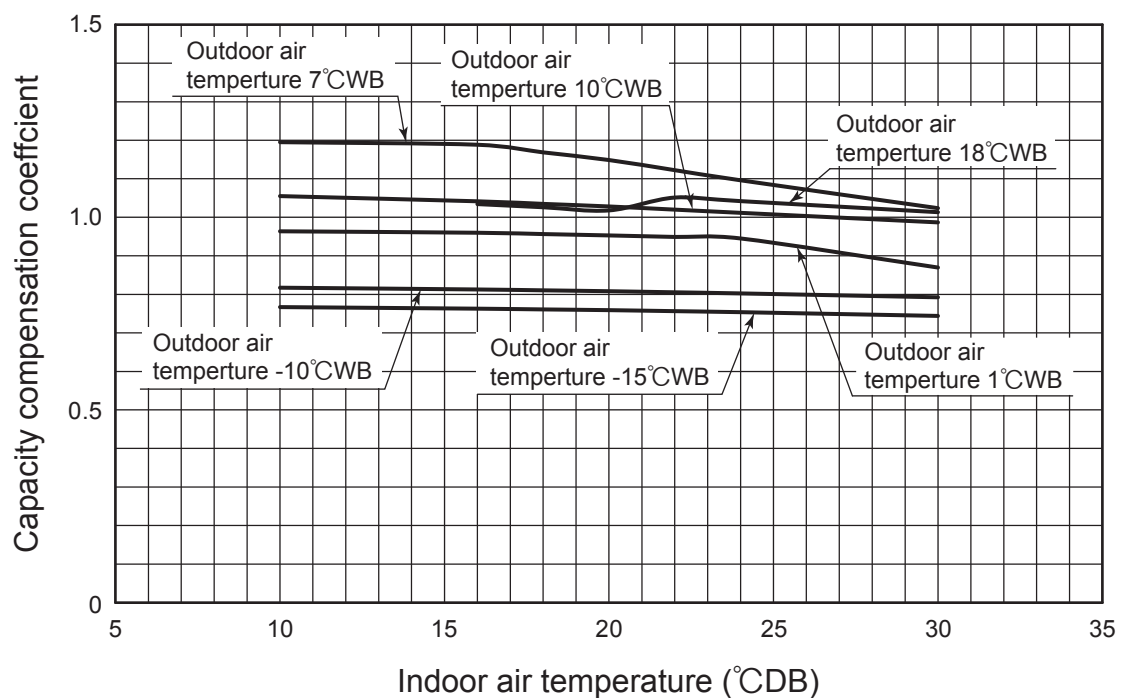
Capacity variation against outdoor and indoor temperature at the maximum compressor speed capacity compensation coefficient shows the ratio to nominal capacity.

(I) Model FDC71VNP

① Cooling

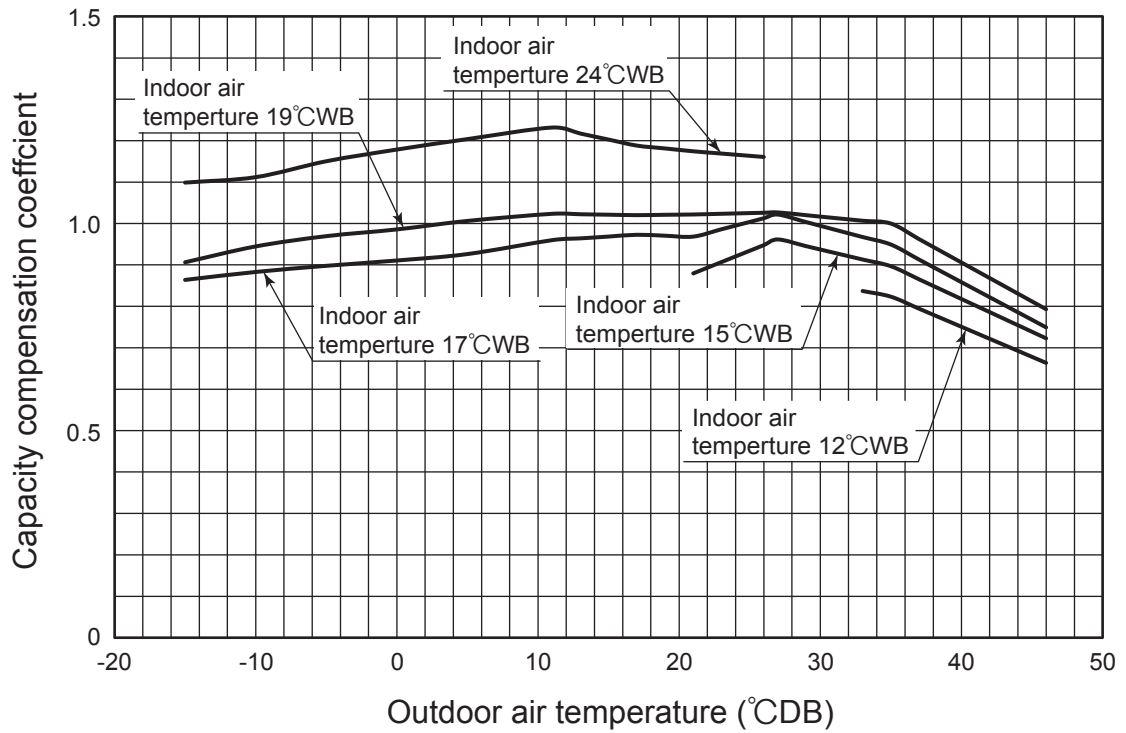


② Heating

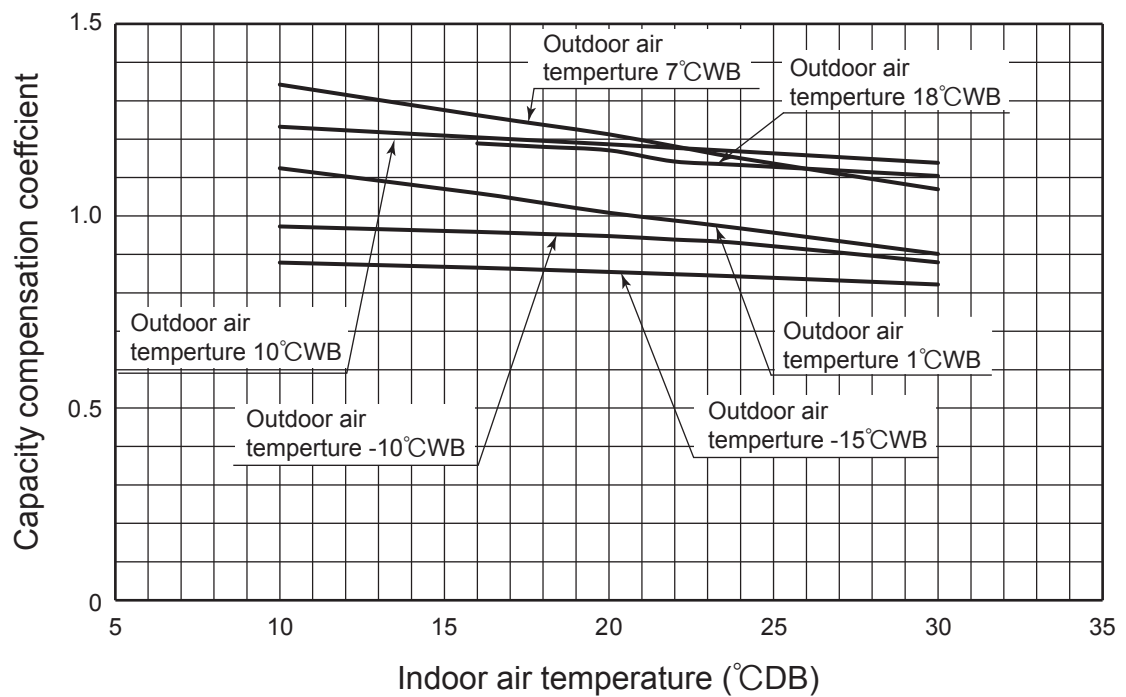


(II) Models FDC90VNP, 90VNP1

① Cooling

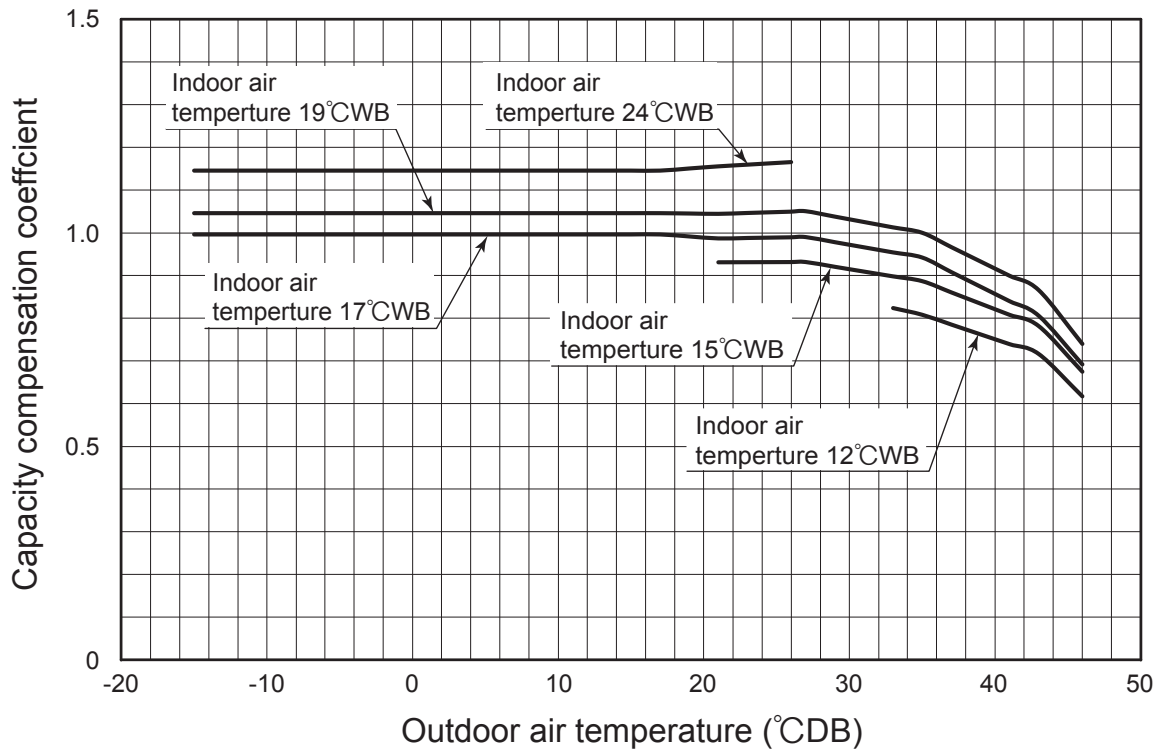


② Heating

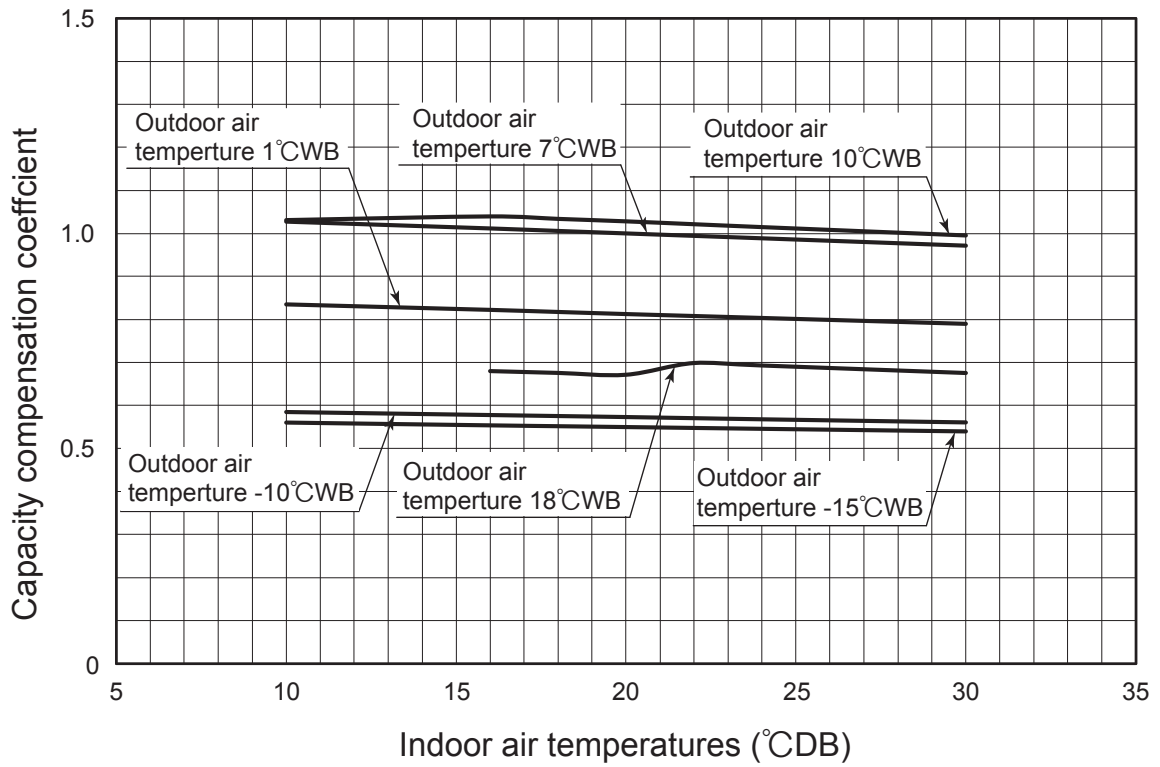


(III) Model FDC100VNP

① Cooling



② Heating



3.9.2 Correction of cooling and heating capacity in relation to air flow rate control (Fan speed)

| Fan speed | | P-Hi | Hi | Me | Lo |
|-------------|---------|------|------|------|------|
| Coefficient | Cooling | 1.00 | 0.95 | 0.93 | 0.90 |
| | Heating | 1.00 | 0.97 | 0.96 | 0.94 |

3.9.3 Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

| Equivalent piping length (m) | 7.5 | 10 | 15 | 20 | 25 | 30 |
|------------------------------|-----|------|------|------|------|------|
| Cooling | 1 | 0.99 | 0.97 | 0.96 | 0.94 | 0.92 |
| Heating | 1 | 1 | 1 | 1 | 1 | 1 |

3.9.4 Height difference between the indoor unit and outdoor unit

When the outdoor unit is located below indoor units in cooling mode, or when the outdoor unit is located above indoor units in heating mode, the correction coefficient mentioned in the below table should be subtracted from the value in the above table.

| Height difference between the indoor unit and outdoor unit in the vertical height difference | 5m | 10m | 15m | 20m |
|--|------|------|------|------|
| Adjustment coefficient | 0.99 | 0.98 | 0.97 | 0.96 |

Piping length limitations

| Item | Model | All models |
|---------------------------------|-------|---|
| Max. one way piping length | | 30m |
| Max. vertical height difference | | Outdoor unit is higher 20m Outdoor unit is lower 20m |

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling and heating capacity

Example : The net cooling capacity of the model FDE100VNP1VH with the air flow “P-Hi”, the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulb temperature at 19.0°C and outdoor dry-bulb temperature 35°C is

$$\text{Net cooling capacity} = 10.0 \times 1.00 \times 0.97 \times 0.99 \approx 9.6 \text{ kW}$$

↑

Net cooling total capacity of FDE100VNP1VH (Outdoor temp. : 35°CDB Indoor temp. : 19°CWB) shown in table 3.9.1

↑

Air flow : P-Hi shown in table 3.9.2

↑

Piping length : 15m (Gas pipe size is φ 15.88) shown in table 3.9.3

↑

Height difference : 5m (Outdoor unit : below) shown in table 3.9.4

3.10 APPLICATION DATA

- 3.10.1 Installation of indoor unit See page 141.
- 3.10.2 Electric wiring work installation See page 165.
- 3.10.3 Installation of wired remote control (Option parts) See page 169.
- 3.10.4 Installation of outdoor unit

(1) Model FDC71VNP

PSC012D053A

R410A REFRIGERANT USED

- This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 141.
- When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels. **⚠ WARNING** and **⚠ CAUTION**.
 - ⚠ **WARNING** : Wrong installation would cause serious consequences such as injuries or death.
 - ⚠ **CAUTION** : Wrong installation might cause serious consequences depending on circumstances.
- Both mentions the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.

| | |
|--|--|
| | Never do it under any circumstances. |
| | Always do it according to the instruction. |

| | ⚠ WARNING | |
|---|--|---|
| <p>⚠</p> <ul style="list-style-type: none"> • Installation must be carried out by the qualified installer. If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except by the qualified installer. • Install the system in full accordance with the installation manual. Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire. • Be sure to use only for household and residence. If this appliance is installed in interior environment such as machine shop and etc., it can cause malfunction. • When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149). If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident. • Use the original accessories and the specified components for installation. If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury. • Install the unit in a location with good support. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury. • Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury. • Ventilate the working area well in the event of refrigerant leakage during installation. | <p>⚠</p> <p>If the refrigerant comes into contact with naked flames, poisonous gas is produced.</p> <ul style="list-style-type: none"> • Use the prescribed pipes, flare nuts and tools for R410A. Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit. • Tighten the flare nut by torque wrench with specified method. If the flare nut were tightened with excess torque, this may cause burst and refrigerant leakage after a long period. • Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation. If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant. • The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit. Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire. • Be sure to shut off the power before starting electrical work. Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment. • Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work. Unconformable cables can cause electric leak, anomalous heat production or fire. • This appliance must be connected to main power source by means of a circuit breaker or switch (fuse:20A) with a contact separation of at least 3mm. Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly. | <p>⚠</p> <ul style="list-style-type: none"> • Do not bundling, winding or processing for the power cord. Or, do not deforming the power plug due to treat it. This may cause fire or heating. • Do not run the unit with removed panels or protections. Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks. |
| <p>⊘</p> <ul style="list-style-type: none"> • Ensure that no air enters in the refrigerant circuit when the unit is installed and removed. If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury. • Do not processing, splice the power cord, or share a socket with other power plugs. This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc. | <p>⊘</p> <p>Incorrect installation may result in overheating and fire.</p> <ul style="list-style-type: none"> • Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks. Loose connections or cable mountings can cause anomalous heat production or fire. • Be sure to fix up the service panels. Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water. • Be sure to switch off the power source in the event of installation, inspection or servicing. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan. • Stop the compressor before removing the pipe after shutting the service valve on pump down work. If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle. • Only use prescribed option parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. • Be sure to wear protective goggles and gloves while at work. Earth leakage breaker must be installed. • Appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. Children being supervised not to play with appliance. | <p>⊘</p> <ul style="list-style-type: none"> • Do not perform any change of protective device itself or its setup condition. The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst. |

⚠ CAUTION

| | | |
|---|--|--|
| ⚡ | <p>• Carry out the electrical work for ground lead with care. Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting.</p> | |
| ! | <p>• Use the circuit breaker for all pole correct capacity. Circuit breaker should be the one that disconnect all poles under over current. Using the incorrect circuit breaker, it can cause the unit malfunction and fire.</p> <p>• Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be locked in OFF state in accordance with EN60204-1.</p> <p>• After maintenance, all wiring, wiring ties and the like, should be returned to their original state and wiring route, and the necessary clearance from all metal parts should be secured.</p> <p>• Secure a space for installation, inspection and maintenance specified in the manual. Insufficient space can result in accident such as personal injury due to falling from the installation place.</p> | <p>• Take care when carrying the unit by hand. If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.</p> <p>• Dispose of any packing materials correctly. Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.</p> <p>• Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.</p> |
| ⊘ | <p>• Do not install the unit in the locations listed below.</p> <ul style="list-style-type: none"> • Locations where carbon fiber, metal powder or any powder is floating. • Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur. • Vehicles and ships. • Locations where cosmetic or special sprays are often used. • Locations with direct exposure of oil mist and steam such as kitchen and machine plant. • Locations where any machines which generate high frequency harmonics are used. • Locations with salty atmospheres such as coastlines. • Locations with heavy snow (if installed, be sure to provide base flame and snow hood mentioned in the manual). • Locations where the unit is exposed to chimney smoke. • Locations at high altitude (more than 1000m high). • Locations with ammoniac atmospheres. (e.g. organic fertilizer) • Locations with calcium chloride (e.g. snow melting agent). • Locations where heat radiation from other heat source can affect the unit. • Locations without good air circulation. • Locations with any obstacles which can prevent inlet and outlet air of the unit. • Locations where short circuit of air can occur (in case of multiple units installation). • Locations where strong air blows against the air outlet of outdoor unit. • Locations where something located above the unit could fall. • It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire. | <p>• Do not install the outdoor unit in the locations listed below.</p> <ul style="list-style-type: none"> • Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood. • Locations where outlet air of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc. • Locations where vibration can be amplified and transmitted due to insufficient strength of structure. • Locations where vibration and operation sound generated by the outdoor unit can affect seriously (on the wall or at the place near bed room). • Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 5m). • Locations where drainage cannot run off safely. • It can affect surrounding environment and cause a claim. <p>• Do not install the unit near the location where leakage of combustible gases can occur. If leaked gases accumulate around the unit, it can cause fire.</p> <p>• Do not install the unit where corrosive gas (such as sulfuric acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled. Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.</p> <p>• Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics. Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.</p> |

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.5 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit service valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the left before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected to the system, will impair proper system operation)

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

| Accessories for outdoor unit | Qty |
|-------------------------------------|-----|
| ① Grommet (Heat pump type only) | 4 |
| ② Drain elbow (Heat pump type only) | 1 |
| ③ Reducer set ø9.52- ø6.35 | 1 |
| ④ Reducer set ø15.88- ø12.7 | 1 |

| Option parts | Qty |
|--|-----|
| Ⓐ Sealing plate | 1 |
| Ⓑ Sleeve | 1 |
| Ⓒ Inclination plate | 1 |
| Ⓓ Putty | 1 |
| Ⓔ Drain hose (extension hose) | 1 |
| Ⓕ Piping cover (for insulation of connection piping) | 1 |

| Necessary tools for the installation work | |
|---|--|
| 1 Plus headed driver | |
| 2 Knife | |
| 3 Saw | |
| 4 Tape measure | |
| 5 Hammer | |
| 6 Spanner wrench | |
| 7 Torque wrench [14.0-82.0N·m (1.4-8.2kgf·m)] | |
| 8 Hole core drill [65mm in diameter] | |

| | |
|---|--|
| 9 Wrench key (Hexagon) [4mm] | |
| 10 Vacuum pump | |
| 11 Vacuum pump adapter (Anti-reverse flow type) (Designed specifically for R410A) | |
| 12 Gauge manifold (Designed specifically for R410A) | |
| 13 Charge hose (Designed specifically for R410A) | |
| 14 Flaring tool set (Designed specifically for R410A) | |
| 15 Gas leak detector (Designed specifically for R410A) | |
| 16 Gauge for projection adjustment (Used when flare is made by using conventional flare tool) | |

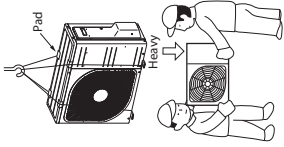
1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

CAUTION

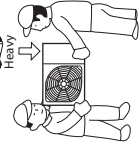
1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When you have to unpack the unit for a compelling reason before you haul it to the installation point, hoist the unit with nylon slings or ropes and protection pads so that you may not damage the unit.



2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavy. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.



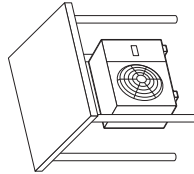
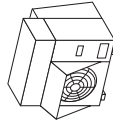
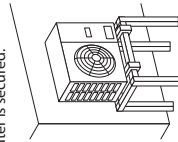
3) Selection of installation location for the outdoor unit

Be sure to select a suitable installation place in consideration of following conditions.

- A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
- A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit.
- A place where the unit is not exposed to oil splashes.
- A place where it can be free from danger of flammable gas leakage.
- A place where drain water can be disposed without any trouble.
- A place where the unit will not be affected by heat radiation from other heat source.
- A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
- A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
- A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
- A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
- If a operation is conducted when the outdoor air temperature is -5°C or lower, the outdoor unit should be installed at a place where it is not influenced by natural wind.
- A place where strong wind will not blow against the outlet air blow of the unit.
- Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

4) Caution about selection of installation location

- (1) If the unit is installed in the area where the snow will accumulate, following measures are required.
The bottom plate of unit and intake, outlet may be blocked by snow.
- 2 Install the unit under eaves or provide the roof on site.
- 3 Provide a snow hood to the outdoor unit on site.

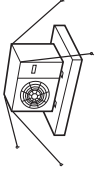
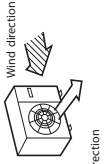
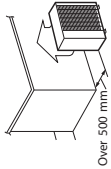


Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grommets (accessories). [Refer to Drain piping work.]
- Attached heater on a base plate on site, if there is possibility to freeze drain water. In case that the product has a corrective drainage system, the drainage paths should have suitable treatment against freezing but be sure not to melt the material of drainage paths with heat.

- (2) If the unit can be affected by strong wind, following measures are required.
Strong wind can cause damage of fan (fan motor) or can cause performance degradation, or can trigger an anomaly at the top of the unit due to rising of high pressure.

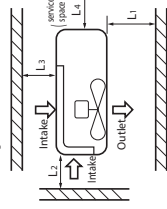
1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.
2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.
3. The unit should be installed on the stable and level foundation. If the foundation is not level, the down the unit with wires.



5) Installation space

- Walls surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- When more than one unit are installed side by side, provide a 250mm or wider interval between them as a service space. In order to facilitate servicing of controllers, please provide a sufficient space between units so that their top plates can be removed easily.
- Where a danger of short-circuiting exists, install guide louvers.
- When more than one unit are installed, provide sufficient intake space, consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.

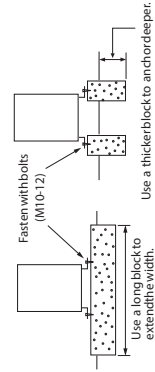
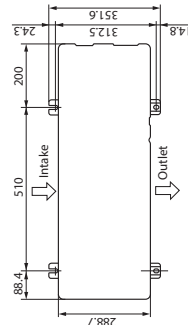
The height of a wall is 1200mm or less.



| Size | (mm) | | | |
|----------------------|------|------|------|------|
| Example installation | I | II | III | IV |
| L1 | Open | 280 | 280 | 180 |
| L2 | 100 | 75 | Open | Open |
| L3 | 100 | 80 | 80 | 80 |
| L4 | 250 | Open | 250 | Open |

6) Installation

- ① Anchor bolt fixed position
- ② Notabillator installation



- In installing the unit, fix the unit's legs with bolts specified on the above.
- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the above illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)

Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Restrictions | Dimensional restrictions | Marks appearing in the drawing on the right |
|---|---|--|
| Indoor unit | FDT, FDEN, FDU, FDUJ, SRK FDJ | L 30m or less |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher When the outdoor unit is positioned lower | L 23m or less H 20m or less H 20m or less |

● The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. When an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, please see "5. UTILIZATION OF EXISTING PIPING".

2) Determination of pipe size

● Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

| | Gas pipe | Liquid pipe |
|------------------------------------|----------------|----------------|
| Outdoor unit connected | φ12.7 Flare | φ6.35 Flare |
| Refrigerant piping (branch pipe/L) | φ12.7 | φ6.35 |
| FDT, FDEN, FDU, FDUJ, FDF | φ15.88 | φ9.52 |
| SRK | φ15.88 | φ6.35 |

3) Refrigerant pipe wall thickness and material

● Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.

NOTE ● Select pipes having a wall thickness larger than the specified minimum pipe thickness.

| Pipe diameter (mm) | φ6.35 | φ12.7 |
|----------------------------------|-------------|-------------|
| Minimum pipe wall thickness (mm) | 0.8 | 0.8 |
| Pipe material* | O-type pipe | O-type pipe |

*Phosphorus deoxidized seamless copper pipe (CS23.040.15, (CS 77.1 50.30)

4) On-site piping work

IMPORTANT Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

- (Except SRK) Regarding the change in the size of liquid/gas pipe: Use the reducer at indoor unit side. Reducer set is available in the outdoor unit as accessory.
- (SRK) Regarding the change in the size of gas pipe: Use the reducer at indoor unit side. Reducer set is available in the outdoor unit as accessory.

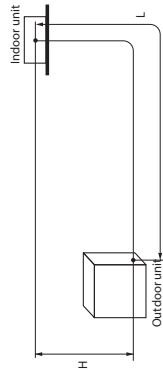
How to remove the side cover

- Please remove the screw of a side cover and remove to the front.
- Carry out the on site piping work with the service valve fully closed.
- Give sufficient protection to a pipe end (compressed and blazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical (R100-R150). Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.

CAUTION

Do not apply force beyond proper fastening torque in tightening the flare nut. Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

| Service valve size (mm) | Tightening torque (N·m) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|-------------------------|-------------------------|----------------------|--|
| φ6.35 | 14 - 18 | 45 - 60 | 150 |
| φ9.52 | 34 - 42 | 30 - 45 | 200 |
| φ12.7 | 49 - 61 | 30 - 45 | 250 |
| φ15.88 | 68 - 82 | 15 - 20 | 300 |



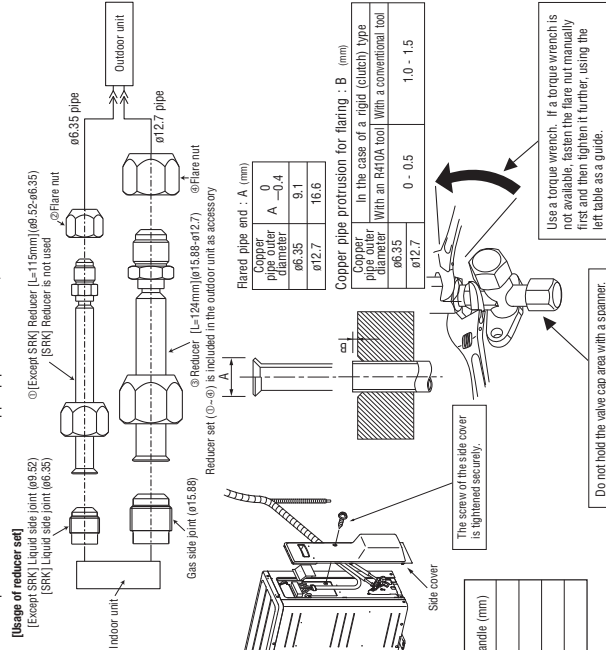
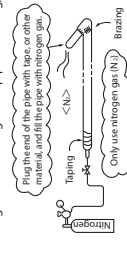
When pipe is brazing.

About brazing

Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.

If the refrigerant is existing in the pipe at brazing, poisonous gas is produced.



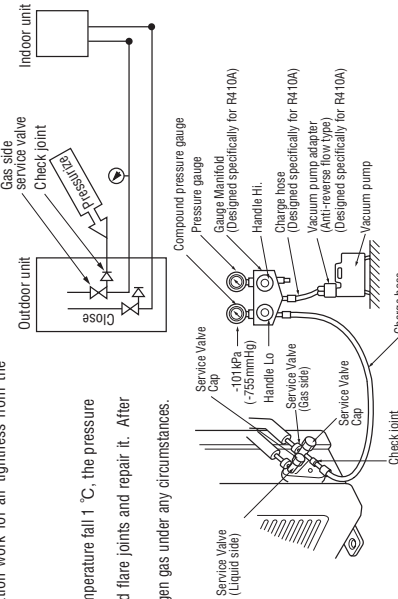
Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.

Do not hold the valve cap area with a spanner.

The screw of this side cover is tightened securely.

5) Air tightness test

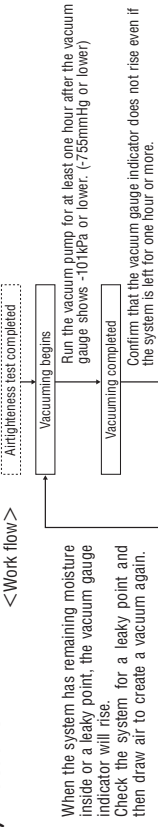
- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut all the time.
 - a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
 - d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall 1 °C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
 - e) If a pressure drop is observed in checking e) and a) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- ② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



Securely tighten the service valve cap and the check joint blind nut after adjustment.

| | | |
|---|-------|-------|
| Service valve size (mm) | 20-30 | 25-35 |
| Service valve cap tightening torque (N·m) | 10-12 | |
| Check joint blind nut tightening torque (N·m) | | 10-12 |

6) Evacuation



When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.

Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

- (1) Calculate a required refrigerant charge volume from the following table.

| Indoor unit | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe ø6.35) | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|----------------|---|---|--|
| FDT, FDBEN | 0.02 | 1.6 | 15 |
| FDU, FDUW, SSK | 0.02 | 1.6 | 8 |

● This unit contains factory charged refrigerant covering 15m/8m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 15m/8m refrigerant piping. When refrigerant piping exceeds 15m/8m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 15m/8m.

● If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, please see "5. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

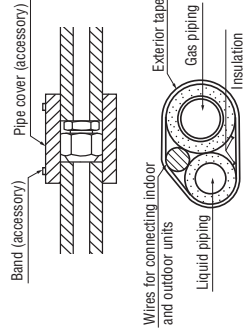
$$\text{Additional charge volume (kg)} = (\text{Main length (m)} - \text{Factory charged volume}) \times 0.02 \text{ (kg/m)}$$

*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

- (2) For an installation measuring 15m/8m or shorter in pipe length, please charge the refrigerant volume charged for shipment at the factory, when you recharge refrigerant after servicing etc.

8) Heating and condensation prevention

- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- (2) Use a heat insulating material that can withstand 120 °C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
 - Both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.

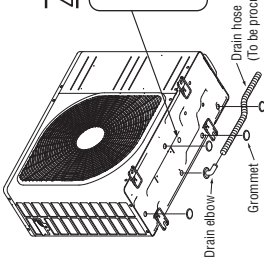


- (2) Charging refrigerant
 - Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
 - Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
 - In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
 - When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

3. DRAIN PIPING WORK

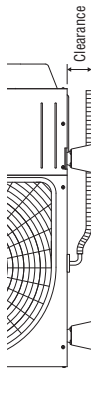
- Execute drain piping by using a drain elbow and drain grommets supplied separately as accessories, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of service valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)



CAUTION

Do not put a grommet on this hole. This is a supplementary drain hole to discharge drain water, when a large quantity of it is gathered.

- When condensed water needs to be led to a drain, etc., install the unit on a flat base or concrete blocks. (prepared on site) Then, please secure space for the drain elbow and the drain hose.



4. ELECTRICAL WIRING WORK

For details of electrical cabling, refer to the indoor unit installation manual.

- Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country.
- Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.
- Do not use any supply cord lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC S1).
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin tinsel cord (code designation 60227 IEC 41);
 - Use polychloroprene sheathed flexible cord (code designation 60245 IEC 57) for supply cords of parts of appliances for outdoor use.
 - Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
 - If improper grounded, an electric shock or malfunction may result.
 - A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
 - The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.
 - Do not turn on the power until the electrical work is completed.
 - Do not use a condensative capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheat accident.)
 - For power source cables, use conduits.
 - Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
 - Fasten cables so that they may not touch the piping, etc.
 - When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
 - Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.

CAUTION

In case of faulty wiring connection, the indoor unit stops, and then the run lamp turns on and the timer lamp blinks.

Use cables for interconnection wiring to avoid loosening of the wires.

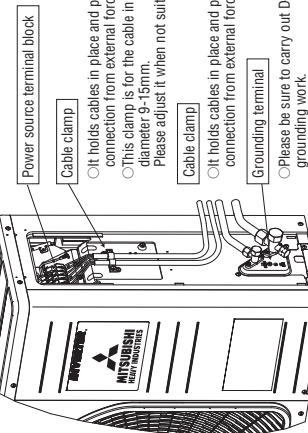
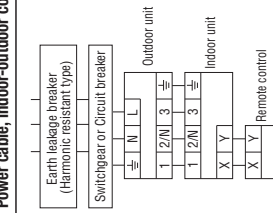
- CENELEC code for cables Required field cables.
- H05RN10G1.5 (Example) or 2x45IEC57
- H Harmonized cable type
 - 05 300/500 volts
 - R Natural-and/or synth. rubber wire insulation
 - N Polychloroprene rubber conductors insulation
 - R Stranded core
 - 40r5 Number of conductors
 - G One conductor of the cable is the earth conductor (yellow/green)
 - 1.5 Section of copper wire (mm²)

Main fuse specification

| Specification | Part No. |
|---------------|--------------|
| 250V 20A | SSA56-4A136A |

- Always perform grounding system installation work with the power cord unplugged.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.

Power cable, indoor-outdoor connecting wires



- It holds cables in place and protect the terminal connection from external force.
- This clamp is for the cable in the outside diameter 9-15mm. Please adjust it when not suitable.
- It holds cables in place and protect the terminal connection from external force.
- Please be sure to carry out D-type (type II) grounding work.

CAUTION

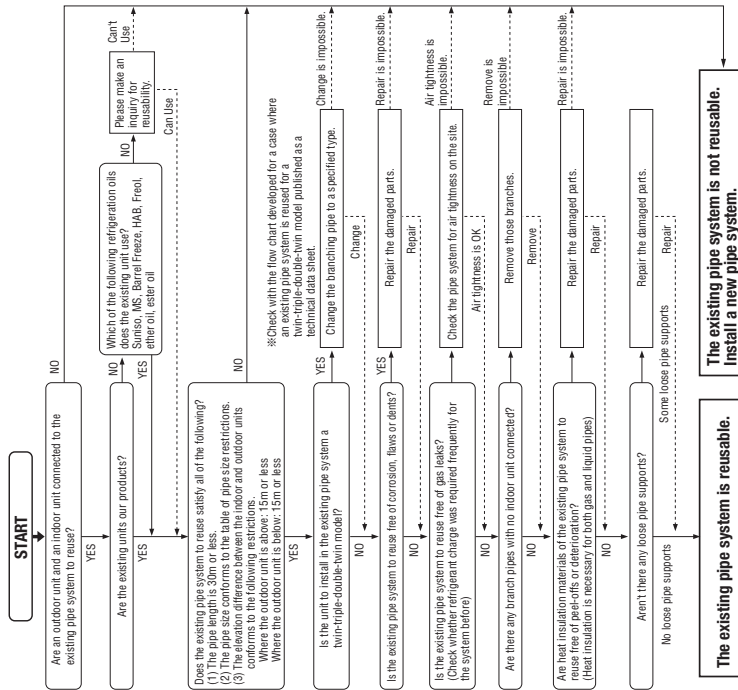
Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

| Phase | Earth leakage breaker | Switchgear or Circuit Breaker | | Power source (minimum) (grounding wires (minimum)) |
|--------------|--------------------------|-------------------------------|---------------------------------------|--|
| | | Switch breaker | Over current protector rated capacity | |
| Single-phase | 20A-30mA, 0.1sec or less | 30A | 20A | 2.0mm ² 1.5mm ² x4 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

5. UTILIZATION OF EXISTING PIPING

Check whether an existing pipe system is reusable or not by using the following flow chart.



<Table of pipe size restrictions>

◎ Standard pipe size ○ Usable △ Restricted to shorter pipe length limits

| Indoor unit | Additional charge volume per meter of pipe | | 0.025kg/m | | 0.06kg/m | |
|-----------------------------|--|-------------|-----------|-----------|----------|--------|
| | Pipe size | Liquid pipe | Gas pipe | Usability | 09.52 | 09.52 |
| FDT, FDEN FDU, FDUM, SRK | Maximum one-way pipe length | φ12.7 | φ15.88 | ○ | φ12.7 | φ15.88 |
| | Length covered without additional charge | 30 | 24 | 10 | △ | △ |
| FDF | Maximum one-way pipe length | 15 | 12 | ○ | 5 | 5 |
| | Length covered without additional charge | 23 | 18 | 8 | △ | △ |
| | | 8 | 6 | 3 | 3 | 3 |

- Please consult with our distributor in the area, if you need to recover refrigerant and charge it again.
- Any combinations of pipe sizes not listed in the table are not usable.

Formula to calculate additional charge volume

Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.

Example When FDT is installed in a 10m long existing pipe system (liquid φ9.52, gas φ12.7), 0.3 kg. the quantity of refrigerant to charge additionally should be (10m-5m) × 0.06kg/m = 0.3 kg.

WARNING

<Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4))

- Run the unit for 30 minutes for a cooling operation.
- Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
- Close the liquid side service valve of the outdoor unit and pump down (refrigerant recovery)
- Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.

- For the flare nut, do not use the old one, but use the one supplied with the outdoor unit. Process a flare to the dimensions specified for R410A.

<Where the existing unit cannot be run for a cooling operation.>

- Wash the pipe system or install a new pipe system.
- If you choose to wash the pipe system, please contact our distributor in the area.

INSTALLATION TEST CHECK POINTS

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. Explain to the customer how to use the unit and how to take care of the unit following the instruction manual.

After installation

- Power cables and connecting wires are securely fixed to the terminal block.
- The power source voltage is correct as the rating.
- The drain hose is fixed securely.
- Service valve is fully open.
- No gas leaks from the joints of the service valve and joint.
- The pipe joints for indoor and outdoor pipes have been insulated.
- The reverse flow check cap is attached.
- The cover of the pipe cover (A) faces downward to prevent rain from entering.
- Gaps are properly sealed between the pipe covers (A) (B) and the wall surface / pipes.
- The screw of the side cover is tightened securely.

(2) Models FDC90VNP, 90VNP1

PSC012D054 

R410A REFRIGERANT USED

- This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 141.
- When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage and etc.) and installation spaces.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
 - WARNING** : Wrong installation would cause serious consequences such as injuries or death.
 - CAUTION** : Wrong installation might cause serious consequences depending on circumstances.
- Both mentions the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.
 - For installing qualified personnel, take precautions in respect to themselves by using suitable protective clothing, gloves, etc., and then perform the installation works.
 - Please pay attention not to fall down the tools, etc. when installing the unit at the high position.
 - If unusual noise can be heard during operation, consult the dealer.
 - The meanings of "Marks" used here are shown as follows:

| | |
|---|--|
|  | Never do it under any circumstances. |
|  | Always do it according to the instruction. |

WARNING

- **Installation must be carried out by the qualified installer.**
If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except by the qualified installer.
 - **Install the system in full accordance with the installation manual.**
Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
 - **Be sure to use only for household and residence.**
If this appliance is installed in interior environment such as machine shop and etc., it can cause malfunction.
 - **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).**
If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system; otherwise lack of oxygen can occur, which can cause serious accident.
 - **Use the original accessories and the specified components for installation.**
If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury.
 - **Install the unit in a location with good support.**
Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
 - **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
 - **Ventilate the working area well in the event of refrigerant leakage during installation.**
- If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
 - **Tighten the flare nut by torque wrench with specified method.**
If the flare nut were tightened with excess torque, this may cause burst and refrigerant leakage after a long period.
 - **Do not open the operation valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
If the compressor is operated in state of opening operation valves before completed connection of refrigerant piping work, air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.
 - **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire.
 - **Be sure to shut off the power before starting electrical work.**
Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
 - **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
Unconformable cables can cause electric leak, anomalous heat production or fire.
 - **This appliance must be connected to main power source by means of a circuit breaker or switch (fuse:20A) with a contact separation of at least 3mm.**
Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.

- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
 - **Do not processing, splice the power cord, or share a socket with other power plugs.**
This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc.
- Incorrect installation may result in overheating and fire.
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
 - **Be sure to fix up the service panels.**
Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
 - **Be sure to switch off the power source in the event of installation, inspection or servicing.**
If the power source is not shut off, there is a risk of electric shocks; unit failure or personal injury due to the unexpected start of fan.
 - **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
 - **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
 - **Be sure to wear protective goggles and gloves while at work.**
 - **Earth leakage breaker must be installed.**
If the earth leakage breaker is not installed, it can cause electric shocks.
 - **Appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.**
Children being supervised not to play with appliance.
- Do not perform any change of protective device itself or its setup condition.
The forced operation by short-circuiting protective device or pressure switch and temperature control or the use of non specified component can cause fire or burst.

⚠ CAUTION

| | |
|--|---|
| | <p>• Carry out the electrical work for ground lead with care. Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting.</p> |
| | <p>• Use the circuit breaker for all pole correct capacity. Circuit breaker should be the one that disconnect all poles under over current. Using the incorrect circuit breaker, it can cause the unit malfunction and fire.</p> <p>• Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be locked in OFF state in accordance with EN60204-1.</p> <p>• After maintenance, all wiring, wiring ties and the like, should be returned to their original state and wiring route, and the necessary clearance from all metal parts should be secured.</p> <p>• Secure a space for installation, inspection and maintenance specified in the manual. Insufficient space can result in accident such as personal injury due to falling from the installation place.</p> |
| | <p>• Do not install the unit in the locations listed below.</p> <ul style="list-style-type: none"> • Locations where carbon fiber, metal powder or any powder is floating. • Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur. • Vehicles and ships. • Locations where cosmetic or special sprays are often used. • Locations with direct exposure of oil mist and steam such as kitchen and machine plant. • Locations where any machines which generate high frequency harmonics are used. • Locations with salty atmospheres such as coastlines. • Locations with heavy snow (if installed, be sure to provide base frame and snow hood mentioned in the manual). • Locations where the unit is exposed to chimney smoke. • Locations at high altitude (more than 1000m high). • Locations with ammoniac atmospheres. (e.g. organic fertilizer) • Locations with calcium chloride (e.g. snow melting agent) • Locations where heat radiation from other heat source can affect the unit. • Locations without good air circulation. • Locations with any obstacles which can prevent inlet and outlet air of the unit. • Locations where short circuit of air can occur (in case of multiple units installation). • Locations where strong air blows against the air outlet of outdoor unit. • Locations where something located above the unit could fall. <p>It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and life.</p> |
| | <p>• Take care when carrying the unit by hand. If the unit weighs more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.</p> <p>• Dispose of any packing materials correctly. Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.</p> <p>• Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.</p> |
| | <p>• When perform the air-conditioner operation (cooling or drying operation) in which ventilator is installed in the room. In this case, using the air-conditioner in parallel with the ventilator, there is the possibility that drain water may backflow in accordance with the room lapse into the negative pressure status. Therefore, set up the opening port such as incorporate the air into the room that may appropriate to ventilation (For example: Open the door a little). In addition, just as above, so set up the opening port if the room lapse into negative pressure status due to register of the wind for the high rise apartment etc.</p> |
| | <p>• Do not install the outdoor unit in a location where insects and small animals can inhabit. Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.</p> <p>• Do not use the base frame for outdoor unit which is corroded or damaged due to long periods of operation. Using an old and damaged base frame can cause the unit falling down and cause personal injury.</p> <p>• Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used. Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.</p> <p>• Do not touch any buttons with wet hands. It can cause electric shocks.</p> <p>• Do not touch any refrigerant pipes with your hands when the system is in operation. During operation, the refrigerant pipes become extremely hot or extremely cold depending on the operating condition, and it can cause burn injury or frost injury.</p> <p>• Do not touch the suction or aluminum fin on the outdoor unit. This may cause injury.</p> <p>• Do not put anything on the outdoor unit and operating unit. This may cause damage the objects or injury due to falling to the object.</p> <p>• Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.</p> <p>• Do not clean up the unit with water.</p> |

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit operation valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure.
- Accordingly, you are required to arrange dedicated R410A tools listed in the table on the left before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation.)

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

| Accessories for outdoor unit | Qty |
|-------------------------------------|-----|
| ① Grommet (Heat pump type only) | 2 |
| ② Drain elbow (Heat pump type only) | 1 |
| ③ Reducer set 09J52 → 06J35 | 1 |

| Option parts | Qty |
|---|-----|
| ③ Sealing plate | 1 |
| ④ Sleeve | 1 |
| ⑤ Inclination plate | 1 |
| ⑥ Putty | 1 |
| ⑦ Drain hose (extension hose) | 1 |
| ⑧ Piping cover (for insulation of connection piping) | 1 |

| Necessary tools for the installation work | |
|---|---|
| 1 | Plus headed driver |
| 2 | Knife |
| 3 | Saw |
| 4 | Tape measure |
| 5 | Hammer |
| 6 | Spanner wrench |
| 7 | Torque wrench [1.4-32.0N·m (1.4-3.2kgf·m)] |
| 8 | Hole core drill (65mm in diameter) |
| 9 | Wrench key (Hexagon) [4mm] |
| 10 | Vacuum pump |
| 11 | Vacuum pump adapter (Anti-reverse flow type) (Designed specifically for R410A) |
| 12 | Gauge manifold (Designed specifically for R410A) |
| 13 | Charge hose (Designed specifically for R410A) |
| 14 | Flaring tool set (Designed specifically for R410A) |
| 15 | Gas leak detector (Designed specifically for R410A) Gauge for projection adjustment |
| 16 | Gauge for projection adjustment (Used when flare is made by using conventional flare tool) |

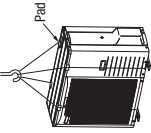
1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

CAUTION

When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

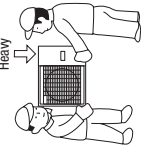
1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When you have to unpack the unit for a compelling reason, before you haul it to the installation point, hoist the unit with nylon slings or ropes and protection pads so that you may not damage the unit.



2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.



3) Selection of installation location for the outdoor unit

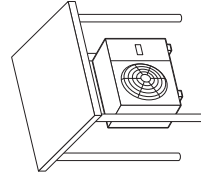
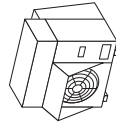
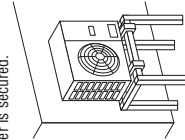
Be sure to select a suitable installation place in consideration of following conditions.

- A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
- A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit.
- A place where the unit is not exposed to oil splashes.
- A place where it can be free from danger of flammable gas leakage.
- A place where drain water can be disposed without any trouble.
- A place where the unit will not be affected by heat radiation from other heat source.
- A place where snow will not accumulate.
- A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
- A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
- A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
- A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
- If an operation is conducted when the outdoor air temperature is -5°C lower, the outdoor unit should be installed at a place where it is not influenced by natural wind.
- A place where strong wind will not blow against the outlet air blow of the unit.
- Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

4) Caution about selection of installation location

- (1) If the unit is installed in the area where the snow will accumulate, following measures are required.
The bottom plate of unit and intake, outlet may be blocked by snow.

- 1 Install the unit on the base so that the bottom is higher than snow cover surface, and draining water is secured.
- 2 Provide a snow hood to the outdoor unit on site.
- 3 Install the unit under eaves or provide the roof on site.

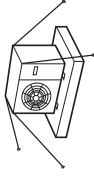
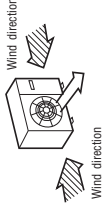
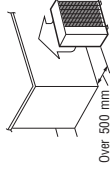


Since drain water generated by defrost control may freeze, following measures are required.

- Don't execute drain piping work by using a drain elbow and drain grommets (accessories). [Refer to DRAIN PIPING WORK.]
- Attached heater on a base plate on site, if there is possibility to freeze drain water. In case that the product has a corrective drainage system, the drainage paths should have suitable treatment against freezing but be sure not to melt the material of drainage paths with heat.

- (2) If the unit can be affected by strong wind, following measures are required.
Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.

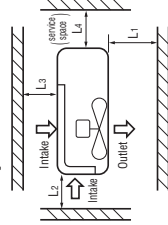
1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.
2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.
3. The unit should be installed on the stable and level foundation. If the foundation is not level, level the unit with wires.



5) Installation space

- Walls surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- When more than one unit are installed side by side, provide a 250mm or wider interval between them as a service space. In order to facilitate servicing of controls, please provide a sufficient space between units so that their top plates can be removed easily.
- Where a danger of short-circuiting exists, install guide louvers.
- When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.

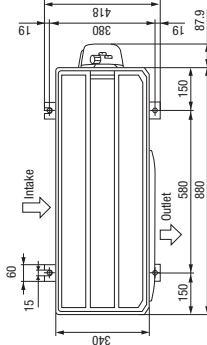
The height of a wall is 1200mm or less.



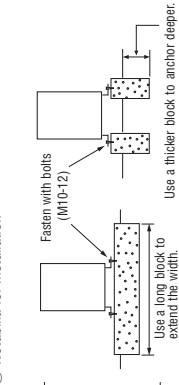
| Size | I | II | III |
|------|------|------|------|
| L1 | Open | Open | 500 |
| L2 | 300 | 250 | Open |
| L3 | 100 | 150 | 100 |
| L4 | 250 | 250 | 250 |

6) Installation

- ① Anchor bolt fixed position



- ② Notabilia for installation



- In installing the unit, fix the unit's legs with bolts specified on the above.
- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the above illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)

Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation,

when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Indoor unit | Restrictions | | Marks appearing in the drawing on the right | |
|---|---------------------|--|---|---|
| | FDT, FDE, FDU, FDUH | Main pipe length | L | H |
| Elevation difference between indoor and outdoor units | FDF | 30m or less | | |
| | | 23m or less | | |
| | | When the outdoor unit is positioned higher | H | |
| | | When the outdoor unit is positioned lower | | H |

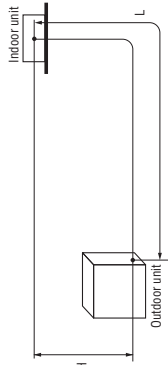
● The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, please see "5. UTILIZATION OF EXISTING PIPING."

CAUTION

2) Determination of pipe size

- Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

| | Gas pipe | Liquid pipe |
|------------------------------------|-----------------|----------------|
| Outdoor unit connected | ø15.88 Flare | ø6.35 Flare |
| Refrigerant piping (branch pipe/L) | ø15.88 | ø6.35 |
| Indoor unit connected | ø15.88 | ø9.52 |

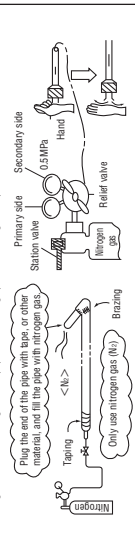


When pipe is brazing.

About brazing

Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging. If the refrigerant is existing in the pipe at brazing, poisonous gas is produced.



3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.
- Select pipes having a wall thickness larger than the specified minimum pipe thickness.

| Pipe diameter (mm) | ø6.35 | ø15.88 |
|----------------------------------|-------------|-------------|
| Minimum pipe wall thickness (mm) | 0.8 | 1.0 |
| Pipe material* | O-type pipe | O-type pipe |

* Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30

4) On-site piping work

- Take care so that installed pipes may not touch components within a unit.
- If touching with an internal component, it will generate abnormal sounds and/or vibrations.
- Regarding the change in the size of liquid pipe: Use the reducer at indoor unit side. Reducer set is available in the outdoor unit as accessory.

IMPORTANT

- Please remove the screw of a side cover and remove to the front.
- Carry out the on site piping work with the operation valve fully closed.
- Give sufficient protection to a pipe end (compressed and brazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical.(R100-R150) Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.

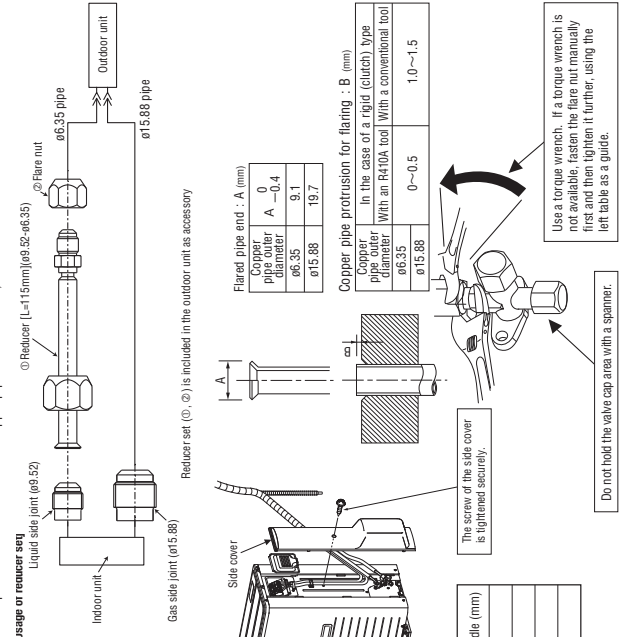
How to remove the side cover

- Please remove the screw of a side cover and remove to the front.
- Carry out the on site piping work with the operation valve fully closed.
- Give sufficient protection to a pipe end (compressed and brazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
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- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.

CAUTION

- Do not apply force beyond proper fastening torque in tightening the flare nut.
- Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

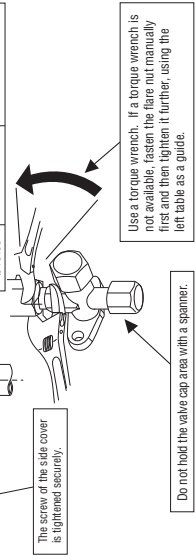
| Service valve size (mm) | Tightening torque (N·m) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|-------------------------|-------------------------|----------------------|--|
| ø6.35 | 14-18 | 45-60 | 150 |
| ø9.52 | 34-42 | 30-45 | 200 |
| ø12.7 | 49-61 | 30-45 | 250 |
| ø15.88 | 68-82 | 15-20 | 300 |



| Flared pipe end: A (mm) | |
|----------------------------|------|
| Copper pipe outer diameter | A |
| 0 | -0.4 |
| ø6.35 | 9.1 |
| ø15.88 | 19.7 |

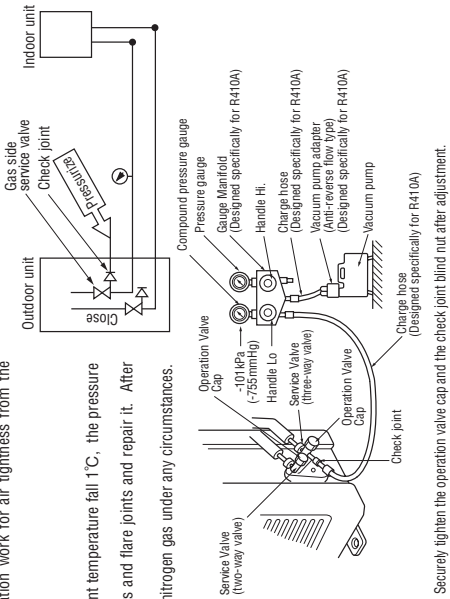
Copper pipe protrusion for flaring: B (mm)

| Copper pipe outer diameter | In the case of a rigid (clutch) type pipe flaring tool | With an R410A tool | With a conventional tool |
|----------------------------|--|--------------------|--------------------------|
| ø6.35 | 0~0.5 | 0~0.5 | 1.0~1.5 |
| ø15.88 | | | |



5) Air tightness test

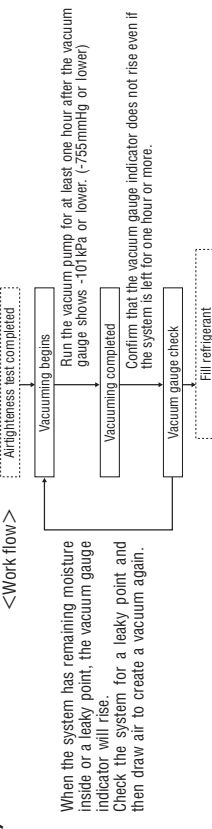
- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut all the time.
 - a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
 - e) If a pressure drop is observed in checking e) and a) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.
- ② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



Securely tighten the operation valve cap and the check joint blind nut after adjustment.

| | | | | | |
|-------------------------|---------------|---|-------|---|-------|
| Service valve size (mm) | ø6.35 (1/4") | Service valve cap tightening torque (N.m) | 20-30 | Check joint blind nut tightening torque (N.m) | 10-12 |
| | ø15.88 (5/8") | | 30-40 | | |

6) Evacuation



When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.

7) Additional refrigerant charge

- (1) Calculate a required refrigerant charge volume from the following table.
 - To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.)
 - Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

| Indoor unit | Additional charge volume (kg) per meter of refrigerant piping (liquid pipe ø6.35) | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|----------------------|---|---|--|
| FDT, FDE, FDU, FDUIM | 0.025 | 2.1 | 15 |
| FDE | 0.025 | 2.1 | 8 |

- (2) This unit contains factory charged refrigerant covering 15m/8m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 15m/8m refrigerant piping. When refrigerant piping exceeds 15m/8m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 15m/8m.
 - If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, please see "5. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

$$\text{Additional charge volume (kg)} = (\text{Main length (m)} - \text{Factory charged volume}) \times 0.025 \text{ (kg/m)}$$

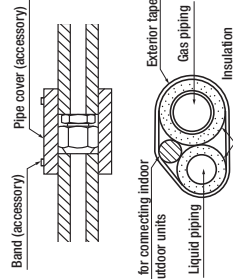
*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
 - Both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.

8) Heating and condensation prevention

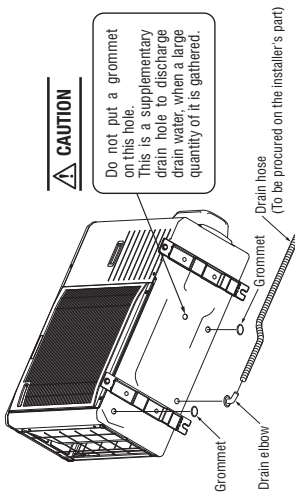
- (1) Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
 - Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
 - In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume. When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.



3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as accessories, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of operation valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)



- When condensed water needs to be led to a drain, etc., install the unit on a flat base or concrete blocks. Then, please secure space for the drain elbow and the drain hose.



4. ELECTRICAL WIRING WORK

For details of electrical cabling, refer to the indoor unit installation manual.

Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country. Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

- Do not use any supply cord lighter than one specified in parentheses for each type below.
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin insel cord (code designation 60227 IEC 41)
 - Use polychloroprene sheathed flexible cord (code designation 60245 IEC 57) for supply cords of parts of appliances for outdoor use.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
 - If improperly grounded, an electric shock or malfunction may result.
- A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
 - The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.
 - Do not turn on the power until the electrical work is completed.
 - Do not use a condensive capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheat accident)
 - For power source cables, use conduits.
 - Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
 - Fasten cables so that they may not touch the piping, etc.
 - When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
 - Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.

CAUTION

In case of faulty wiring connection, the indoor unit stops, and then the run lamp turns on and the timer lamp blinks.

Use cables for interconnection wiring to avoid loosening of the wires.

CEWLEEC code for cables Required field cables.

- H05RN10G1.5 (Example) or 245IEC57
- H Harmonized cable type
- 05 300/500 volts
- R Natural-and/or synth. rubber wire insulation
- N Polychloroprene rubber conductors insulation
- R Stranded core
- 4or5 Number of conductors
- G One conductor of the cable is the earth conductor (yellow/green)
- 1.5 Section of copper wire (mm²)

Main fuse specification

| Specification | Part No. |
|---------------|--------------|
| 250V 20A | SS45E-4A130A |

- Always perform grounding system installation work with the power cable unplugged.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.

Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

| Phase | Earth leakage breaker | Switchgear or circuit breaker | | Power source (minimum) (minimum) (minimum) |
|--------------|----------------------------|-------------------------------|---------------------------------------|--|
| | | Switch breaker | Over current protector rated capacity | |
| Single-phase | 20A,30mA 0.1sec or less | 30A | 20A | 2.5 mm ² 1.5mm ² ×4 |

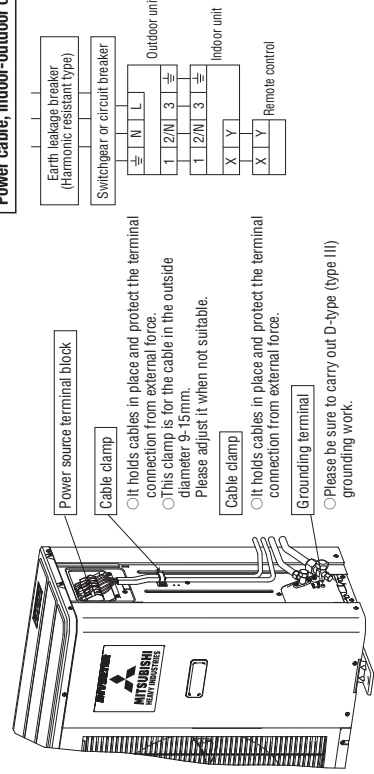
- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear or circuit breaker capacity, which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

Power cable, indoor-outdoor connecting wires

- Always perform grounding system installation work with the power cable unplugged.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the control box.

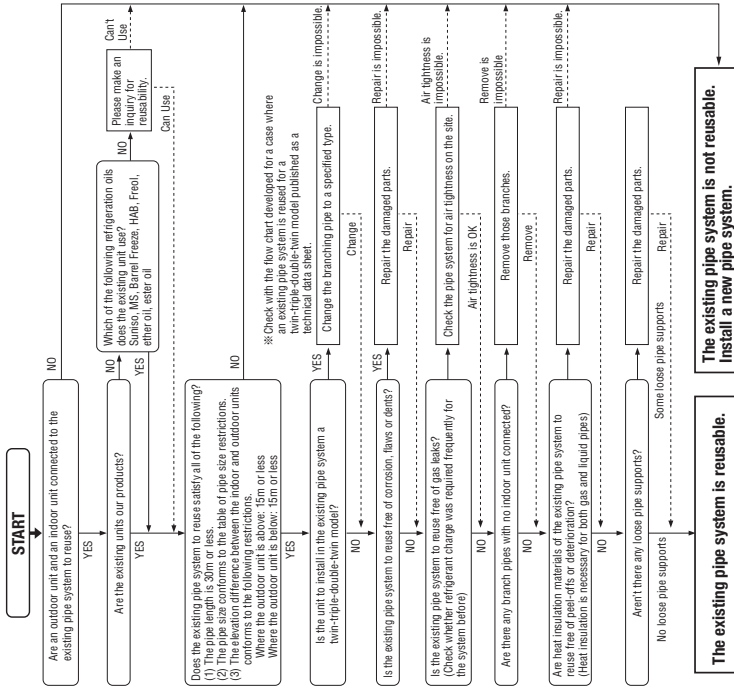
CAUTION

- It holds cables in place and protect the terminal connection from external force.
- This clamp is for the cable in the outside diameter 9-15mm. Please adjust it when not suitable.
- It holds cables in place and protect the terminal connection from external force.
- Please be sure to carry out D-type (type III) grounding work.



5. UTILIZATION OF EXISTING PIPING

Check whether an existing pipe system is reusable or not by using the following flow chart.



<Table of pipe size restrictions>

◎Standard pipe size △Usable △△Restricted to shorter pipe length limits

| Indoor unit | Additional charge volume per meter of pipe | | 0.025kg/m | | 0.06kg/m | |
|-----------------------|--|--|-----------|----|----------|-----|
| | Pipe size | Liquid pipe | Gas pipe | ◎ | △ | △△ |
| FDT, FDE FDU, FDDM | Usability | Maximum one-way pipe length | 30 | 12 | 12 | 6 |
| | | Length covered without additional charge | 15 | 6 | 6 | 3 |
| FDF | Usability | Maximum one-way pipe length | 23 | 10 | 10 | 5 |
| | | Length covered without additional charge | 8 | 3 | 3 | 1.5 |

- Please consult with our distributor in the area, if you need to recover refrigerant and charge it again.
- Any combinations of pipe sizes not listed in the table are not usable.

Formula to calculate additional charge volume

Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.

Example When FDT is installed in a 10m long existing pipe system (liquid 09.52, gas 012.7), the quantity of refrigerant to charge additionally should be (10m-6m) × 0.06kg/m = 0.24 kg.

WARNING

<Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4))

- Run the unit for 30 minutes for a cooling operation.
- Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
- Close the liquid side operation valve of the outdoor unit and pump down (refrigerant recovery)
- Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.

- For the flare nut, do not use the old one, but use the one supplied with the outdoor unit. Process a flare to the dimensions specified for R410A.

<Where the existing unit cannot be run for a cooling operation.>

- Wash the pipe system or install a new pipe system.
- If you choose to wash the pipe system, please contact our distributor in the area.

INSTALLATION TEST CHECK POINTS

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. Explain to the customer how to use the unit and how to take care of the unit following the instruction manual.

After installation

- Power cables and connecting wires are securely fixed to the terminal block.
- The power source voltage is correct as the rating.
- The drain hose is fixed securely.
- Service valve is fully open.
- No gas leaks from the joints of the service valve and joint.
- The pipe joints for indoor and outdoor pipes have been insulated.
- The reverse flow check cap is attached.
- The cover of the pipe cover (A) faces downward to prevent rain from entering.
- Gaps are properly sealed between the pipe covers (A) (B) and the wall surface / pipes.
- The screw of the side cover is tightened securely.

(3) Model FDC100VNP

PSC012D055

R410A REFRIGERANT USED

- This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to page 141.
- While installing the unit, be sure to check the selection of installation place, power source specifications, usage limitation (pipng length, height differences between indoor and outdoor units, power source voltage etc.) and installation spaces.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
 - The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
 - WARNING**: Wrong installation would cause serious consequences such as injuries or death.
 - CAUTION**: Wrong installation might cause serious consequences depending on circumstances.
- Both mention the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completing installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.

⊘ Never do it under any circumstances. ⚠ Always do it according to the instruction.

WARNING

| | | |
|---|--|---|
| <p>⚠ Installation must be carried out by the qualified installer. If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except the by qualified installer.</p> <p>⚠ Install the system in full accordance with the installation manual. Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.</p> <p>⚠ When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149). If the density of refrigerant exceeds the limit, consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident.</p> <p>⚠ Use the original accessories and the specified components for installation. If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury.</p> <p>⚠ Install the unit in a location with good support. Unsuitable installation locations can cause the unit to fall resulting in material damage and personal injury.</p> <p>⚠ Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds. Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.</p> <p>⚠ Ventilate the working area well in the event of refrigerant leakage during installation. If the refrigerant comes into contact with naked flames, poisonous gas is produced.</p> <p>⚠ Use the prescribed pipes, flare nuts and tools for R410A. Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.</p> <p>⚠ Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation. If the compressor is operated in state of opening service valves before completing</p> | <p>connection of refrigerant piping work, air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.</p> <ul style="list-style-type: none"> • The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit. Power source with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire. • Be sure to shut off the power before starting electrical work. Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment. • Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work. Unconformable cables can cause electric leak, anomalous heat production or fire. • This appliance must be connected to main power source by means of a circuit breaker or switch (fuse: 30A) with a contact separation of at least 3mm. • Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly. Incorrect installation may result in overheating and fire. • Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks. Loose connections or cable mountings can cause anomalous heat production or fire. • Be sure to fix up the service panels. Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water. • Be sure to switch off the power source in the event of installation, inspection or servicing. If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan. • Stop the compressor before removing the pipe after shutting the service valve on pump down work. | <p>If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.</p> <ul style="list-style-type: none"> • Only use prescribed option parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. • Be sure to wear protective goggles and gloves while at work. • Earth leakage breaker must be installed. If the earth leakage breaker is not installed, it can cause electric shocks. • Do not perform any change of protective device itself or its setup condition. The forced operation by short-circuiting protective device of pressure switch and temperature controller, or the use of non-specified component can cause fire or burst. • After completed installation, check that no refrigerant leaks from the system. If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced. • Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support. An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit. • Do not perform brazing work in the airtight room It can cause leak of oxygen. • Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much. Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen. • Consult the dealer or an expert regarding removal of the unit. Incorrect installation can cause water leaks, electric shocks or fire. |
| <p>⊘ Do not bundle or wind or process the power cord. Do not deform the power cord by residing it. This may cause fire or heating.</p> <ul style="list-style-type: none"> • Do not run the unit with removed panels or protections. Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entanglement, burn or electric shocks. | <p>⊘ Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair. If you repair or modify the unit, it can cause water leaks, electric shocks or fire.</p> | |

CAUTION

- **Carry out the electrical work for ground lead with care.**
Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks, it could cause explosion or ignition.
- **Take care when carrying the unit by hand.**
If the unit weighs more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handles when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **Do not install the unit in the locations listed below.**
 - Locations where carbon fiber, metal powder or any powder is floating.
 - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
 - Vehicles and ships.
 - Locations where cosmetic or special sprays are often used.
 - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
 - Locations where any machines which generate high frequency harmonics are used.
 - Locations with salty atmospheres such as coastal areas.
 - Locations with heavy snow. (If installed, be sure to provide base flame and snow hood mentioned in the manual).
 - Locations where the unit is exposed to chimney smoke.
 - Locations at high altitude (more than 1000m high).
 - Locations with ammoniac atmospheres (e.g. organic fertilizer).
 - Locations with calcium chloride (e.g. snow melting agent).
 - Locations where heat radiation from other heat source can affect the unit.
 - Locations without good air circulation.
 - Locations with any obstacles which can prevent inlet and outlet air of the unit.
 - Locations where short circuit of air can occur (in case of multiple units installation).
 - Locations where strong air blows against the air outlet of outdoor unit.
 - Locations where something located above the unit could fall.
- **Do not install the outdoor unit in the locations listed below.**
 - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood.
 - Locations where outlet air of the outdoor unit blows directly to an animal or plants.
- **Take care when carrying the unit by hand.**
If the unit weighs more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handles when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
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Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **The outlet air can affect adversely to the plant, etc.**
 - Locations where vibration can be amplified and transmitted due to insufficient strength of structure.
 - Locations where vibration and operation sound generated by the outdoor unit can affect seriously (on the wall or at the place near bed room).
 - Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 5m).
 - Locations where drainage cannot run off safely.
 - Locations where drainage cannot run off safely.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
If leaked gases accumulate around the unit, it can cause fire.
- **Do not install the unit where corrosive gas (such as sulfuric acid gas, etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics.**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.
- **Do not use the base flame for outdoor unit which is corroded or damaged**

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

| Accessories for outdoor unit | Q'ty |
|------------------------------|------|
| ① Edging | 1 |

Locally procured parts

| | Q'ty |
|--|------|
| ③ Sealing plate | 1 |
| ④ Sleeve | 1 |
| ⑤ Inclination plate | 1 |
| ⑥ Putty | 1 |
| ⑦ Drain hose (extension hose) | 1 |
| ⑧ Piping cover (for insulation of connection piping) | 1 |
| ⑨ Drain elbow | 1 |
| ⑩ Grommet | 2 |

Necessary tools for the installation work

| | |
|---|---|
| 1 Plus headed driver | 9 Wrench key (Hexagon) [4m/m] |
| 2 Knife | 10 Vacuum pump |
| 3 Saw | 11 Vacuum pump adapter (Anti-reverse flow type) (Designed specifically for R410A) |
| 4 Tape measure | 12 Gauge manifold (Designed specifically for R410A) |
| 5 Hammer | 13 Charge hose (Designed specifically for R410A) |
| 6 Spanner wrench | 14 Flaring tool set (Designed specifically for R410A) |
| 7 Torque wrench [14.0- 82.0N·m (1.4- 8.2kgf·m)] | 15 Gas leak detector (Designed specifically for R410A) |
| 8 Hole core drill (65mm in diameter) | 16 Gauge for projection adjustment (Used when flare is made by using conventional flare tool) |

Note as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.5 times higher than that of a conventional refrigerant.
- A cylinder containing R410A has a pink indication mark on the top.
- The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the left before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

Head the following the heating operation

- In the case when this unit has stopped for a long time, heating operation may start and operate in cooling mode by 7 minutes, after that, heating operation keep oil quality in compressor by preventing liquid refrigerant come into compressor. If that is the case, do not suspect a unit failure. (In this case, remote control displays "DEFROST" or "In operation for defrosting.")

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

CAUTION When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

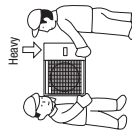
1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When you have to unpack the unit for a compelling reason before you haul it to the installation point, hoist the unit with nylon slings or ropes and protection pads so that you may not damage the unit.



2) Portage

- The right hand side of the unit as viewed from the front (fan side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.

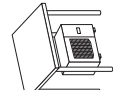
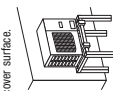


3) Selecting the installation location

- Be sure to select a suitable installation place in consideration of following conditions.
- A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
 - A place where the unit can be free from possibility of bothering neighbors due to noise or exhaust air from the unit.
 - A place where the unit is not exposed to oil splashes.
 - A place where drain water can be disposed without any trouble.
 - A place where the unit will not be affected by heat radiation from other heat sources.
 - A place where snow will not accumulate.
 - A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any TV set or radio receiver interferences.
 - A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
 - A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
 - A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
 - If a operation is conducted when the outdoor air temperature is -5 or lower, the outdoor unit should be installed at a place where it is not influenced by natural wind.
 - A place where strong wind will not blow against the outlet air blow of the unit.
 - A place where stringent regulation of electric noises is not applicable.
- Do not install the unit in places which exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent), exposed to ammonia substance (e.g. organic fertilizer).

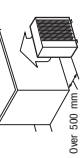
4) Caution about selection of installation location

- If the unit is installed in the area where the snow will accumulate, following measures are required. The bottom plate of unit and intake, outlet may be blocked by snow.
 - Install the unit on the base so that the bottom is higher than snow cover surface.
 - Provide a snow hood to the outdoor unit on site. Regarding outline of a snow hood, refer to our technical manual.
 - Install the unit under eaves or provide the roof on site.
- Since drain water generated by defrost control may freeze, following measures are required.
- Don't execute drain piping work by using a drain elbow and drain grommets (optional parts). (Refer to Drain piping work.)



- Attach heater on a base plate on site, if there is possibility to freeze drain water. In case that the product has a connective drainage system, the drainage paths should have suitable measure against freezing but be sure not to mat the material of drainage paths with heat.
- If the unit can be affected by strong wind, following measures are required. Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.

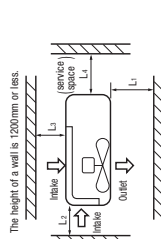
- Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.
- Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.
- The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires.



5) Installation space

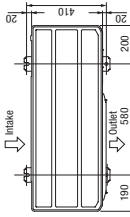
- Walls surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- When more than one unit, are installed side by side, provide a 250mm or wider interval between them as a service space. In order to facilitate servicing or controllers, provide a sufficient space between units so that their top plates can be removed easily.
- Where a danger of short-circuiting exists, install guide lowers.
- When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.

| Size | I | II | III |
|----------------------|------|------|------|
| Example installation | Open | Open | Open |
| L1 | 300 | 250 | Open |
| L2 | 100 | 150 | 100 |
| L3 | 250 | 250 | 250 |
| L4 | 250 | 250 | 250 |



6) Installation

- Anchor bolt fixed position
- Notes for installation
 - Use a long block to extend the width.
 - Use a thicker block to anchor deeper.
 - Fasten with bolts (M10×12)



7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

| Restrictions | Dimensional restrictions | Marks appearing in the drawing on the right |
|---|---|---|
| Main pipe length | 30m or less | L |
| Elevation difference between indoor and outdoor units | When the outdoor unit is positioned higher, | H |
| | When the outdoor unit is positioned lower, | H |

- The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, see "5. UTILIZATION OF EXISTING PIPING."

⚠ CAUTION

2) Determination of pipe size

Determine refrigerant pipe size according to the following guidelines based on the indoor unit specifications.

| | Gas pipe | Liquid pipe |
|------------------------------------|----------------|----------------|
| Outdoor unit connected | ø15.8 Flare | ø9.52 Flare |
| Refrigerant piping (branch pipe L) | ø15.8 | ø9.52 |
| Indoor unit connected | ø15.8 | ø9.52 |

3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.

| Pipe diameter (mm) | ø9.52 | ø15.88 |
|----------------------------------|-------------|-------------|
| Minimum pipe wall thickness (mm) | 0.8 | 1.0 |
| Pipe material* | O-type pipe | O-type pipe |

*Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30

NOTE Select pipes having a wall thickness larger than the specified minimum pipe thickness.

4) On-site piping work

⚠ IMPORTANT

Take care so that installed pipes may not touch components within a unit. If pipes touch internal components, abnormal sounds and/or vibrations.

How to remove the side cover

First remove the five screws (X mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.

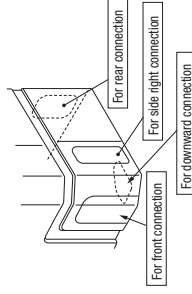
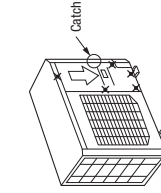
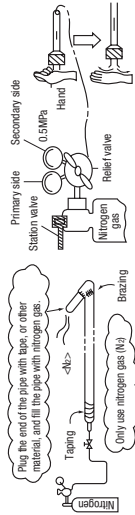
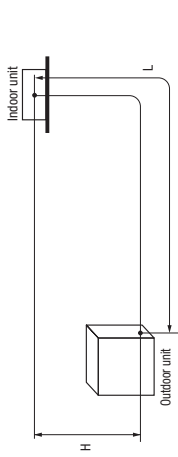
- The pipe can be laid in any of the following directions: side right, front, rear and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- Carry out the on site piping work with the service valve fully closed.
- Give sufficient protection to a pipe end (compressed and brazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical (R100-R150). Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten the flare joint securely with a double spanner.

⚠ CAUTION

Do not apply force beyond proper fastening torque in tightening the flare nut.

Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

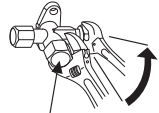
| Service valve size (mm) | Tightening torque (N · m) | Tightening angle (°) | Recommended length of a tool handle (mm) |
|-------------------------|---------------------------|----------------------|--|
| ø9.52 (3/8") | 34-42 | 30-45 | 200 |
| ø15.88 (5/8") | 68-82 | 15-20 | 300 |



Edging
(For knock-out hole protection)

| Copper pipe outer diameter | 0-0.5 | 1.0-1.5 |
|----------------------------|-------|---------|
| ø9.52 | | |
| ø15.88 | | |

| Copper pipe outer diameter | A | 0 |
|----------------------------|-------|---|
| ø9.52 | 013.2 | |
| ø15.88 | 13.7 | |

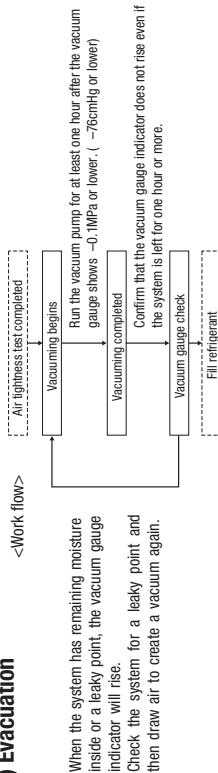


Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.

5) Air tightness test

- ① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the service valve's check joint equipped on the outdoor unit side. While conducting a test, keep the service valve shut all the time.
 - a) Raise the pressure to 0.5MPa, and then stop. Leave it for five minutes to see if the pressure drops.
 - b) Then raise the pressure to 1.5MPa, and stop. Leave it for five more minutes to see if the pressure drops.
 - c) Then raise the pressure to the specified level (4.15MPa), and record the ambient temperature and the pressure.
 - d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall approximately 0.01MPa. The pressure, if changed, should be compensated for.
 - e) If a pressure drop is observed in checking e) and a)~d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air tightness test again.
- ② In conducting an air tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.

6) Evacuation



When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise. Check the system for a leaky point and then draw air to create a vacuum again.

Pay attention to the following points in addition to the above for the R410A and compatible machines.

- To prevent a different oil from entering, use dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

- (1) Calculate a required refrigerant charge volume from the following table.

| Additional charge volume (g) per meter of refrigerant piping liquid pipe ø9.52 | Refrigerant volume charged for shipment at the factory (kg) | Installation's pipe length (m) covered without additional refrigerant charge |
|--|---|--|
| 60 | 2.55 | 15 |

- This unit contains factory charged refrigerant covering 15m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 15m refrigerant piping. When refrigerant piping exceeds 15m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 15m.
- If an existing pipe system is used, required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "5. UTILIZATION OF EXISTING PIPING."

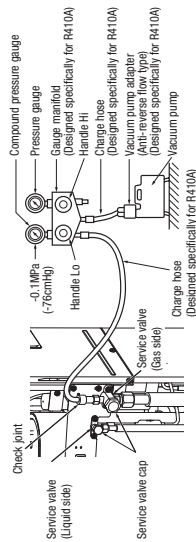
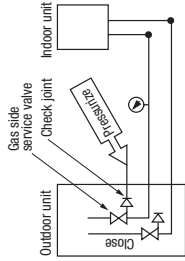
Formula to calculate the volume of additional refrigerant required

$$\text{Additional charge volume (g)} = (\text{Main length (m)} - \text{Factory charged volume } 15 \text{ (m)}) \times 60 \text{ (g/m)}$$

- * When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.
- For an installation measuring 15m or shorter in pipe length, charge the refrigerant volume charged for shipment at the factory, when you recharge refrigerant after servicing etc.

8) Heating and condensation prevention

- (1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
 - Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 - All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
 - Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
 - Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
 - Both gas and liquid pipes need to be dressed with 20mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.



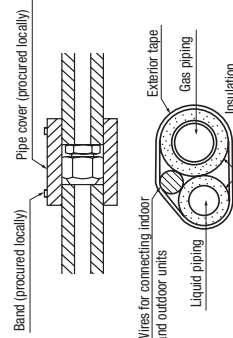
Securely tighten the service valve cap and the check joint blind nut after adjustment.

| Service valve size (mm) | Service valve cap tightening torque (N·m) | Check joint blind nut tightening torque (N·m) |
|-------------------------|---|---|
| ø9.52 (3/8") | 20—30 | 10—12 |
| ø15.88 (5/8") | 30—40 | |

(2) Charging refrigerant

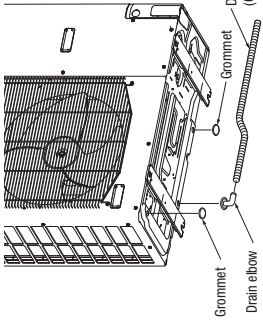
- Since R410A refrigerant must be charged in the liquid phase, you should charge it keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
- Charge refrigerant always from the liquid side service port with the service valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gassy upon entering the unit.
- In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
- When refrigerant is charged with the unit being run, complete a charge operation within 30minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the service panel.

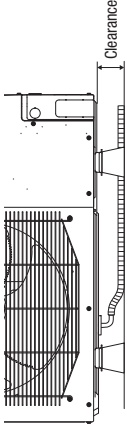


3. DRAIN PIPING WORK

- Execute drain piping by using a drain elbow and drain grommets supplied separately as accessories, where water drained from the outdoor unit is a problem.
- Water may drip where there is a larger amount of drain water. Seal around the drain elbow and drain grommets with putty or adequate caulking material.
- Condensed water may flow out from vicinity of service valve or connected pipes.
- Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blocking the drain.)
- Do not use drain elbow and grommet made of plastic for drain piping when base heater for outdoor unit is used. Plastic grommet and elbow will be damaged and burnt in worst case.
- Prepare another drain tray made of metallic material for collecting drain when base heater is used.



- When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as a locally procured part) or concrete blocks. Then, secure space for the drain elbow and the drain hose.



4. ELECTRICAL WIRING WORK

For details of electrical cabling, refer to the indoor unit installation manual.

- Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country.
- Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.
- Do not use any power cable lighter than one specified in parentheses for each type below.
 - braided cord (code designation 60245 IEC 51)
 - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
 - flat twin tinsel cord (code designation 60227 IEC 41)
- Use polythoroprene sheathed flexible cord (code designation 60245 IEC57) for power cables of parts of appliances for outdoor use.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
 - If improperly grounded, an electric shock or malfunction may result.
 - A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
 - The installation of an impulse withstanding type earth leakage breaker is necessary.
 - A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.
 - Do not turn on the power until the electrical work is completed.
 - Do not use a condensive capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheating accident)
 - For power cables, use conduits.

- Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
- Fasten the cables so that those may not touch the piping, etc.
- When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
- Never use a shield cable.
- Always use a three-core cable for an indoor-outdoor connecting cable.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connectors.

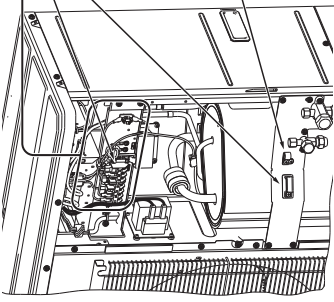
In case of faulty wiring connection, indoor unit does not operate. Then, run lamp turns on and timer lamp blinks.

Use cables for interconnection wiring to avoid loosening of the wires. CENELEC code for cables Required field cables.

| H05RN4RG1.5 (Example) or 245IEC57 | |
|-----------------------------------|--|
| H | Harmonized cable type |
| 05 | 300/500 volts |
| R | Natural-and/or synth. rubber wire insulation |
| N | Polychloroprene rubber conductors insulation |
| R | Stranded core |
| 4x0.5 | Number of conductors |
| G | One conductor of the cable is the earth conductor (yellow/green) |
| 1.5 | Section of copper wire (mm ²) |

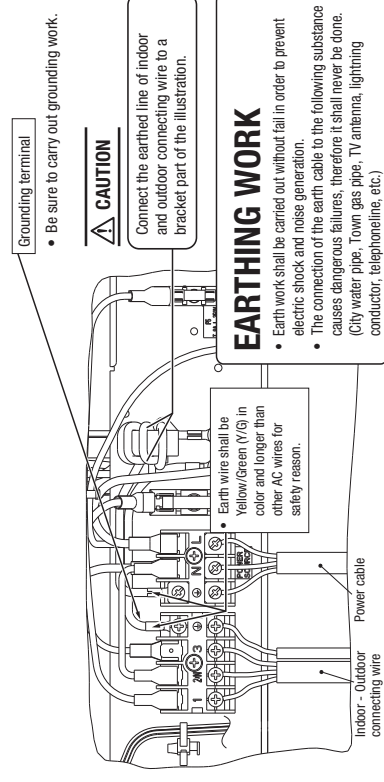
Main fuse specification

| Specification | Part No. |
|---------------|-------------|
| 250V 20A | SSA564A136A |



- It holds cables in place and protect the terminal connection from external force.
- This clamp is for the cable in the outside diameter 9 - 15mm. Adjust it when not suitable.
- This clamp holds the power cable.

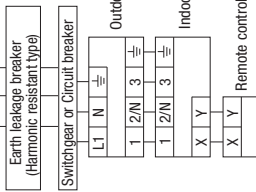
Power cable, indoor - outdoor connecting wire circuit diagram



EARTHING WORK

- Earth work shall be carried out without fail in order to prevent electric shock and noise generation.
- The connection of the earth cable to the following substance causes dangerous failures, therefore it shall never be done. (City water pipe, Town gas pipe, TV antenna, lightning conductor, telephonenumber, etc.)

Power cable, indoor-outdoor connecting wires

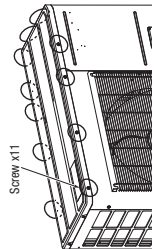


- Always perform grounding system installation work with the power cable unplugged.
- Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- Grounding terminals are provided in the terminal block.

When change the Printed circuit board, take off the top panel.

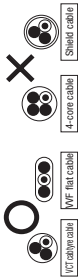
How to remove the top panel

Remove the screws of the top panel.



- Use Polychloroprene sheathed flexible cord (code designation 60245 IEC57, IEC60335-2-40) with cross-sectional area of 5.5 mm² for power cable of outdoor unit.

(POWER CABLE)
CENELEC code for cables requiring fields cables.
H05RNRS3G5.5



CAUTION

Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.

| Power source | Power cable thickness (mm ²) | Cable length (m) | Grounding wire thickness | Indoor-outdoor wire thickness-number |
|---|--|------------------|--------------------------|--------------------------------------|
| Single phase 3 wire 220-240V/50Hz 220V/60Hz | 5.5 | 21 | φ1.6 | φ1.6x3 |

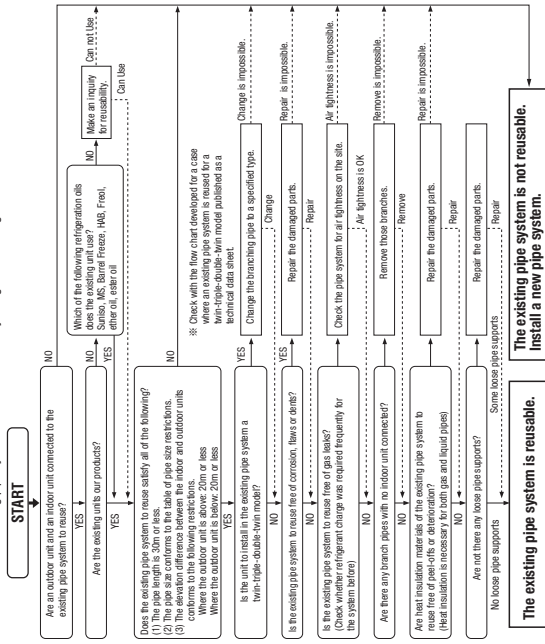
All the connection with the duct type indoor unit.

| Power source | Power cable thickness (mm ²) | Cable length (m) | Grounding wire thickness | Indoor-outdoor wire thickness-number |
|---|--|------------------|--------------------------|--------------------------------------|
| Single phase 3 wire 220-240V/50Hz 220V/60Hz | 5.5 | 22 | φ1.6 | φ1.6x3 |

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear or Circuit breaker capacity which is calculated from maximum over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

5. UTILIZATION OF EXISTING PIPING

Check whether an existing pipe system is reusable or not by using the following flow chart.



INSTALLATION TEST CHECK POINTS

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. Explain to the customer how to use the unit and how to take care of the unit following the instruction manual.

After installation

- Power cables and connecting wires are securely fixed to the terminal block.
- The power source voltage is correct as the rating.
- The drain hose is fixed securely.
- Service valve is fully open.
- No gas leaks from the joints of the service valve.
- The pipe joints for indoor and outdoor pipes have been insulated.
- The screw of the side cover is tightened securely.

<Table of pipe size restrictions>

○: Standard pipe size △: Restricted to shorter pipe length limits

| Additional charge volume per meter of pipe | 60g/m | 80g/m |
|--|--------|--------|
| Liquid pipe | φ9.52 | φ12.7 |
| Gas pipe | φ15.88 | φ15.88 |
| Usability | ○ | △ |
| Maximum one-way pipe length | 30 | 15 |
| Length covered without additional charge | 15 | 7 |

- Consult with our distributor in the area, if you need to recover refrigerant and charge it again.
- Any combinations of pipe sizes not listed in the table are not usable.

Formula to calculate additional charge volume

Additional charge volume (g) = (Main pipe length (m) - Length covered without additional charge shown in the table (m)) X Additional charge volume per meter of pipe shown in the table (g/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.
Example) When an FDC100 is installed in a 10m long existing pipe system (if fluid φ12.7, gas φ15.88), the quantity of refrigerant to charge additionally should be (10m-7m) X 80g/m = 240g.

WARNING

<Where the existing unit can be run for a cooling operation >
Carry out the following steps with the existing unit. (in the order of (1), (2), (3) and (4))

- Run the unit for 30 minutes for a cooling operation.
- Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
- Close the liquid side service valve of the outdoor unit and pump down (refrigerant recovery)
- Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
 - For the flare nut, do not use the old one, but use the one supplied with the outdoor unit.
 - Process a flare to the dimensions specified for R410A.

<Where the existing unit cannot be run for a cooling operation >
Wash the pipe system or install a new pipe system.

- If you choose to wash the pipe system, contact our distributor in the area.

3.11 TECHNICAL INFORMATION

(1) Duct connected-High static pressure type (FDU)

FDU71VNPVH


| | | | | | | | |
|---|--|----------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDU71VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC71VNP | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 5.73 | A+ |
| heating / Average | Pdesignh | 5.7 | kW | heating / Average | SCOP/A | 4.00 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 5.7 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 2.70 | - |
| Tj=30°C | Pdc | 5.20 | kW | Tj=30°C | EERd | 4.30 | - |
| Tj=25°C | Pdc | 3.40 | kW | Tj=25°C | EERd | 7.40 | - |
| Tj=20°C | Pdc | 1.50 | kW | Tj=20°C | EERd | 9.80 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 5.00 | kW | Tj=-7°C | COPd | 2.50 | - |
| Tj=2°C | Pdh | 3.00 | kW | Tj=2°C | COPd | 3.90 | - |
| Tj=7°C | Pdh | 2.00 | kW | Tj=7°C | COPd | 5.40 | - |
| Tj=12°C | Pdh | 1.40 | kW | Tj=12°C | COPd | 6.00 | - |
| Tj=bivalent temperature | Pdh | 5.70 | kW | Tj=bivalent temperature | COPd | 2.40 | - |
| Tj=operating limit | Pdh | 5.10 | kW | Tj=operating limit | COPd | 2.10 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -15 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyhc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 10 | W | cooling | Qce | 434 | kWh/a |
| standby mode | Psb | 10 | W | heating / Average | Qhe | 1997 | kWh/a |
| thermostat-off mode | Pto(cooling) | 25 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 67 | dB(A) |
| variable | | Yes | | Global warming potential | GWp | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,440 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,160 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |

FDU90VNPVH

| | | | |
|---|-----------------|--|--|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDU100VH | | |
| Outdoor unit model name | FDC90VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | Seasonal efficiency and energy efficiency class | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | — | kW |
| heating / Colder | Pdesignh | — | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.10 | kW |
| heating / Warmer (2°C) | Pdh | — | kW |
| heating / Colder (-22°C) | Pdh | — | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.60 | kW |
| Tj=25°C | Pdc | 4.30 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.10 | kW |
| Tj=2°C | Pdh | 4.30 | kW |
| Tj=7°C | Pdh | 2.70 | kW |
| Tj=12°C | Pdh | 1.80 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.10 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | — | kW |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Tj=-15°C | Pdh | — | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | — | °C |
| heating / Colder | Tbiv | — | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | — | kW |
| for heating | Pcyh | — | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 10 | W |
| thermostat-off mode | Pto | 55 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 69 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. | |
| | | Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | |


FDU90VNP1VH

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| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDU100VH | | |
| Outdoor unit model name | FDC90VNP1 | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.1 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.60 | kW |
| Tj=25°C | Pdc | 4.30 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.10 | kW |
| Tj=2°C | Pdh | 4.30 | kW |
| Tj=7°C | Pdh | 2.70 | kW |
| Tj=12°C | Pdh | 1.80 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.10 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto(cooling) | 50 | W |
| | Pto(heating) | 60 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 69 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. | |
| | | Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | |

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FDU100VNP1VH

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| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDU100VH | | |
| Outdoor unit model name | FDC100VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.1 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.50 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.17 | kW |
| Tj=2°C | Pdh | 4.36 | kW |
| Tj=7°C | Pdh | 2.83 | kW |
| Tj=12°C | Pdh | 2.90 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.15 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 10 | W |
| thermostat-off mode | Pto(cooling) | 50 | W |
| | Pto(heating) | 60 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Sound power level(indoor) | | Lwa | 65 dB(A) |
| Sound power level(outdoor) | | Lwa | 70 dB(A) |
| Global warming potential | | GWP | 1,975 kgCO ₂ eq. |
| Rated air flow(indoor) | | - | 2,160 m ³ /h |
| Rated air flow(outdoor) | | - | 4,500 m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

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(2) Duct connected-Low / Middle static pressure type (FDUM)

FDUM71VNPVH

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| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDUM71VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC71VNP | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | | | | |
| heating | | Yes | | | | | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 5.73 | A+ |
| heating / Average | Pdesignh | 5.7 | kW | heating / Average | SCOP/A | 4.00 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 5.7 | kW | heating / Average (-10°C) | elbu | 0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 2.70 | - |
| Tj=30°C | Pdc | 5.20 | kW | Tj=30°C | EERd | 4.30 | - |
| Tj=25°C | Pdc | 3.40 | kW | Tj=25°C | EERd | 7.40 | - |
| Tj=20°C | Pdc | 1.50 | kW | Tj=20°C | EERd | 9.80 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 5.00 | kW | Tj=-7°C | COPd | 2.50 | - |
| Tj=2°C | Pdh | 3.00 | kW | Tj=2°C | COPd | 3.90 | - |
| Tj=7°C | Pdh | 2.00 | kW | Tj=7°C | COPd | 5.40 | - |
| Tj=12°C | Pdh | 1.40 | kW | Tj=12°C | COPd | 6.00 | - |
| Tj=bivalent temperature | Pdh | 5.70 | kW | Tj=bivalent temperature | COPd | 2.40 | - |
| Tj=operating limit | Pdh | 5.10 | kW | Tj=operating limit | COPd | 2.10 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -15 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcyc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 10 | W | cooling | Qce | 434 | kWh/a |
| standby mode | Psb | 10 | W | heating / Average | Qhe | 1997 | kWh/a |
| thermostat-off mode | Pto(cooling) | 25 | W | heating / Warmer | Qhe | - | kWh/a |
| | Pto(heating) | 35 | W | heating / colder | Qhe | - | kWh/a |
| crankcase heater mode | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 65 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 67 | dB(A) |
| variable | | Yes | | Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,440 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,160 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |


FDUM90VNPVH

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| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDUM100VH | | |
| Outdoor unit model name | FDC90VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | Seasonal efficiency and energy efficiency class | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | — | kW |
| heating / Colder | Pdesignh | — | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.10 | kW |
| heating / Warmer (2°C) | Pdh | — | kW |
| heating / Colder (-22°C) | Pdh | — | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.60 | kW |
| Tj=25°C | Pdc | 4.30 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.10 | kW |
| Tj=2°C | Pdh | 4.30 | kW |
| Tj=7°C | Pdh | 2.70 | kW |
| Tj=12°C | Pdh | 1.80 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.10 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | — | kW |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Tj=-15°C | Pdh | — | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | — | °C |
| heating / Colder | Tbiv | — | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | — | kW |
| for heating | Pcyh | — | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 10 | W |
| thermostat-off mode | Pto | 55 | W |
| crankcase heater mode | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 65 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 69 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Rated air flow(indoor) | |
| Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | Rated air flow(outdoor) | |
| | | - | |

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FDUM90VNP1VH

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| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDUM100VH | | |
| Outdoor unit model name | FDC90VNP1 | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.1 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.60 | kW |
| Tj=25°C | Pdc | 4.30 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.10 | kW |
| Tj=2°C | Pdh | 4.30 | kW |
| Tj=7°C | Pdh | 2.70 | kW |
| Tj=12°C | Pdh | 1.80 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.10 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | COPd | 2.69 | - |
| Tj=2°C | COPd | 3.93 | - |
| Tj=7°C | COPd | 5.12 | - |
| Tj=12°C | COPd | 5.25 | - |
| Tj=bivalent temperature | COPd | 2.50 | - |
| Tj=operating limit | COPd | 2.36 | - |
| Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | COPd | - | - |
| Tj=7°C | COPd | - | - |
| Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | COPd | - | - |
| Tj=2°C | COPd | - | - |
| Tj=7°C | COPd | - | - |
| Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Tj=-15°C | COPd | - | - |
| Operating limit temperature | | | |
| heating / Average | Tol | -15 | °C |
| heating / Warmer | Tol | - | °C |
| heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Cycling interval efficiency | | | |
| for cooling | EERcyc | - | - |
| for heating | COPcyc | - | - |
| Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - |
| Degradation coefficient | | | |
| heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | |
| off mode | Poff | 8 | W |
| standby mode | Psb | 8 | W |
| thermostat-off mode | Pto(cooling) | 50 | W |
| | Pto(heating) | 60 | W |
| crankcase heater mode | Pck | 0 | W |
| Annual electricity consumption | | | |
| cooling | Qce | 480 | kWh/a |
| heating / Average | Qhe | 2850 | kWh/a |
| heating / Warmer | Qhe | - | kWh/a |
| heating / colder | Qhe | - | kWh/a |
| Capacity control(indicate one of three options) | | | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Other items | | | |
| Sound power level(indoor) | Lwa | 65 | dB(A) |
| Sound power level(outdoor) | Lwa | 69 | dB(A) |
| Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| Rated air flow(indoor) | - | 2,160 | m ³ /h |
| Rated air flow(outdoor) | - | 3,780 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

PJG000Z573 

FDUM100VNP1VH

| | | | |
|---|---|--|-----------------------|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDUM100VH | | |
| Outdoor unit model name | FDC100VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.1 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.74 | kW |
| Tj=20°C | Pdc | 3.50 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.17 | kW |
| Tj=2°C | Pdh | 4.36 | kW |
| Tj=7°C | Pdh | 2.83 | kW |
| Tj=12°C | Pdh | 2.90 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.15 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | COPd | 2.79 | - |
| Tj=2°C | COPd | 4.04 | - |
| Tj=7°C | COPd | 5.34 | - |
| Tj=12°C | COPd | 6.17 | - |
| Tj=bivalent temperature | COPd | 2.52 | - |
| Tj=operating limit | COPd | 2.38 | - |
| Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | COPd | - | - |
| Tj=7°C | COPd | - | - |
| Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | COPd | - | - |
| Tj=2°C | COPd | - | - |
| Tj=7°C | COPd | - | - |
| Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | COPd | - | - |
| Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Operating limit temperature | | | |
| heating / Average | Tol | -15 | °C |
| heating / Warmer | Tol | - | °C |
| heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Cycling interval efficiency | | | |
| for cooling | EERcyc | - | - |
| for heating | COPcyc | - | - |
| Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - |
| Degradation coefficient | | | |
| heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 10 | W |
| thermostat-off mode | Pto(cooling) | 50 | W |
| | Pto(heating) | 60 | W |
| crankcase heater mode | Pck | 0 | W |
| Annual electricity consumption | | | |
| cooling | Qce | 551 | kWh/a |
| heating / Average | Qhe | 2748 | kWh/a |
| heating / Warmer | Qhe | - | kWh/a |
| heating / colder | Qhe | - | kWh/a |
| Capacity control(indicate one of three options) | | | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Other items | | | |
| Sound power level(indoor) | Lwa | 65 | dB(A) |
| Sound power level(outdoor) | Lwa | 70 | dB(A) |
| Global warming potential | GWP | 1,975 | kgCO ₂ eq. |
| Rated air flow(indoor) | - | 2,160 | m ³ /h |
| Rated air flow(outdoor) | - | 4,500 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

PJG000Z573 


(3) Ceiling suspended type (FDE)

FDE71VNPVH

| | | | | | | | |
|---|---|----------|------|--|--------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to: | | | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | | | |
| Indoor unit model name | | FDE71VH | | Average(mandatory) | | Yes | |
| Outdoor unit model name | | FDC71VNP | | Warmer(if designated) | | No | |
| Function(indicate if present) | | | | Colder(if designated) | | | |
| cooling | | Yes | | No | | No | |
| heating | | Yes | | No | | No | |
| Item | symbol | value | unit | Item | symbol | value | class |
| Design load | | | | Seasonal efficiency and energy efficiency class | | | |
| cooling | Pdesignc | 7.1 | kW | cooling | SEER | 6.35 | A++ |
| heating / Average | Pdesignh | 5.8 | kW | heating / Average | SCOP/A | 4.22 | A+ |
| heating / Warmer | Pdesignh | - | kW | heating / Warmer | SCOP/W | - | - |
| heating / Colder | Pdesignh | - | kW | heating / Colder | SCOP/C | - | - |
| Declared capacity at outdoor temperature Tdesignh | | | | Back up heating capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 5.8 | kW | heating / Average (-10°C) | elbu | 0.0 | kW |
| heating / Warmer (2°C) | Pdh | - | kW | heating / Warmer (2°C) | elbu | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW | heating / Colder (-22°C) | elbu | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 7.10 | kW | Tj=35°C | EERd | 2.84 | - |
| Tj=30°C | Pdc | 5.23 | kW | Tj=30°C | EERd | 4.43 | - |
| Tj=25°C | Pdc | 3.37 | kW | Tj=25°C | EERd | 7.49 | - |
| Tj=20°C | Pdc | 1.55 | kW | Tj=20°C | EERd | 15.50 | - |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 5.13 | kW | Tj=-7°C | COPd | 2.73 | - |
| Tj=2°C | Pdh | 3.12 | kW | Tj=2°C | COPd | 4.27 | - |
| Tj=7°C | Pdh | 2.01 | kW | Tj=7°C | COPd | 5.15 | - |
| Tj=12°C | Pdh | 1.02 | kW | Tj=12°C | COPd | 5.96 | - |
| Tj=bivalent temperature | Pdh | 5.80 | kW | Tj=bivalent temperature | COPd | 2.28 | - |
| Tj=operating limit | Pdh | 5.17 | kW | Tj=operating limit | COPd | 2.17 | - |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | - | kW | Tj=-7°C | COPd | - | - |
| Tj=2°C | Pdh | - | kW | Tj=2°C | COPd | - | - |
| Tj=7°C | Pdh | - | kW | Tj=7°C | COPd | - | - |
| Tj=12°C | Pdh | - | kW | Tj=12°C | COPd | - | - |
| Tj=bivalent temperature | Pdh | - | kW | Tj=bivalent temperature | COPd | - | - |
| Tj=operating limit | Pdh | - | kW | Tj=operating limit | COPd | - | - |
| Tj=-15°C | Pdh | - | kW | Tj=-15°C | COPd | - | - |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating / Average | Tbiv | -10 | °C | heating / Average | Tol | -15 | °C |
| heating / Warmer | Tbiv | - | °C | heating / Warmer | Tol | - | °C |
| heating / Colder | Tbiv | - | °C | heating / Colder | Tol | - | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | - | kW | for cooling | EERcyc | - | - |
| for heating | Pcyhc | - | kW | for heating | COPcyc | - | - |
| Degradation coefficient | | | | Degradation coefficient | | | |
| cooling | Cdc | 0.25 | - | heating | Cdh | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | Poff | 9 | W | cooling | Qce | 392 | kWh/a |
| standby mode | Psb | 9 | W | heating / Average | Qhe | 1927 | kWh/a |
| thermostat-off mode | Pto(cooling) | 20 | W | heating / Warmer | Qhe | - | kWh/a |
| crankcase heater mode | Pto(heating) | 30 | W | heating / colder | Qhe | - | kWh/a |
| | Pck | 0 | W | | | | |
| Capacity control(indicate one of three options) | | | | Other items | | | |
| fixed | | No | | Sound power level(indoor) | Lwa | 60 | dB(A) |
| staged | | No | | Sound power level(outdoor) | Lwa | 67 | dB(A) |
| variable | | Yes | | Global warming potential | GWp | 1,975 | kgCO ₂ eq. |
| | | | | Rated air flow(indoor) | - | 1,200 | m ³ /h |
| | | | | Rated air flow(outdoor) | - | 2,160 | m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | | | | | |


FDE90VNPVH

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|--|---|--|------------------------------------|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDE100VH | | |
| Outdoor unit model name | FDC90VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.2 | kW |
| heating / Warmer | Pdesignh | — | kW |
| heating / Colder | Pdesignh | — | kW |
| Declared capacity at outdoor temperature Tdesignh | | | |
| heating / Average (-10°C) | Pdh | 8.2 | kW |
| heating / Warmer (2°C) | Pdh | — | kW |
| heating / Colder (-22°C) | Pdh | — | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.63 | kW |
| Tj=25°C | Pdc | 4.27 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | 7.26 | kW |
| Tj=2°C | Pdh | 4.41 | kW |
| Tj=7°C | Pdh | 2.84 | kW |
| Tj=12°C | Pdh | 1.45 | kW |
| Tj=bivalent temperature | Pdh | 8.20 | kW |
| Tj=operating limit | Pdh | 7.20 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
| Tj=-7°C | Pdh | — | kW |
| Tj=2°C | Pdh | — | kW |
| Tj=7°C | Pdh | — | kW |
| Tj=12°C | Pdh | — | kW |
| Tj=bivalent temperature | Pdh | — | kW |
| Tj=operating limit | Pdh | — | kW |
| Tj=-15°C | Pdh | — | kW |
| Bivalent temperature | | | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | — | °C |
| heating / Colder | Tbiv | — | °C |
| Operating limit temperature | | | |
| heating / Average | Tol | -15 | °C |
| heating / Warmer | Tol | — | °C |
| heating / Colder | Tol | — | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | — | kW |
| for heating | Pcyh | — | kW |
| | | for cooling | EERcyc |
| | | for heating | COPcyc |
| Degradation coefficient cooling | | Degradation coefficient heating | |
| | Cdc | 0.25 | - |
| | | | Cdh |
| | | | 0.25 |
| | | | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 9 | W |
| standby mode | Psb | 9 | W |
| thermostat-off mode | Pto | 30 | W |
| crankcase heater mode | Pck | 0 | W |
| | | cooling | Qce |
| | | heating / Average | Qhe |
| | | heating / Warmer | Qhe |
| | | heating / colder | Qhe |
| | | | 475 kWh/a |
| | | | 2,704 kWh/a |
| | | | — kWh/a |
| | | | — kWh/a |
| Capacity control(indicate one of three options) | | | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Other items | | | |
| Sound power level(indoor) | | Lwa | 64 dB(A) |
| Sound power level(outdoor) | | Lwa | 69 dB(A) |
| Global warming potential | | GWP | 1,975 kgCO ₂ eq. |
| Rated air flow(indoor) | | - | 1,920 m ³ /h |
| Rated air flow(outdoor) | | - | 3,780 m ³ /h |
| Contact details for obtaining more information | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | | |

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FDE90VNP1VH

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| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDE100VH | | |
| Outdoor unit model name | FDC90VNP1 | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 9.0 | kW |
| heating / Average | Pdesignh | 8.2 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.2 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 9.00 | kW |
| Tj=30°C | Pdc | 6.63 | kW |
| Tj=25°C | Pdc | 4.27 | kW |
| Tj=20°C | Pdc | 2.20 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.26 | kW |
| Tj=2°C | Pdh | 4.41 | kW |
| Tj=7°C | Pdh | 2.84 | kW |
| Tj=12°C | Pdh | 1.45 | kW |
| Tj=bivalent temperature | Pdh | 8.20 | kW |
| Tj=operating limit | Pdh | 7.20 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 9 | W |
| standby mode | Psb | 9 | W |
| thermostat-off mode | Pto(cooling) | 30 | W |
| crankcase heater mode | Pto(heating) | 38 | W |
| | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | No | Sound power level(indoor) | Lwa 64 dB(A) |
| staged | No | Sound power level(outdoor) | Lwa 69 dB(A) |
| variable | Yes | Global warming potential | GWP 1,975 kgCO ₂ eq. |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. | |
| | | Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | |

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FDE100VNP1VH

| | | | |
|---|------------------|---|-----------|
| Information to identify the model(s) to which the information relates to: | | If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. | |
| Indoor unit model name | FDE100VH | | |
| Outdoor unit model name | FDC100VNP | | |
| Function(indicate if present) | | Average(mandatory) | |
| cooling | Yes | Warmer(if designated) | No |
| heating | Yes | Colder(if designated) | No |
| Item | symbol | value | unit |
| Design load | | | |
| cooling | Pdesignc | 10.0 | kW |
| heating / Average | Pdesignh | 8.1 | kW |
| heating / Warmer | Pdesignh | - | kW |
| heating / Colder | Pdesignh | - | kW |
| Declared capacity at outdoor temperature Tdesignh | | Back up heating capacity at outdoor temperature Tdesignh | |
| heating / Average (-10°C) | Pdh | 8.1 | kW |
| heating / Warmer (2°C) | Pdh | - | kW |
| heating / Colder (-22°C) | Pdh | - | kW |
| Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature Tj | | Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature Tj | |
| Tj=35°C | Pdc | 10.00 | kW |
| Tj=30°C | Pdc | 7.37 | kW |
| Tj=25°C | Pdc | 4.80 | kW |
| Tj=20°C | Pdc | 3.50 | kW |
| Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | 7.20 | kW |
| Tj=2°C | Pdh | 4.40 | kW |
| Tj=7°C | Pdh | 2.80 | kW |
| Tj=12°C | Pdh | 2.90 | kW |
| Tj=bivalent temperature | Pdh | 8.10 | kW |
| Tj=operating limit | Pdh | 7.17 | kW |
| Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj | | Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature Tj | |
| Tj=-7°C | Pdh | - | kW |
| Tj=2°C | Pdh | - | kW |
| Tj=7°C | Pdh | - | kW |
| Tj=12°C | Pdh | - | kW |
| Tj=bivalent temperature | Pdh | - | kW |
| Tj=operating limit | Pdh | - | kW |
| Tj=-15°C | Pdh | - | kW |
| Bivalent temperature | | Operating limit temperature | |
| heating / Average | Tbiv | -10 | °C |
| heating / Warmer | Tbiv | - | °C |
| heating / Colder | Tbiv | - | °C |
| Cycling interval capacity | | Cycling interval efficiency | |
| for cooling | Pcycc | - | kW |
| for heating | Pcyh | - | kW |
| Degradation coefficient | | Degradation coefficient | |
| cooling | Cdc | 0.25 | - |
| Electric power input in power modes other than 'active mode' | | Annual electricity consumption | |
| off mode | Poff | 10 | W |
| standby mode | Psb | 10 | W |
| thermostat-off mode | Pto(cooling) | 36 | W |
| crankcase heater mode | Pto(heating) | 45 | W |
| | Pck | 0 | W |
| Capacity control(indicate one of three options) | | Other items | |
| fixed | | No | |
| staged | | No | |
| variable | | Yes | |
| Contact details for obtaining more information | | Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom | |

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4. V MULTI SYSTEM

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4.1 HYPER INVERTER PACKAGED AIR-CONDITIONERS

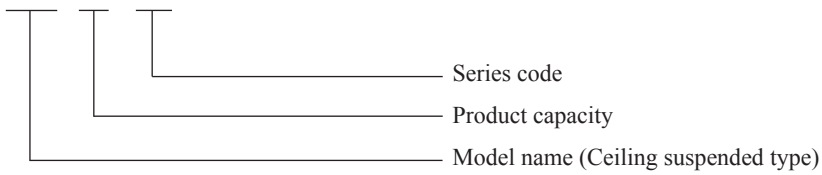
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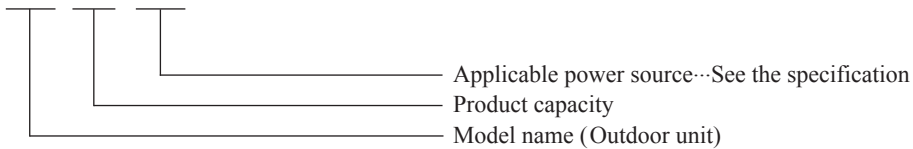
4.1.1 GENERAL INFORMATION

(1) How to read the model name

Example: **FDE 40 VH**



Example: **FDC 100 VNX**



(2) Table of models

| Model \ Capacity | 40 | 50 | 60 | 71 |
|-----------------------------------|-----------------------------|---|---|---|
| Ceiling suspended type (FDE) | ○ | ○ | ○ | ○ |
| Outdoor unit to be combined (FDC) | FDC71VNX (3 Horse Power) | FDC100VNX FDC100VSX (4 Horse Power) | FDC125VNX FDC125VSX (5 Horse Power) | FDC140VNX FDC140VSX (6 Horse Power) |

(3) Table of system combinations

| Outdoor unit | Type | Indoor unit assembly capacity | Branch pipe set (Option) |
|------------------------|--------|-------------------------------|-------------------------------|
| FDC71VNX | Twin | 40+40 | DIS-WA1 |
| FDC100VNX FDC100VSX | | 50+50 | |
| FDC125VNX FDC125VSX | | 60+60 50+71 | |
| FDC140VNX FDC140VSX | Twin | 71+71 | DIS-TA1 or DIS-WA1×2set |
| | Triple | 50+50+50 | |

Notes(1) Always use the branch piping set (option) at branches in the refrigerant piping.

(2) If wireless specifications are used, use 1 wireless indoor unit in combination with wired indoor units.

(3) The combinations except the above table forbids.

4.1.2 SPECIFICATIONS

(1) Indoor units

| Item | | Model | FDE40VH | |
|---|----------------------------------|---------------------|--|----|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity | kW | 4.0 | |
| | Nominal heating capacity | kW | 4.5 | |
| | Sound power level | Cooling | dB(A) | 60 |
| | | Heating | | |
| | Sound pressure level | Cooling | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | |
| | Heating | | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1070 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | kg | 28 | |
| Heat exchanger | | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | |
| | Heating | | | |
| Available external static pressure | | Pa | 0 | |
| Outside air intake | | | Not possible | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | |
| Electric heater | | W | — | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | Thermostat by electronics | |
| | Operation display | | — | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | m | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | |
| Drain hose | | | Hose connectable VP20(O.D.26) | |
| Drain pump, max lift height | | mm | — | |
| IP number | | | IPX0 | |
| Standard accessories | | | Mounting kit, Drain hose | |
| Option parts | | | Motion sensor : LB-E | |

Notes (1) The data are measured at the following conditions.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDE50VH | |
|---|----------------------------------|---------------------|--|----|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity | kW | 5.0 | |
| | Nominal heating capacity | kW | 5.4 | |
| | Sound power level | Cooling | dB(A) | 60 |
| | | Heating | | |
| | Sound pressure level | Cooling | P-Hi : 46 Hi : 38 Me : 36 Lo : 31 | |
| | Heating | | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1070 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | kg | 28 | |
| Heat exchanger | | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | | Centrifugal fan ×2 | |
| Fan motor (Starting method) | | W | 30 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | |
| | Heating | | | |
| Available external static pressure | | Pa | 0 | |
| Outside air intake | | | Not possible | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | |
| Electric heater | | W | — | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | Thermostat by electronics | |
| | Operation display | | — | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 12.7 (1/2") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | m | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | |
| Drain hose | | | Hose connectable VP20(O.D.26) | |
| Drain pump, max lift height | | mm | — | |
| IP number | | | IPX0 | |
| Standard accessories | | | Mounting kit, Drain hose | |
| Option parts | | | Motion sensor : LB-E | |

Notes (1) The data are measured at the following conditions.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDE60VH | |
|---|----------------------------------|---------------------|--|----|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity | kW | 5.6 | |
| | Nominal heating capacity | kW | 6.7 | |
| | Sound power level | Cooling | dB(A) | 60 |
| | | Heating | | |
| | Sound pressure level | Cooling | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | |
| Heating | | | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1320 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | kg | 33 | |
| Heat exchanger | | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | |
| | Heating | | | |
| Available external static pressure | | Pa | 0 | |
| Outside air intake | | | Not possible | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | |
| Electric heater | | W | — | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | Thermostat by electronics | |
| | Operation display | | — | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 12.7 (1/2") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | m | — | |
| | Drain hose | | Hose connectable VP20(O.D.26) | |
| Drain pump, max lift height | | mm | — | |
| IP number | | | IPX0 | |
| Standard accessories | | | Mounting kit, Drain hose | |
| Option parts | | | Motion sensor : LB-E | |

Notes (1) The data are measured at the following conditions.

| Operation \ Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|------------------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDE71VH | |
|---|----------------------------------|---------------------|--|----|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 | |
| | Nominal heating capacity (range) | kW | 8.0 | |
| | Sound power level | Cooling | dB(A) | 60 |
| | | Heating | | |
| | Sound pressure level | Cooling | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | |
| Heating | | | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 210 × 1320 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | kg | 33 | |
| Heat exchanger | | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | | Centrifugal fan ×4 | |
| Fan motor (Starting method) | | W | 50 < Direct line start > | |
| Air flow | Cooling | m ³ /min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | |
| | Heating | | | |
| Available external static pressure | | Pa | 0 | |
| Outside air intake | | | Not possible | |
| Air filter, Quality / Quantity | | | Pocket plastic net ×2(Washable) | |
| Shock & vibration absorber | | | Rubber sleeve(for fan motor) | |
| Electric heater | | W | — | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | Thermostat by electronics | |
| | Operation display | | — | |
| Safety equipments | | | Overload protection for fan motor Frost protection thermostat | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: ϕ 9.52 (3/8") Gas line: ϕ 15.88 (5/8") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | m | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | |
| Drain hose | | | Hose connectable VP20(O.D.26) | |
| Drain pump, max lift height | | mm | — | |
| IP number | | | IPX0 | |
| Standard accessories | | | Mounting kit, Drain hose | |
| Option parts | | | Motion sensor : LB-E | |

Notes (1) The data are measured at the following conditions.

| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|-----------|------|------------------------|------|-------------------------|------|------------|
| | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | | 20°C | — | 7°C | 6°C | ISO5151-H1 |

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(2) Outdoor units

| Item | | Model | FDC71VNX | | | |
|--|---|--|---|-------------------------|------|------------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 7.1 [3.2(Min.)-8.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 8.0 [3.6(Min.)-9.0(Max.)] | | | |
| | Sound power level | Cooling | dB(A) | 66 | | |
| | | Heating | | 51 | | |
| | Sound pressure level | Cooling | | 48 | | |
| Heating | | — | | | | |
| Silent mode sound pressure level | | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 750×880(+88)×340 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 60 | | | |
| Compressor type & Q'ty | | | RMT5118MDE2(Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.675 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 2.95 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | 60 | | | |
| | Heating | | 50 | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | | | |
| Electric heater | | W | 20(Crank case heater) | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ 20 x 3 pcs | | | |
| IP number | | | IP24 | | | |
| Standard accessories | | | — | | | |
| Option parts | | | — | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | FDC100VNX | | | |
|--|---|------------------------|---|-------------------------|------|------------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Sound power level | Cooling | dB(A) | 70 | | |
| | | Heating | | 48 | | |
| | Sound pressure level | Cooling | 50 | | | |
| Heating | | — | | | | |
| Silent mode sound pressure level | | | — | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 105 | | | |
| Compressor type & Q'ty | | | RMT5134MDE2(Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | 100 | | | |
| | Heating | | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | | | |
| Electric heater | | W | 20(Crank case heater) | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ 20 x 3 pcs | | | |
| IP number | | | IP24 | | | |
| Standard accessories | | | Edging | | | |
| Option parts | | | — | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | |
| | | | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| Cooling | | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

| Item | | Model | FDC100VSX | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------------|---------------------|---|-------------------------------------|--------------------------------|-----------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-16.0(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound power level | Cooling | dB(A) | 70 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | 48 | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound pressure level | Cooling | | 50 | | | | | | | | | | | | | | | | | | | | | | | |
| Heating | | — | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | | | — | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | kg | 105 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor type & Q'ty | | | RMT5134MDE3(Twin rotary type)×1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant control | | | Electronic expansion valve | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | Cooling | m ³ /min | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Heating | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | W | 20(Crank case heater) | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Gas line: φ 15.88 (5/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | | Flare piping | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | | m | — | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | | | | | | | | | | | | | | | | | | | | | |
| | Refrigerant line (one way) length | | m | Max.100 | | | | | | | | | | | | | | | | | | | | | | | |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | | Hole size φ 20 x 3 pcs | | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | IP24 | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | Edging | | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | — | | | | | | | | | | | | | | | | | | | | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Operation</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>—</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | | | Operation | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards | | | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | | Model | FDC125VNX | |
|---|-----------------------------------|---------------------|---|---------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-17.0(Max.)] | |
| | Sound power level | Cooling | dB(A) | 70 |
| | | Heating | | |
| | Sound pressure level | Cooling | 48 | |
| Heating | | 50 | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 105 | |
| Compressor type & Q'ty | | | RMT5134MDE2(Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | |
| Heat exchanger | | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | |
| Fan type & Q'ty | | | Propeller fan ×2 | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m ³ /min | 100 | |
| | Heating | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | |
| Electric heater | | W | 20(Crank case heater) | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") | |
| | | | Gas line: φ 15.88 (5/8") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | |
| | Refrigerant line (one way) length | | m | Max.100 |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hole size φ 20 x 3 pcs | |
| IP number | | | IP24 | |
| Standard accessories | | | Edging | |
| Option parts | | | — | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDC125VSX | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------------|---------------------|---|-------------------------------------|--------------------------------|------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-18.0(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound power level | Cooling | dB(A) | 70 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | 48 | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound pressure level | Cooling | | 50 | | | | | | | | | | | | | | | | | | | | | | | |
| Heating | | — | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | | — | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | kg | 105 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor type & Q'ty | | | RMT5134MDE3 (Twin rotary type)×1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant control | | | Electronic expansion valve | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | Cooling | m ³ /min | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Heating | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | W | 20(Crank case heater) | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Gas line: φ 15.88 (5/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | Flare piping | | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | | m | — | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | | | | | | | | | | | | | | | | | | | | | |
| | Refrigerant line (one way) length | | m | Max.100 | | | | | | | | | | | | | | | | | | | | | | | |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) | | Max.15 (Outdoor unit is lower) | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | | Hole size φ 20 x 3 pcs | | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | IP24 | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | Edging | | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | — | | | | | | | | | | | | | | | | | | | | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Item</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>—</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | | | Item | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| Item | Indoor air temperature | | Outdoor air temperature | | Standards | | | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | | Model | FDC140VNX | |
|---|-----------------------------------|---------------------|---|---------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-18.0(Max.)] | |
| | Sound power level | Cooling | dB(A) | 72 |
| | | Heating | | 49 |
| | Sound pressure level | Cooling | 52 | |
| Heating | | — | | |
| Silent mode sound pressure level | | | — | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | |
| Net weight | | kg | 105 | |
| Compressor type & Q'ty | | | RMT5134MDE2(Twin rotary type)×1 | |
| Compressor motor (Starting method) | | kW | Direct line start | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | |
| Heat exchanger | | | M shape fin & inner grooved tubing | |
| Refrigerant control | | | Electronic expansion valve | |
| Fan type & Q'ty | | | Propeller fan ×2 | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | |
| Air flow | Cooling | m ³ /min | 100 | |
| | Heating | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | |
| Electric heater | | W | 20(Crank case heater) | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") | |
| | | | Gas line: φ 15.88 (5/8") | |
| | Connecting method | | Flare piping | |
| | Attached length of piping | | — | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | |
| | Refrigerant line (one way) length | | m | Max.100 |
| Vertical height diff. between O/U and I/U | | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | |
| Drain hose | | | Hole size φ 20 x 3 pcs | |
| IP number | | | IP24 | |
| Standard accessories | | | Edging | |
| Option parts | | | — | |

Notes (1) The data are measured at the following conditions. The pipe length is 7.5m.

| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
|---------|------------------------|------|-------------------------|------|------------|
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

| Item | | Model | FDC140VSX | | | |
|--|---|--|---|-------------------------|------------|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 14.0 [5.0(Min.)-16.0(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 16.0 [4.0(Min.)-20.0(Max.)] | | | |
| | Sound power level | Cooling | dB(A) | 72 | | |
| | | Heating | | 49 | | |
| | Sound pressure level | Cooling | | 52 | | |
| Heating | | — | | | | |
| Silent mode sound pressure level | | | | — | | |
| Exterior dimensions (Height x Width x Depth) | | mm | 1300×970×370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 105 | | | |
| Compressor type & Q'ty | | | RMT5134MDE3(Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 4.5 in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | | |
| Fan motor (Starting method) | | W | 86 x 2 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | 100 | | | |
| | Heating | | | | | |
| Shock & vibration absorber | | | Rubber sleeve(for compressor) | | | |
| Electric heater | | W | 20(Crank case heater) | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.100 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ 20 x 3 pcs | | | |
| IP number | | | IP24 | | | |
| Standard accessories | | | Edging | | | |
| Option parts | | | — | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |

(3) Operation chart

The V Multi is a system that allows for different models and capacities of indoor units to be connected so the individual operating characteristics of the indoor and outdoor are provided. Use the procedure shown in item (c) to calculate the combined operating characteristics.

(a) Operating characteristic of outdoor unit

(220-240V 50Hz/220V 60Hz)

| Item | | Model | FDC71VNX | FDC100VNX | FDC125VNX | FDC140VNX |
|---------------------------------------|----|-------|----------|-----------|-----------|-----------|
| Cooling power consumption | kW | | 1.95 | 2.90 | 3.81 | 4.51 |
| Heating power consumption | | | 1.85 | 3.29 | 3.54 | 4.42 |
| Cooling running current | A | | 8.5/8.9 | 12.8/13.4 | 16.9/17.7 | 20.7/21.7 |
| Heating running current | | | 8.1/8.5 | 14.5/15.2 | 15.7/16.4 | 20.3/21.2 |
| Inrush current <Max. running current> | A | | 5 <17> | 5 <24> | 5 <26> | |

(380-415V 50Hz/380V 60Hz)

| Item | | Model | FDC100VSX | FDC125VSX | FDC140VSX |
|---------------------------------------|----|-------|-----------|-----------|-----------|
| Cooling power consumption | kW | | 2.90 | 3.81 | 4.51 |
| Heating power consumption | | | 3.29 | 3.54 | 4.42 |
| Cooling running current | A | | 4.1/4.4 | 5.4/5.6 | 6.8/7.2 |
| Heating running current | | | 4.7/4.9 | 5.0/5.2 | 6.7/7.1 |
| Inrush current <Max. running current> | A | | 5 <15> | | |

Note(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO5151-T1 "UNITARY AIR-CONDITIONERS"

(b) Operating characteristic of indoor unit

(220-240V 50Hz/220V 60Hz)

| Item | | Model | FDE40VH | FDE50VH | FDE60VH | FDE71VH |
|---------------------------|----|-------|-----------|-----------|-----------|-----------|
| Cooling power consumption | kW | | 0.05/0.05 | 0.05/0.05 | 0.08/0.08 | 0.08/0.08 |
| Heating power consumption | | | 0.05/0.05 | 0.05/0.05 | 0.08/0.08 | 0.08/0.08 |
| Cooling running current | A | | 0.50/0.50 | 0.50/0.50 | 0.75/0.75 | 0.75/0.75 |
| Heating running current | | | 0.50/0.50 | 0.50/0.50 | 0.75/0.75 | 0.75/0.75 |

Notes(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO5151-T1 "UNITARY AIR-CONDITIONERS"

(2) The values shown in the above table are common to both cooling and heating operations.

(c) Calculation of total operation characteristics

Since the operation characteristics of V Multi system depend on combination of indoor unit, calculate the total operation characteristics of the system by using the formulas below according to specifications of each indoor unit or outdoor unit.

1) 1 Phase models**a) Total power consumption**

Total power consumption (kW) = Power consumption of outdoor unit + Σ (Power consumption of indoor unit)

b) Total running current

Total running current (A) = Running current of outdoor unit + Σ (Running current of indoor unit)

c) Total power factor

Total power factor (%) = [Total power consumption (W) / Total running current (A) \times Power source] \times 100

Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

[Example]

(Conditions) Operation Voltage Indoor unit: 220 V, 50 Hz
 Outdoor unit: 220 V, 50 Hz
 Operation mode Cooling and Heating
 Unit Outdoor unit: FDC140VNX \times 1 unit
 Indoor unit: FDE71VH \times 2 units

Operation characteristics of each unit

(Cooling/Heating)

| Item \ Model | FDC140VNX | FDE71VH |
|------------------------|-----------|-----------|
| Power consumption (kW) | 4.51/4.42 | 0.08/0.08 |
| Running current (A) | 20.7/20.3 | 0.75/0.75 |

① Total power consumption (kW)

(Cooling) $4.51 + (0.08 \times 2) = 4.67$

(Heating) $4.42 + (0.08 \times 2) = 4.58$

② Total running current (A)

(Cooling) $20.7 + (0.75 \times 2) = 22.2$

(Heating) $20.3 + (0.75 \times 2) = 21.8$

③ Total power factor (%)

(Cooling) $\frac{4.67 \times 1000}{22.2 \times 220} \times 100 \approx 96 \%$

(Heating) $\frac{4.58 \times 1000}{21.8 \times 220} \times 100 \approx 95 \%$

2) 3 Phase models**a) Total power consumption**

Total power consumption (kW) = Power consumption of outdoor unit + Σ (Power consumption of indoor unit)

b) Total running current

Total running current (A) = Running current of outdoor unit + [Σ (Running current of indoor unit) \times 1/3]

c) Total power factor

Total power factor (%) = [Total power consumption (W) / $\sqrt{3} \times$ Total running current (A) \times Power source] \times 100

Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

4.1.3 EXTERIOR DIMENSIONS

- (1) Indoor units See page 58.
- (2) Outdoor units See page 67.
- (3) Remote controller (Option parts) See page 70.

4.1.4 ELECTRICAL WIRING

- (1) Indoor units See page 73.
- (2) Outdoor units See page 80.

4.1.5 NOISE LEVEL

- (1) Indoor units See page 84.
- (2) Outdoor units See page 86.

4.1.6 TEMPERATURE AND VELOCITY DISTRIBUTION See page 95.

4.1.7 PIPING SYSTEM See page 101.

4.1.8 RANGE OF USAGE & LIMITATIONS See page 104.

4.1.9 SELECTION CHART See page 108.

4.1.10 APPLICATION DATA

- (1) Installation of indoor unit See page 141.**
- (2) Electric wiring work installation See page 165.**
- (3) Installation of wired remote control (Option parts) See page 169.**
- (4) Installation of outdoor unit**
 - (a) Model FDC71VNX See page 185.
 - (b) Models FDC100-140VNX,100-140VSX See page 193.
- (5) Instructions for branching pipe set (DIS-WA1,WB1,TA1,TB1) See page 201.**

4.1.11 TECHNICAL INFORMATION
Models FDE40VH, 50VH, 60VH, 71VH

| Model(s) : FDE40VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.4 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 4.5 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE50VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE60VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.0 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE71VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.6 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.5 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

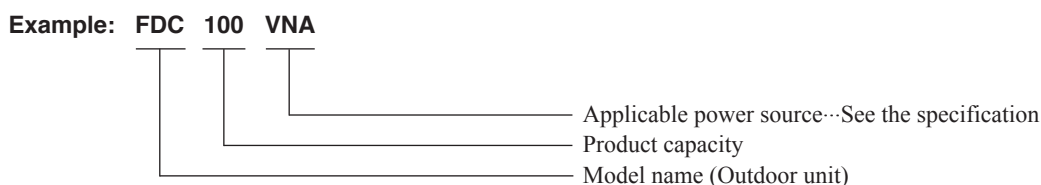
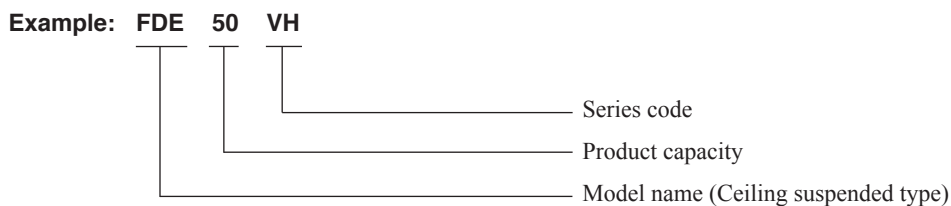
4.2 MICRO INVERTER PACKAGED AIR-CONDITIONERS

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| 4.2.11 TECHNICAL INFORMATION | 630 |

4.2.1 GENERAL INFORMATION

(1) How to read the model name



(2) Table of models

| Model \ Capacity | 50 | 60 | 71 | 100 | 125 |
|--|---|---|---|------------------------------|-------------------------------|
| Ceiling suspended type (FDE) | ○ | ○ | ○ | ○ | ○ |
| Outdoor unit to be combined (FDC) | FDC100VNA FDC100VSA (4 Horse Power) | FDC125VNA FDC125VSA (5 Horse Power) | FDC140VNA FDC140VSA (6 Horse Power) | FDC200VSA (8 Horse Power) | FDC250VSA (10 Horse Power) |

(3) Table of system combinations

| Outdoor unit | Type | Indoor unit assembly capacity | Branch pipe set (Option) |
|--------------------------------|-------------|--------------------------------|---|
| FDC100VNA FDC100VSA | Twin | 50+50 | DIS-WA1 |
| | | FDC125VNA FDC125VSA | |
| FDC140VNA FDC140VSA | Twin | 71+71 | |
| | Triple | 50+50+50 | DIS-TA1 or DIS-WA1 × 2set |
| FDC200VSA | Twin | 100+100 | DIS-WB1 |
| | | 71+125 | |
| | Triple | 71+71+71 | DIS-TB1 or DIS-WA1 × 1set DIS-WB1 × 1set |
| | Double twin | 50+50+50+50 | DIS-WA1 × 2set DIS-WB1 × 1set |
| FDC250VSA | Twin | 125+125 | DIS-WB1 |
| | Triple | 60+60+125 | DIS-TB1 or DIS-WA1 × 1set DIS-WB1 × 1set |
| | | 71+71+100 | |
| | Double twin | 60+60+60+60 | DIS-WA1 × 2set DIS-WB1 × 1set |

Notes(1) Always use the branch piping set (option) at branches in the refrigerant piping.

(2) If wireless specifications are used, use 1 wireless indoor unit in combination with wired indoor units.

(3) The combinations except the above table forbids.

4.2.2 SPECIFICATIONS

(1) Indoor units

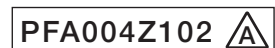
| Item | | Model | | FDE50VH | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------------------------------|---|---|--|------------|-----------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Sound power level | Cooling | dB(A) | 60 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound pressure level | Cooling | | P-Hi : 46 Hi : 39 Me : 36 Lo : 31 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | | | - | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 210 × 1070 × 690 | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | kg | | 28 | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | | Centrifugal fan x2 | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | W | | 30 < Direct line start > | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | | Cooling | m ³ /min | P-Hi : 13 Hi : 10 Me : 9 Lo : 7 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| Available external static pressure | | Pa | | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| Outside air intake | | | | Not possible | | | | | | | | | | | | | | | | | | | | | | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net x2 (Washable) | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | W | | - | | | | | | | | | | | | | | | | | | | | | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Room temperature control | | Thermostat by electronics | | | | | | | | | | | | | | | | | | | | | | | | |
| | Operation display | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | | Liquid line: φ6.35 (1/4") Gas line: φ 12.7 (1/2") | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | | Flare piping | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | m | | - | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | | | Hose connectable VP20 (O.D.26) | | | | | | | | | | | | | | | | | | | | | | | |
| Drain pump, max lift height | | mm | | - | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | | IPX0 | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | | Mounting kit, Drain hose | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | | Motion sensor : LB-E | | | | | | | | | | | | | | | | | | | | | | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th rowspan="2">Operation</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>-</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | Operation | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards | | | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | | |
| | | (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | | Model | | FDE60VH | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------------------------------|---------|---|--|------------|-----------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Sound power level | Cooling | dB(A) | 60 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound pressure level | Cooling | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | | | - | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 210 × 1320 × 690 | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | kg | | 33 | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | W | | 50 < Direct line start > | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| Available external static pressure | | Pa | | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| Outside air intake | | | | Not possible | | | | | | | | | | | | | | | | | | | | | | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2 (Washable) | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | W | | - | | | | | | | | | | | | | | | | | | | | | | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Room temperature control | | Thermostat by electronics | | | | | | | | | | | | | | | | | | | | | | | | |
| | Operation display | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | | Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2") | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | | Flare piping | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | m | | - | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | | | Hose connectable VP20 (O.D.26) | | | | | | | | | | | | | | | | | | | | | | | |
| Drain pump, max lift height | | mm | | - | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | | IPX0 | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | | Mounting kit, Drain hose | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | | Motion sensor : LB-E | | | | | | | | | | | | | | | | | | | | | | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Operation</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>-</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | | | Operation | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards | | | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Item | | Model | | FDE71VH | | |
|--|----------------------------------|--|---|--|------------|-----------|
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Sound power level | Cooling | dB(A) | 60 | | |
| | | Heating | | | | |
| | Sound pressure level | Cooling | | P-Hi : 47 Hi : 41 Me : 37 Lo : 32 | | |
| Heating | | - | | | | |
| Silent mode sound pressure level | | | | - | | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 210 × 1320 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | | 33 | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Fan type & Q'ty | | | | Centrifugal fan ×4 | | |
| Fan motor (Starting method) | | W | | 50 < Direct line start > | | |
| Air flow | | Cooling | m³/min | P-Hi : 20 Hi : 16 Me : 13 Lo : 10 | | |
| | | Heating | | | | |
| Available external static pressure | | Pa | | 0 | | |
| Outside air intake | | | | Not possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net ×2 (Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | | - | | |
| Operation control | Remote control | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | | | |
| | Room temperature control | | Thermostat by electronics | | | |
| | Operation display | | - | | | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat | | |
| Installation data | Refrigerant piping size (O.D.) | mm | | Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | m | | - | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| Drain hose | | | | Hose connectable VP20 (O.D.26) | | |
| Drain pump, max lift height | | mm | | - | | |
| IP number | | | | IPX0 | | |
| Standard accessories | | | | Mounting kit, Drain hose | | |
| Option parts | | | | Motion sensor : LB-E | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | |
| Operation | Cooling | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |

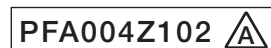
| Item | | Model | | FDE100VH | |
|--|----------------------------------|--|--------|--|------------|
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | |
| Operation data | Sound power level | Cooling | dB(A) | 64 | |
| | Sound pressure level | Heating | | P-Hi : 48 Hi : 43 Me : 38 Lo : 34 | |
| | | Cooling | | - | |
| Silent mode sound pressure level | | Heating | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 250 × 1620 × 690 | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | |
| Net weight | | kg | | 43 | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | |
| Fan type & Q'ty | | | | Centrifugal fan x4 | |
| Fan motor (Starting method) | | W | | 80 < Direct line start > | |
| Air flow | | Cooling | m³/min | P-Hi : 32 Hi : 26 Me : 21 Lo : 16.5 | |
| | | Heating | | | |
| Available external static pressure | | Pa | | 0 | |
| Outside air intake | | | | Not possible | |
| Air filter, Quality / Quantity | | | | Pocket plastic net x2 (Washable) | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | |
| Electric heater | | W | | - | |
| Operation control | Remote control | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | | Thermostat by electronics | |
| | Operation display | | | - | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat | |
| Installation data | Refrigerant piping size (O.D.) | mm | | Liquid line: φ9.52 (3/8") Gas line: φ 15.88 (5/8") | |
| | Connecting method | | | Flare piping | |
| | Attached length of piping | m | | - | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | |
| Drain hose | | | | Hose connectable VP20 (O.D.26) | |
| Drain pump, max lift height | | mm | | - | |
| IP number | | | | IPX0 | |
| Standard accessories | | | | Mounting kit, Drain hose | |
| Option parts | | | | Motion sensor : LB-E | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | |
| | Item | Indoor air temperature | | Outdoor air temperature | |
| | | DB | WB | DB | WB |
| Operation | | 27°C | 19°C | 35°C | 24°C |
| Cooling | | 20°C | - | 7°C | 6°C |
| Heating | | | | | |
| | | | | | Standards |
| | | | | | ISO5151-T1 |
| | | | | | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | |

| Item | | Model | | FDE125VH | | |
|--|----------------------------------|--|--------|--|---|------------|
| Power source | | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Sound power level | Cooling | dB(A) | 64 | | |
| | | Heating | | P-Hi : 48 Hi : 45 Me : 40 Lo : 35 | | |
| | Silent mode sound pressure level | - | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | | 250 × 1620 × 690 | | |
| Exterior appearance (Munsell color) (RAL color) | | | | Plaster white (6.8Y8.9/0.2) near equivalent (RAL 9003) near equivalent | | |
| Net weight | | kg | | 43 | | |
| Heat exchanger | | | | Louver fin & inner grooved tubing | | |
| Fan type & Q'ty | | | | Centrifugal fan x4 | | |
| Fan motor (Starting method) | | W | | 80 < Direct line start > | | |
| Air flow | | Cooling | m³/min | P-Hi : 32 Hi : 29 Me : 23 Lo : 17 | | |
| | | Heating | | | | |
| Available external static pressure | | Pa | | 0 | | |
| Outside air intake | | | | Not possible | | |
| Air filter, Quality / Quantity | | | | Pocket plastic net x2 (Washable) | | |
| Shock & vibration absorber | | | | Rubber sleeve (for fan motor) | | |
| Electric heater | | W | | - | | |
| Operation control | Remote control | | | | (Option) Wired : RC-EX3A , RC-E5 , RCH-E3 Wireless : RCN-E-E3 | |
| | Room temperature control | | | | Thermostat by electronics | |
| | Operation display | | | | - | |
| Safety equipments | | | | Overload protection for fan motor Frost protection thermostat | | |
| Installation data | Refrigerant piping size (O.D.) | mm | | Liquid line: φ9.52 (3/8") Gas line: φ 15.88 (5/8") | | |
| | Connecting method | | | Flare piping | | |
| | Attached length of piping | m | | - | | |
| | Insulation for piping | | | Necessary (both Liquid & Gas lines) | | |
| Drain hose | | | | Hose connectable VP20 (O.D.26) | | |
| Drain pump, max lift height | | mm | | - | | |
| IP number | | | | IPX0 | | |
| Standard accessories | | | | Mounting kit, Drain hose | | |
| Option parts | | | | Motion sensor : LB-E | | |
| Notes | | (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | |
| | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

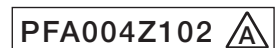


(2) Outdoor units

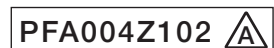
| Item | | Model | FDC100VNA | | |
|--|---|--------------------------|---|-----------|------------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | |
| | Sound power level | Cooling | dB(A) | 70 | |
| | | Heating | | | |
| | Sound pressure level | Cooling | 54 | | |
| Heating | | 56 | | | |
| Silent mode sound pressure level | | | 50/44 (Normal/Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 80 | | |
| Compressor type & Q'ty | | | RMT5126MCE3(Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | 75 | | |
| | Heating | | 73 | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| | Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hole size φ 20 × 3 pcs | | |
| IP number | | | IP24 | | |
| Standard accessories | | | — | | |
| Option parts | | | — | | |
| Notes (1) The data are measured at the following conditions. | | The pipe length is 7.5m. | | | |
| Operation | Indoor air temperature | Outdoor air temperature | | Standards | |
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | |



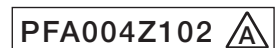
| Item | | Model | FDC100VSA | | | |
|--|---|--|---|-------------------------|--------------------------|-----------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 10.0 [4.0(Min.)-11.2(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 11.2 [4.0(Min.)-12.5(Max.)] | | | |
| | Sound power level | Cooling | dB(A) | 70 | | |
| | | Heating | | | | |
| | Sound pressure level | Cooling | 54 | | | |
| Heating | | 56 | | | | |
| Silent mode sound pressure level | | | 50/44 (Normal/Silent) | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 82 | | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | 75 | | | |
| | Heating | | 73 | | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | | |
| Electric heater | | W | 20 (Crank case heater) | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ20 × 3 pcs | | | |
| IP number | | | IP24 | | | |
| Standard accessories | | | — | | | |
| Option parts | | | — | | | |
| Notes | | (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | |
| Operation | Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| | | DB | WB | DB | WB | |
| | Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | |



| Item | | Model | FDC125VNA | | |
|--|---|---------------------|---|------|--------------------------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Sound power level | Cooling | dB(A) | 71 | |
| | | Heating | | | |
| | Sound pressure level | Cooling | | 55 | |
| | | Heating | | 57 | |
| Silent mode sound pressure level | | | 51/45 (Normal/Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 80 | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | 75 | | |
| | Heating | | 73 | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.50 | | |
| | Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hole size φ20 × 3 pcs | | |
| IP number | | | IP24 | | |
| Standard accessories | | | — | | |
| Option parts | | | — | | |
| Notes (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | |
| Item | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-T1 ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | |

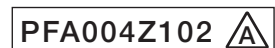


| Item | | Model | FDC125VSA | | |
|--|-----------------------------------|---------------------|---|--------|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 12.5 [5.0(Min.)-14.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 14.0 [4.0(Min.)-16.0(Max.)] | | |
| | Sound power level | Cooling | dB(A) | 71 | |
| | | Heating | | | |
| | Sound pressure level | Cooling | 55 | | |
| Heating | | 57 | | | |
| Silent mode sound pressure level | | | 51/45 (Normal/Silent) | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 82 | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | 75 | | |
| | Heating | | 73 | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") | | |
| | | | Gas line: φ15.88 (5/8") | | |
| | Connecting method | | Flare piping | | |
| | Attached length of piping | | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | | m | Max.50 | |
| Vertical height diff. between O/U and I/U | | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hole size φ20 × 3 pcs | | |
| IP number | | | IP24 | | |
| Standard accessories | | | — | | |
| Option parts | | | — | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards |
| | DB | WB | DB | WB | |
| Cooling | 27°C | 19°C | 35°C | 24°C | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | |

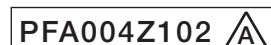


| Item | | Model | FDC140VNA | | | |
|--|---|------------------------|---|-------------------------|------------|-----------|
| Power source | | | 1 Phase 220-240V 50Hz / 220V 60Hz | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | |
| | Sound power level | Cooling | dB(A) | 73 | | |
| | | Heating | | | | |
| | Sound pressure level | Cooling | 57 | | | |
| Heating | | 59 | | | | |
| Silent mode sound pressure level | | | 53/47 (Normal/Silent) | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | |
| Net weight | | kg | 80 | | | |
| Compressor type & Q'ty | | | RMT5126MCE3 (Twin rotary type)×1 | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | | |
| Refrigerant control | | | Electronic expansion valve | | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | | |
| Air flow | Cooling | m ³ /min | 75 | | | |
| | Heating | | 73 | | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | | |
| Electric heater | | W | 20 (Crank case heater) | | | |
| Safety equipments | | | Internal thermostat for fan motor Abnormal discharge temperature protection | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8") | | | |
| | Connecting method | | Flare piping | | | |
| | Attached length of piping | m | — | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | |
| | Refrigerant line (one way) length | m | Max.50 | | | |
| | Vertical height diff. between O/U and I/U | m | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ20 × 3 pcs | | | |
| IP number | | | IP24 | | | |
| Standard accessories | | | — | | | |
| Option parts | | | — | | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | | |
| Item | | Indoor air temperature | | Outdoor air temperature | | Standards |
| Operation | DB | WB | DB | WB | ISO5151-T1 | |
| | Cooling | 27°C | 19°C | 35°C | | |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 | |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz. | | | | | | |

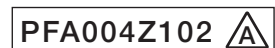
| Item | | Model | FDC140VSA | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------------|---|--|------|------------|-----------|------------------------|--|-------------------------|--|-----------|----|----|----|----|---------|------|------|------|------|------------|---------|------|---|-----|-----|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation data | Nominal cooling capacity (range) | kW | 13.6 [5.0(Min.)-14.5(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Nominal heating capacity (range) | kW | 15.5 [4.0(Min.)-16.5(Max.)] | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound power level | Cooling | dB(A) | 73 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Heating | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sound pressure level | Cooling | 57 | | | | | | | | | | | | | | | | | | | | | | | | |
| Heating | | 59 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silent mode sound pressure level | | | 53/47 (Normal/Silent) | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 845×970×370 | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | | | | | | | | | | | | | | | | | | | | | | | |
| Net weight | | kg | 82 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor type & Q'ty | | | RMT5126MCE4 (Twin rotary type)×1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor motor (Starting method) | | kW | Direct line start | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (M-MA68) | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 3.8kg in outdoor unit (Incl. the amount for the piping of : 30m) | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat exchanger | | | Straight fin & inner grooved tubing | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant control | | | Electronic expansion valve | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan type & Q'ty | | | Propeller fan ×1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor (Starting method) | | W | 86 < Direct line start > | | | | | | | | | | | | | | | | | | | | | | | | |
| Air flow | Cooling | m ³ /min | 75 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Heating | | 73 | | | | | | | | | | | | | | | | | | | | | | | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heater | | W | 20 (Crank case heater) | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety equipments | | | Internal thermostat for fan motor. Abnormal discharge temperature protection. | | | | | | | | | | | | | | | | | | | | | | | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Gas line: φ15.88 (5/8") | | | | | | | | | | | | | | | | | | | | | | | | |
| | Connecting method | | Flare piping | | | | | | | | | | | | | | | | | | | | | | | | |
| | Attached length of piping | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refrigerant line (one way) length | | Max.50 | | | | | | | | | | | | | | | | | | | | | | | | |
| Vertical height diff. between O/U and I/U | | Max.50 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drain hose | | Hole size φ20 × 3 pcs | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP number | | | IP24 | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard accessories | | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Option parts | | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Notes | | (1) The data are measured at the following conditions. The pipe length is 7.5m. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th rowspan="2">Operation</th> <th colspan="2">Indoor air temperature</th> <th colspan="2">Outdoor air temperature</th> <th rowspan="2">Standards</th> </tr> <tr> <th>DB</th> <th>WB</th> <th>DB</th> <th>WB</th> </tr> </thead> <tbody> <tr> <td>Cooling</td> <td>27°C</td> <td>19°C</td> <td>35°C</td> <td>24°C</td> <td>ISO5151-T1</td> </tr> <tr> <td>Heating</td> <td>20°C</td> <td>-</td> <td>7°C</td> <td>6°C</td> <td>ISO5151-H1</td> </tr> </tbody> </table> | | | | Operation | Indoor air temperature | | Outdoor air temperature | | Standards | DB | WB | DB | WB | Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 |
| Operation | Indoor air temperature | | Outdoor air temperature | | Standards | | | | | | | | | | | | | | | | | | | | | | |
| | DB | WB | DB | WB | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | 27°C | 19°C | 35°C | 24°C | ISO5151-T1 | | | | | | | | | | | | | | | | | | | | | | |
| Heating | 20°C | - | 7°C | 6°C | ISO5151-H1 | | | | | | | | | | | | | | | | | | | | | | |
| | | (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | | | | | | | | | | | | | | | | | | | | | |



| Item | | Model | FDC200VSA | | |
|--|---|------------------------|--|-----------|------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 19.0 [5.2(Min.)-22.4(Max.)] | | |
| | Nominal heating capacity (range) | kW | 22.4 [3.3(Min.)-25.0(Max.)] | | |
| | Sound power level | Cooling | dB(A) | 72 | |
| | | Heating | | 74 | |
| | Sound pressure level | Cooling | 58 | | |
| Heating | | 59 | | | |
| Silent mode sound pressure level | | | 52 | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 1300×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 115 | | |
| Compressor type & Q'ty | | | RMT5134MDE3 (Twin rotary type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 0.9 (compressor) + 0.6 (unit) (M-MA32R) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 5.6kg in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | M shape fin & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | |
| Fan motor (Starting method) | | W | 86x2 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | 135 | | |
| | Heating | | | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Safety equipments | | | Internal thermostat for fan motor. Abnormal discharge temperature protection. | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ9.52 (3/8") Gas line: φ22.22 (7/8") | | |
| | Connecting method | | Liquid line : Flare / Gas : Brazing | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.70 (Liquid piping : φ 12.7, Gas piping φ 25.4 or φ 28.58), Max.40 (Liquid piping : φ 9.52, Max.35 (Gas piping : φ 22.22). | | |
| | Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | |
| Drain hose | | | Hole size φ 20 × 3 pcs | | |
| IP number | | | IP24 | | |
| Standard accessories | | | Connecting pipe, Edging | | |
| Option parts | | | — | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | |
| Operation | Cooling | Indoor air temperature | Outdoor air temperature | Standards | |
| | | DB | WB | | DB |
| | 27°C | 19°C | 35°C | | 24°C |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | |



| Item | | Model | FDC250VSA | | |
|--|-----------------------------------|--|--|-----------|--------------------------|
| Power source | | | 3 Phase 380-415V 50Hz / 380V 60Hz | | |
| Operation data | Nominal cooling capacity (range) | kW | 24.0 [6.9(Min.)-28.0(Max.)] | | |
| | Nominal heating capacity (range) | kW | 27.0 [5.5(Min.)-31.5(Max.)] | | |
| | Sound power level | Cooling | dB(A) | 73 | |
| | | Heating | | 75 | |
| | Sound pressure level | Cooling | | 59 | |
| Heating | | 62 | | | |
| Silent mode sound pressure level | | 54 | | | |
| Exterior dimensions (Height × Width × Depth) | | mm | 1505×970×370 | | |
| Exterior appearance (Munsell color) (RAL color) | | | Stucco white (4.2Y7.5/1.1) near equivalent (RAL 7004) near equivalent | | |
| Net weight | | kg | 143 | | |
| Compressor type & Q'ty | | | GTC5150NC40KF (Scroll type)×1 | | |
| Compressor motor (Starting method) | | kW | Direct line start | | |
| Refrigerant oil (Amount, type) | | ℓ | 1.45 (M-MA32R) | | |
| Refrigerant (Type, amount, pre-charge length) | | kg | R410A 7.2kg in outdoor unit (Incl. the amount for the piping of : 30m) | | |
| Heat exchanger | | | M shape & inner grooved tubing | | |
| Refrigerant control | | | Electronic expansion valve | | |
| Fan type & Q'ty | | | Propeller fan ×2 | | |
| Fan motor (Starting method) | | W | 86x2 < Direct line start > | | |
| Air flow | Cooling | m ³ /min | 143 | | |
| | Heating | | 151 | | |
| Shock & vibration absorber | | | Rubber sleeve (for compressor) | | |
| Electric heater | | W | 20 (Crank case heater) | | |
| Safety equipments | | | Internal thermostat for fan motor. Abnormal discharge temperature protection. | | |
| Installation data | Refrigerant piping size (O.D.) | mm | Liquid line: φ 12.7 (1/2") Gas line: φ 22.22 (7/8") | | |
| | Connecting method | | Liquid line : Flare / Gas : Brazing | | |
| | Attached length of piping | m | — | | |
| | Insulation for piping | | Necessary (both Liquid & Gas lines) | | |
| | Refrigerant line (one way) length | m | Max.70 (Gas piping : φ 25.4 or φ 28.58, Max.35 (Gas piping : φ 22.22) | | |
| Vertical height diff. between O/U and I/U | m | Max.30 (Outdoor unit is higher) Max.15 (Outdoor unit is lower) | | | |
| Drain hose | | | Hole size φ 20 × 3 pcs | | |
| IP number | | | IP24 | | |
| Standard accessories | | | Connecting pipe, Edging | | |
| Option parts | | | — | | |
| Notes (1) The data are measured at the following conditions. | | | The pipe length is 7.5m. | | |
| Operation | Indoor air temperature | Outdoor air temperature | | Standards | |
| | DB | WB | DB | | WB |
| Cooling | 27°C | 19°C | 35°C | | 24°C |
| Heating | 20°C | — | 7°C | 6°C | ISO5151-T1 ISO5151-H1 |
| (2) This air-conditioner is manufactured and tested in conformity with the ISO. | | | | | |
| (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions. | | | | | |
| (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. | | | | | |



(3) Operation chart

The V Multi is a system that allows for different models and capacities of indoor units to be connected so the individual operating characteristics of the indoor and outdoor are provided. Use the procedure shown in item (c) to calculate the combined operating characteristics.

(a) Operating characteristic of outdoor unit

(220-240V 50Hz/220V 60Hz)

| Model | | FDC100VNA | FDC125VNA | FDC140VNA |
|---|----|----------------|----------------|----------------|
| Cooling power consumption | kW | 2.60/2.62 | 3.91/3.91 | 4.70/4.70 |
| Heating power consumption | | 2.51/2.51 | 3.60/3.60 | 4.29/4.29 |
| Cooling running current | A | 12.8-11.7/12.8 | 18.5-16.9/18.5 | 21.6-19.8/21.6 |
| Heating running current | | 12.5-11.4/12.5 | 17.2-15.8/17.2 | 19.4-17.8/19.4 |
| Inrush current (L.R.A) <Max. running current> | A | 5 <24> | | |

(380-415V 50Hz/380V 60Hz)

| Model | | FDC100VSA | FDC125VSA | FDC140VSA |
|---|----|-------------|-------------|-------------|
| Cooling power consumption | kW | 2.60/2.62 | 3.91/3.91 | 4.70/4.70 |
| Heating power consumption | | 2.51/2.51 | 3.60/3.60 | 4.29/4.29 |
| Cooling running current | A | 3.8-3.5/3.8 | 5.9-5.4/5.9 | 7.2-6.6/7.2 |
| Heating running current | | 3.7-3.3/3.7 | 5.4-4.9/5.4 | 6.8-6.2/6.8 |
| Inrush current (L.R.A) <Max. running current> | A | 5 <15> | | |

(380-415V 50Hz/380V 60Hz)

| Model | | FDC200VSA | FDC250VSA |
|---|----|-----------|-----------|
| Cooling power consumption | kW | 7.05/7.05 | 8.22/8.16 |
| Heating power consumption | | 7.02/7.02 | 7.42/7.38 |
| Cooling running current | A | 10.2/10.5 | 11.8/12.3 |
| Heating running current | | 10.0/10.5 | 10.8/11.2 |
| Inrush current (L.R.A) <Max. running current> | A | 5 <20> | 5 <21> |

Note(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(b) Operating characteristic of indoor unit

FDE Series

(220-240V 50Hz/220V 60Hz)

| Model | | FDE40VH | FDE50VH | FDE60VH | FDE71VH | FDE100VH | FDE125VH |
|---------------------------|----|-----------|-----------|-----------|-----------|-----------|-----------|
| Cooling power consumption | kW | 0.05/0.05 | 0.05/0.05 | 0.08/0.08 | 0.08/0.08 | 0.13/0.13 | 0.13/0.13 |
| Heating power consumption | | 0.05/0.05 | 0.05/0.05 | 0.08/0.08 | 0.08/0.08 | 0.13/0.13 | 0.13/0.13 |
| Cooling running current | A | 0.50/0.50 | 0.50/0.50 | 0.75/0.75 | 0.75/0.75 | 1.20/1.20 | 1.20/1.20 |
| Heating running current | | 0.50/0.50 | 0.50/0.50 | 0.75/0.75 | 0.75/0.75 | 1.20/1.20 | 1.20/1.20 |

Notes(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(2) The values shown in the above table are common to both cooling and heating operations.

(c) Calculation of total operation characteristics

Since the operation characteristics of V Multi system depend on combination of indoor unit, calculate the total operation characteristics of the system by using the formulas below according to specifications of each indoor unit or outdoor unit.

(i) 1 Phase models**1) Total power consumption**

Total power consumption (kW) = Power consumption of outdoor unit + Σ (Power consumption of indoor unit)

2) Total running current

Total running current (A) = Running current of outdoor unit + Σ (Running current of indoor unit)

3) Total power factor

Total power factor (%) = [Total power consumption (W) / Total running current (A) \times Power source] \times 100

Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

[Example]

(Conditions) Operation Voltage Indoor unit: 220 V, 50 Hz
 Outdoor unit: 220 V, 50 Hz
 Operation mode Cooling and Heating
 Unit Outdoor unit: FDC140VNA \times 1 unit
 Indoor unit: FDE71VH \times 2 units

Operation characteristics of each unit

(Cooling/Heating)

| Item \ Model | FDC140VNA | FDE71VH |
|------------------------|-----------|-----------|
| Power consumption (kW) | 4.70/4.29 | 0.08/0.08 |
| Running current (A) | 21.6/19.4 | 0.75/0.75 |

① Total power consumption (kW)

(Cooling) $4.70 + (0.08 \times 2) = 4.86$

(Heating) $4.29 + (0.08 \times 2) = 4.45$

② Total running current (A)

(Cooling) $21.6 + (0.75 \times 2) = 23.1$

(Heating) $19.4 + (0.75 \times 2) = 20.9$

③ Total power factor (%)

(Cooling) $\frac{4.86 \times 1000}{23.1 \times 220} \times 100 \cong 96 \%$

(Heating) $\frac{4.45 \times 1000}{20.9 \times 220} \times 100 \cong 97 \%$

(ii) 3 Phase models**1) Total power consumption**

Total power consumption (kW) = Power consumption of outdoor unit + Σ (Power consumption of indoor unit)

2) Total running current

Total running current (A) = Running current of outdoor unit + [Σ (Running current of indoor unit) \times 1/3]

3) Total power factor

Total power factor (%) = [Total power consumption (W) / $\sqrt{3} \times$ Total running current (A) \times Power source] \times 100

Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

4.2.3 EXTERIOR DIMENSIONS

- (1) Indoor units See page 343.
- (2) Outdoor units See page 344.
- (3) Remote control (Option parts) See page 346.

4.2.4 ELECTRICAL WIRING

- (1) Indoor units See page 347.
- (2) Outdoor units See page 348.

4.2.5 NOISE LEVEL

- (1) Indoor units See page 352.
- (2) Outdoor units See page 352.

4.2.6 TEMPERATURE AND VELOCITY DISTRIBUTION See page 354.

4.2.7 PIPING SYSTEM See page 355.

4.2.8 RANGE OF USAGE & LIMITATIONS See page 362.

4.2.9 SELECTION CHART See page 366.

4.2.10 APPLICATION DATA

- (1) Installation of indoor unit See page 398.
- (2) Electric wiring work installation See page 403.
- (3) Installation of wired remote control (Option parts) See page 407.
- (4) Installation of outdoor unit
 - (a) Models FDC100-140VNA,100-140VSA See page 407.
 - (b) Models FDC200,250VSA See page 416.
 - (c) Method for connecting the accessory pipe
 - (Models FDC200,250VSA) See page 424.
- (5) Instructions for branching pipe set (DIS-WA1,WB1,TA1,TB1) See page 427.

4.2.11 TECHNICAL INFORMATION

Models FDE50VH, 60VH, 71VH, 100VH, 125VH

| Model(s) : FDE50VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 3.8 | kW | Total electric power input | P_{elec} | 0.050 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 5.4 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE60VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.0 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 0.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 6.7 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE71VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 5.6 | kW | Total electric power input | P_{elec} | 0.080 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.5 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 60.0 | dB |
| Heating capacity | $P_{rated,h}$ | 8.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE100VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 8.4 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 1.6 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 11.2 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

| Model(s) : FDE125VH | | | | | | | |
|-----------------------------|---|-------|------|--|------------|-------|------|
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit |
| Cooling capacity (sensible) | $P_{rated,c}$ | 9.3 | kW | Total electric power input | P_{elec} | 0.130 | kW |
| Cooling capacity (latent) | $P_{rated,c}$ | 3.2 | kW | Sound power level (per speed setting,if applicable) | L_{WA} | 64.0 | dB |
| Heating capacity | $P_{rated,h}$ | 14.0 | kW | | | | |
| Contact details | Mitsubishi heavy industries thermal systems,LTD | | | | | | |

5. OPTION PARTS

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| | |
|--|------------|
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5.1 WIRELESS KIT


5.1.1 FDTC series (RCN-TC-5AW-E2)

PJF012D506

Safety precautions

• Please read this manual carefully before starting installation work to install the unit properly. All of the following are important information to be observed strictly.

 **WARNING** Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.













 **CAUTION** Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.

• The following symbols are used in the text.

| | | | |
|---|-----------|---|---------------------------------------|
|  | Never do. |  | Always follow the instructions given. |
|---|-----------|---|---------------------------------------|

• Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to the new owner.

WARNING

| | |
|---|---|
|  | <ul style="list-style-type: none"> • Consult your dealer or a professional contractor to install the unit. Improper installation made on your own may cause electric shocks, fire or dropping of the unit. |
|  | <ul style="list-style-type: none"> • Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shocks, fire or break-down. |
|  | <ul style="list-style-type: none"> • Be sure to use accessories and specified parts for installation work. Use of unspecified parts may result in drop, fire or electric shocks. |
|  | <ul style="list-style-type: none"> • Install the unit properly to a place with sufficient strength to hold the weight. If the place is not strong enough, the unit may drop and cause injury. |
|  | <ul style="list-style-type: none"> • Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient and improper work can cause electric shock and fire. |
|  | <ul style="list-style-type: none"> • Shut OFF the main power source before starting electrical work. Otherwise, it could result in electric shocks, break-down or malfunction. |
|  | <ul style="list-style-type: none"> • Do not modify the unit. It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit. Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury. |
|  | <ul style="list-style-type: none"> • Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak. If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion. |
|  | <ul style="list-style-type: none"> • Do not install the unit where water vapor is generated excessively or condensation occurs. It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Do not use the unit in a place where it gets wet, such as laundry room. It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Do not operate the unit with wet hands. It could cause electric shocks. |

⚠ WARNING



• **Do not wash the unit with water.**
It could cause electric shocks, fire, or break-down.



• **Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.**
Improper connections or fixing could cause heat generation, fire, etc.



• **When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.**
It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc. The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.



• **Do not leave the remote control with its PCB case removed.**
If dew, water, insect, etc. enter through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION



• Do not install the wireless kit at the following places in order to avoid malfunction. It could cause break-down or deformation of remote control.

| | |
|---|--|
| (1) Places exposed to direct sunlight | (8) Places where the receiver is influenced by fluorescent lamp (especially inverter type) or sunlight |
| (2) Places near heat-generating devices | (9) Places where the receiver is affected by infrared rays of any other communication devices |
| (3) High humidity places | (10) Places where some object may obstruct the communication with the remote control |
| (4) Hot surface or cold surface enough to generate condensation | |
| (5) Places exposed to oil mist or steam directly | |
| (6) Uneven surface | |
| (7) Places affected by the direct air flow of the AC unit | |

① Accessories

Please make sure that you have all of the following accessories.

| | | | | | | | | |
|-------------------------|--|---|------------------------------|--|---|-------------------------------|--|---|
| ① Receiver | | 1 | ⑤ Bracket mounting screw | | 1 | ① Wireless remote control | | 1 |
| ② PCB | | 1 | ⑥ Wiring (For communication) | | 1 | ② Remote control holder | | 1 |
| ③ PCB mounting support | | 2 | ⑦ Wiring (For receiving) | | 1 | ③ Screw for holder | | 2 |
| ④ Bracket (Sheet metal) | | 1 | ⑧ Installation manual | | 1 | ④ AAA dry cell battery (LR03) | | 2 |
| | | | ⑨ Parts set | | 1 | ⑤ User's manual | | 1 |

② Preparation before installation

Setting of PCB

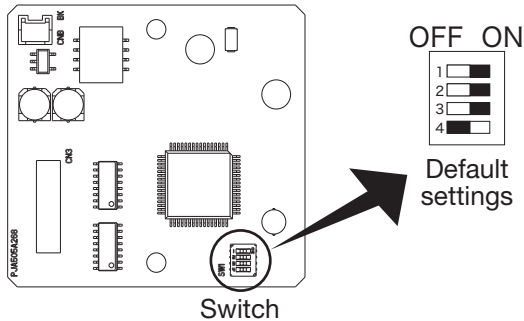
Accessory PCB has the following switches to set the functions. Default setting is shown with mark.

| | | | |
|------------|---|--------------------------------------|--|
| SW1 | Prevents interference during multiple setting | <input type="checkbox"/> ON : Normal | <input type="checkbox"/> OFF : Remote |
| SW2 | Receiver master/slave setting | <input type="checkbox"/> ON : Master | <input type="checkbox"/> OFF : Slave |
| SW3 | Buzzer | <input type="checkbox"/> ON : Valid | <input type="checkbox"/> OFF : Invalid |
| SW4 | Auto restart | <input type="checkbox"/> ON : Valid | <input type="checkbox"/> OFF : Invalid |

② Preparation before installation (continued)

To change setting

1. Change the setting of switches on the accessory PCB.



Master/Slave setting when using multiple remote controls

Up to two receivers or wired remote controls can be installed on one indoor unit group. In such occasion, it is necessary to change the setting to slave on either one.

To change the setting on the receiver, refer to the instruction manual of the receiver.

2. When SW1 is turned to OFF position, change the wireless remote control setting.

For the method of changing the setting, refer to **Setting to avoid mixed communication** of

④ Wireless remote control.

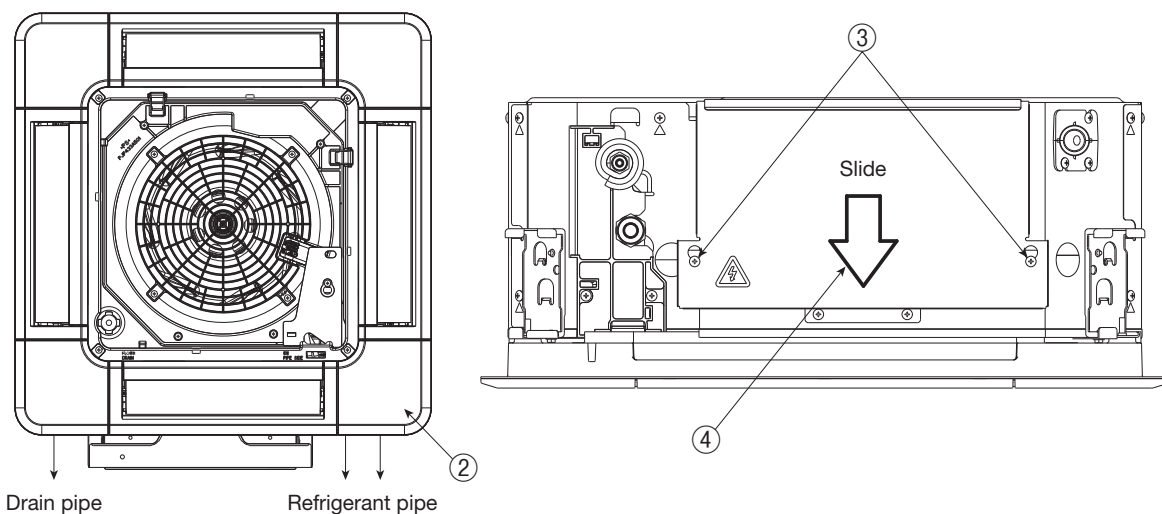
*For the receivable area of the signal, refer to **⑤ Receiver**.

③ How to install the receiver

It is possible to install the receiver by replacing the corner lid on the panel.

Preparation before installation

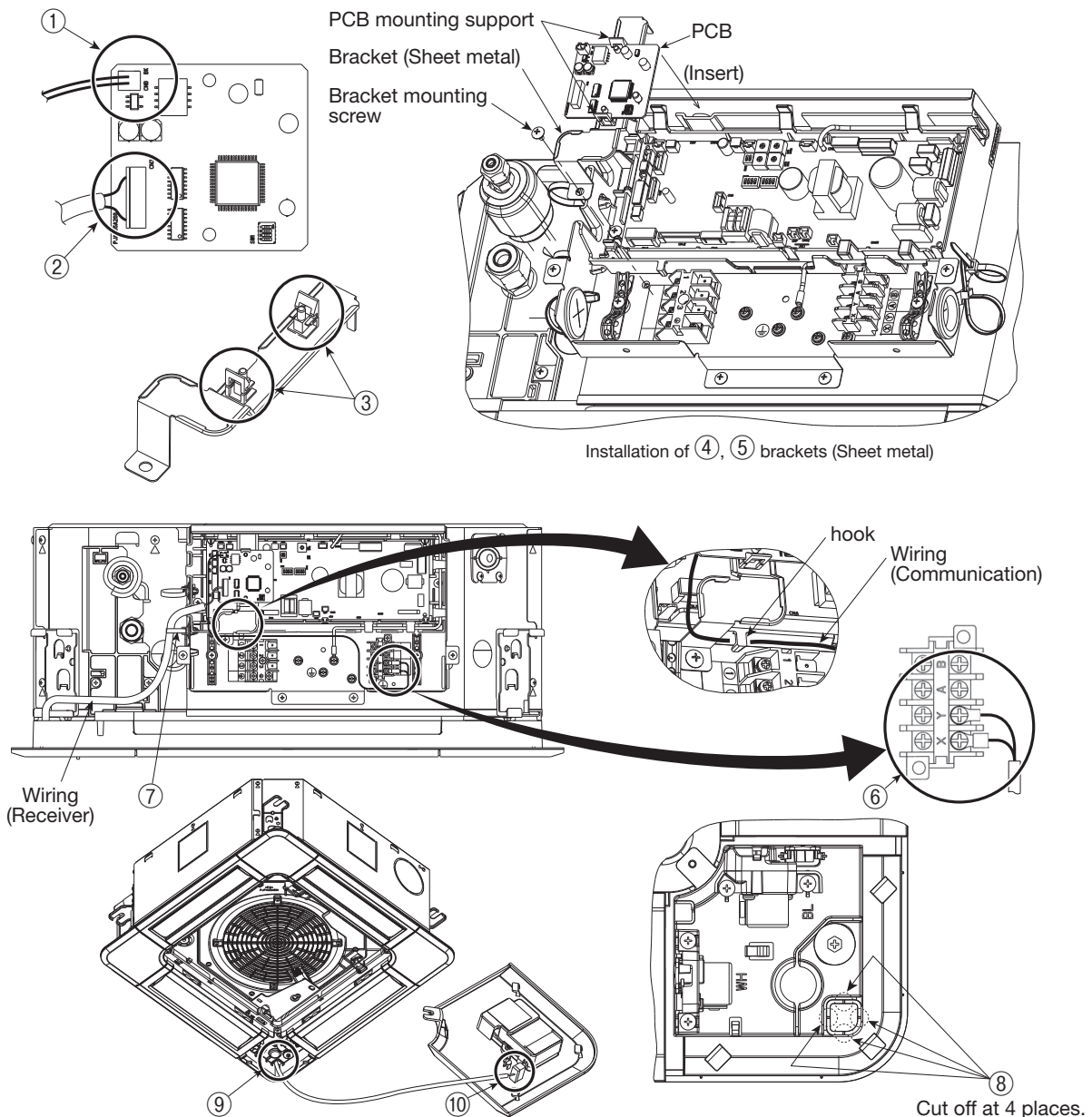
- ① Remove the inlet grille according to the installation manual of the panel.
- ② Remove the corner lid at the refrigerant pipe side.
- ③ Loosen screws (2 pcs) on the control box of the unit.
- ④ Slide the control lid in the arrow direction, and remove it.



③ How to install the receiver(continued)

Installation of the receiver

- ① Connect the wire connector (Communication) to CNB on PCB.
- ② Connect the wire connector (Receiver) to CN3 on PCB.
- ③ Install the PCB mounting supports on the bracket (Sheet metal).
- ④ Install PCB on the PCB mounting supports.
- ⑤ Insert the bracket (Sheet metal) in one side of control box, and fix the other side with screws as shown in the figure.
- ⑥ Connect round terminals of wires (Communication) to the terminal block (X, Y) in the control box. The wires have no polarity.
- ⑦ Fix wires with bands as shown in the figure.
- ⑧ Cut off the half-blanks on the panel (at 4 places) as shown in the figure.
- ⑨ Pass the wiring (Communication) through the opening on the panel.
- ⑩ Connect connectors of the wiring (Communication) and the receiver.
- ⑪ Install the receiver on the panel according to the installation manual of the panel.
- ⑫ Install the control box lid with care not to pinch wires, and fix with screws (2 pcs).



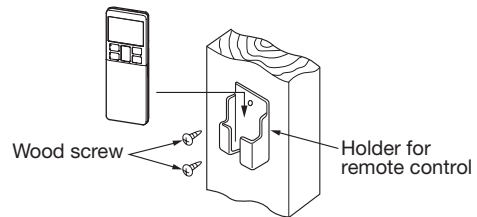
④ Wireless remote control

Installation tips for the remote control holder

Fix the remote control holder using the screws supplied with this product.

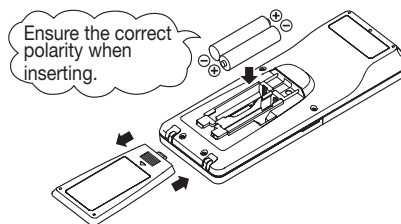
* Precautions for installing the holder

- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



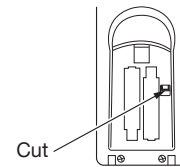
How to insert batteries

1. Detach the back lid.
2. Insert the batteries. (two AAA batteries)
3. Reattach the back lid.



Setting to avoid mixed communication

1. Detach the back lid, and remove the batteries.
2. Cut off the switching wire in the battery compartment using nippers.
3. Insert the batteries, and attach the back lid.



Changing the remote control setting

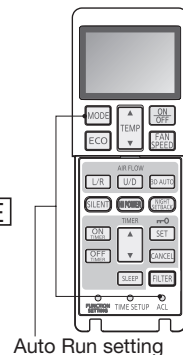
How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioning and gas heat pump series (excluding the cooling/heating free multi system).

When using the remote control to operate those models, set the remote control to disable the Auto Run mode.

To disable the Auto Run mode, press the **[ACL]** switch while holding down the **[MODE]** button, or insert batteries while holding down the **[MODE]** button.

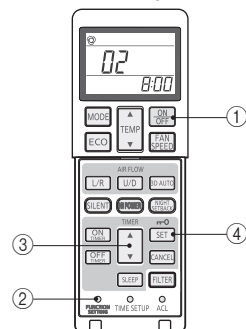
* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.



Indoor function settings

1. How to set indoor functions
 - ① Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons ▲ and ▼ to change the setting.
 - ④ Press the SET button.

The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



④ Wireless remote control (continued)

2. Setting details

The following functions can be set.

| Button | Number indicator | Function setting |
|------------------|------------------|--|
| FAN SPEED | 00 | Fan speed setting : Standard |
| | 01 | Fan speed setting : Setting 1 * |
| | 02 | Fan speed setting : Setting 2 * |
| MODE | 00 | Room heating temperature adjustment : Disable |
| | 01 | Room heating temperature adjustment : +1°C |
| | 02 | Room heating temperature adjustment : +2°C |
| | 03 | Room heating temperature adjustment : +3°C |
| FILTER | 00 | Filter sign display : OFF |
| | 01 | Filter sign display : 180 hours |
| | 02 | Filter sign display : 600 hours |
| | 03 | Filter sign display : 1000 hours |
| | 04 | Filter sign display : Operation stop after 1000 hours have elapsed |
| U/P (Up/Down) | 00 | Anti draft setting : Disable |
| | 01 | Anti draft setting : Enable |
| SILENT | 00 | Infrared sensor setting (Motion sensor setting) : Disable |
| | 01 | Infrared sensor setting (Motion sensor setting) : Enable |
| HI POWER | 00 | Infrared sensor control (Motion sensor control) : Disable |
| | 01 | Infrared sensor control (Motion sensor control) : Power control only |
| | 02 | Infrared sensor control (Motion sensor control) : Auto OFF only |
| | 03 | Infrared sensor control (Motion sensor control) : Power control + Auto OFF |
| ON TIMER | 00 | Cooling fan residual-period running : Disable |
| | 01 | Cooling fan residual-period running : 0.5 hours |
| | 02 | Cooling fan residual-period running : 2 hours |
| | 03 | Cooling fan residual-period running : 6 hours |
| OFF TIMER | 00 | Heating fan residual-period running : Disable |
| | 01 | Heating fan residual-period running : 0.5 hours |
| | 02 | Heating fan residual-period running : 2 hours |
| | 03 | Heating fan residual-period running : 6 hours |
| NIGHT SETBACK | 00 | Remote control signal receiver LED : Brightness High |
| | 01 | Remote control signal receiver LED : Brightness Low |
| | 02 | Remote control signal receiver LED : OFF |

* Refer to technical data.

⑤ Receiver

1 Control multiple indoor units with one remote control

Up to 16 indoor units can be connected.

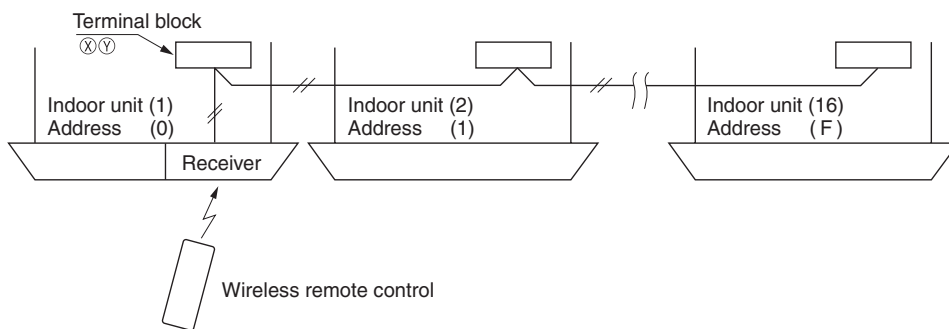
1. Connect the XY terminal with 2 cores wire. As for the size, refer to the note on the right.
2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [1] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire (Maximum length is 600m.)

| | | |
|----------|--------|----------------------------|
| Standard | Within | 0.3 mm ² × 100m |
| | Within | 0.5 mm ² × 200m |
| | Within | 0.75mm ² × 300m |
| | Within | 1.25mm ² × 400m |
| | Within | 2.0 mm ² × 600m |

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.



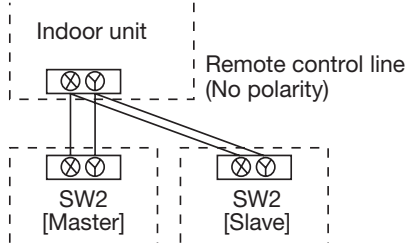
For the building air-conditioning and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses.

Use the rotary switches SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using multiple remote control

Up to two receivers can be installed in one indoor unit group.



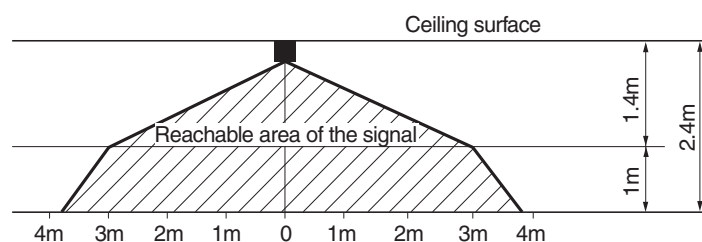
| Switch | Setting | Function |
|--------|---------|----------|
| SW2 | ON | Master |
| | OFF | Slave |

Wireless remote control's operable area

1. Standard reachable area of the signal

[Condition] Illuminance at the receiver: 300lux

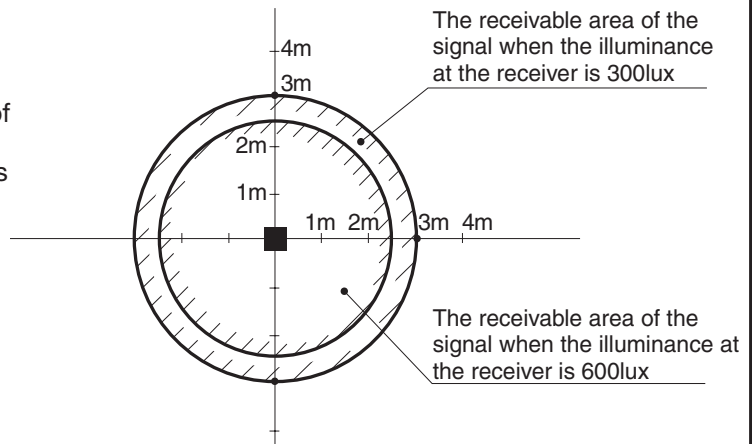
(When no lighting is installed within 1m of the receiver in an ordinary office)



⑤ Receiver (continued)

2. Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote control is operated at 1m high under the condition of ceiling height of 2.4m. When the illuminance becomes double, the area is narrowed down to two thirds.



3. Installation tips when several receivers are installed close to one another.

Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.

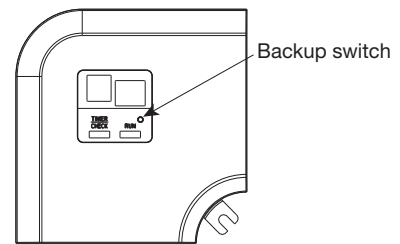
(When no lighting is installed within 1m of the receiver in an ordinary office)

Backup switch

A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

1. If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (In case of cooling only, it is in the cooling mode).
Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal
2. If pressed while the air-conditioner is in operation, it will stop the air-conditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is pressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.

1. An indication will be displayed for one hour after power on.
2. An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote control or the operation of the backup switch to stop the unit.
3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
4. When there are no error records to indicate, addresses of all the connected units are displayed.
5. When there are some error records remaining, the error records are displayed.
6. Error records can be cleared by transmitting a "STOP" command from the wireless remote control, while the backup button is pressed.

PJZ012D112 

5.1.2 FDU, FDUM series (RCN-KIT4-E2)













Safety precautions

- Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.
 - ⚠ **WARNING** Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.
 - ⚠ **CAUTION** Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.
- The following pictograms are used in the text.

| | | | |
|---|-----------|---|---------------------------------------|
|  | Never do. |  | Always follow the instructions given. |
|---|-----------|---|---------------------------------------|

- Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

 WARNING

-  • **Consult your dealer or a professional contractor to install the unit.**
Improper installation made on your own may cause electric shocks, fire or dropping of the unit.
-  • **Installation work should be performed properly according to this installation manual.**
Improper installation work may result in electric shocks, fire or break-down.
-  • **Be sure to use accessories and specified parts for installation work.**
Use of unspecified parts may result in drop, fire or electric shocks.
-  • **Install the unit properly to a place with sufficient strength to hold the weight.**
If the place is not strong enough, the unit may drop and cause injury.
-  • **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
Power source with insufficient and improper work can cause electric shock and fire.
-  • **Shut OFF the main power source before starting electrical work.**
Otherwise, it could result in electric shocks, break-down or malfunction.
-  • **Do not modify the unit.**
It could cause electric shocks, fire, or break-down.
-  • **Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.**
Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.
-  • **Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.**
If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.
-  • **Do not install the unit where water vapor is generated excessively or condensation occurs.**
It could cause electric shocks, fire, or break-down.
-  • **Do not use the unit in a place where it gets wet, such as laundry room.**
It could cause electric shocks, fire, or break-down.
-  • **Do not operate the unit with wet hands.**
It could cause electric shocks.

⚠ WARNING

- **Do not wash the unit with water.**
It could cause electric shocks, fire, or break-down.
- **Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.**
Improper connections or fixing could cause heat generation, fire, etc.
- **When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.**
It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.
The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.
- **Do not leave the remote control with its PCB case removed.**
If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION

- Do not install the wireless kit at the following places in order to avoid malfunction.
It could cause break-down or deformation of remote control.
- | | |
|---|---|
| <ul style="list-style-type: none"> (1) Places exposed to direct sunlight (2) Places near heat devices (3) High humidity places (4) Hot surface or cold surface enough to generate condensation (5) Places exposed to oil mist or steam directly (6) Uneven surface (7) Places affected by the direct air flow of the AC unit | <ul style="list-style-type: none"> (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight (9) Places where the receiver is affected by infrared rays of any other communication devices (10) Places where some object may obstruct the communication with the remote control |
|---|---|

① Accessories

Please make sure that you have all of the following accessories.

| | | | | | | |
|-----------------------|--|---|--|---------------------------------|--|---|
| ① Receiver | | 1 | | ① Wireless remote control | | 1 |
| ② Wiring (3m) | | 1 | | ② Remote control holder | | 1 |
| ③ Parts set (A) | | 1 | | ③ Screw for holder | | 2 |
| ④ Parts set (B) | | 1 | | ④ AAA dry cell battery (LR03) | | 2 |
| ⑤ Parts set (C) | | 1 | | ⑤ User's manual | | 1 |
| ⑥ Installation manual | | 1 | | ① Screw for receiver | | 2 |
| | | | | ② Fixing band | | 1 |
| | | | | ③ Clamp | | 5 |
| | | | | ④ Screw for clamp | | 5 |
| | | | | ① Receiver installation bracket | | 1 |
| | | | | ② Screw for the bracket | | 2 |
| | | | | ③ Installation fitting | | 2 |

② Preparation before installation

Setting on site

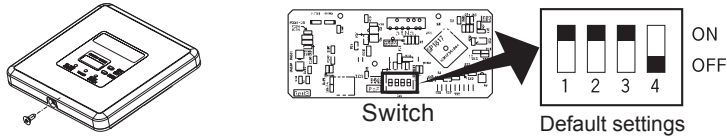
PCB on the receiver has the following switches to set the function. Default setting is shown with mark.

| | | | |
|------------|---|--------------------------------------|---|
| SW1 | Prevents interference during plural setting | ON : <input type="checkbox"/> Normal | OFF : <input type="checkbox"/> Customized |
| SW2 | Receiver master/slave setting | ON : <input type="checkbox"/> Master | OFF : <input type="checkbox"/> Slave |
| SW3 | | | |
| SW4 | Auto restart | ON : <input type="checkbox"/> Valid | OFF : <input type="checkbox"/> Invalid |

② Preparation before installation (continued)

To change setting

1. Remove one screws located on the under of the receiver and detach the board.
2. Change the setting by the switch on PCB.



3. When SW1 is turned to OFF position, change the wireless remote control setting. For the method of changing the setting, refer to **Setting to avoid mixed communication** of ④ **Wireless remote control**.

*The receivable area of the signal refer to ⑤ **Receiver**.

Master/Slave setting when using plural remote controls

Up to two receiver or wired remote control can be installed in one indoor unit group.

When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

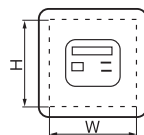
③ How to install the receiver

The following two methods can be used to install the receiver onto a ceiling or a wall. Select a method according to the installation position.

- <Installation position>** (A) Direct installation onto the ceiling with wood screws.
(B) Installation with accessory's bracket

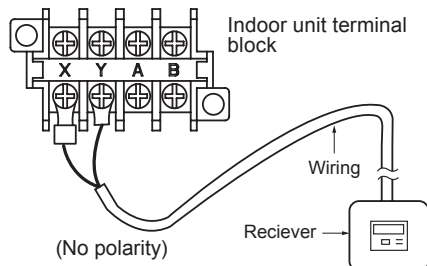
(1) Drilling of the ceiling (ceiling opening)

Drill the receiver installation holes with the dimensions shown right at the ceiling position where wires can be connected.



| | |
|--|-------------------|
| (A) Direct installation onto the ceiling with wood screws. | 88mm(H)×101mm(W) |
| (B) Installation with enclosed bracket | 108mm(H)×108mm(W) |

(2) Wiring connection of receiver



⚠ Caution

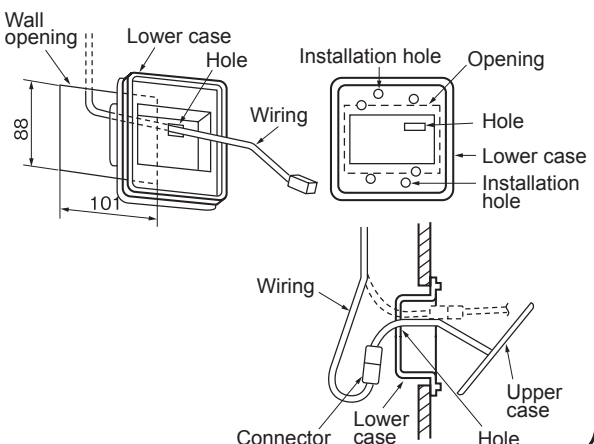
Do not connect the wiring to the power source of the terminal block. If it is connected, printed board will be damaged.

(3) Installation of the receiver

Remove the screw on the side of the receiver and split it into the upper case and lower case. Install the receiver with one of the two installation methods (A) to (C) shown below.

(A) Direct installation onto the ceiling with screws

- ▷ Use this installation method when the ceiling is wooden, and there is no problem for strength in installing directly with wood screws.
- ① Put through the wiring from the back side to the hole of the lower case.
 - ② Fit the lower case into the ceiling opening. Make sure that the clearance between the convex part of the back of the lower case and the ceiling opening must be as equal as possible on both sides.
 - ③ Using the two installation holes shown right, fix the lower case onto the ceiling with the enclosed wood screws. (The other four holes are not used.)
 - ④ Connect the wiring with the wiring from the upper case by the connector.

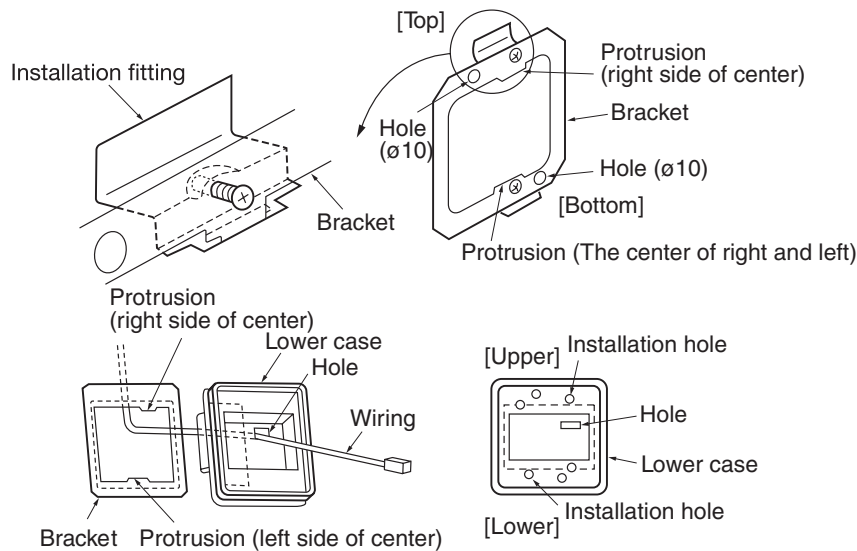


③ How to install the receiver(continued)

- ⑤ Take out the connector to the backside from the hole of the lower case putting through the wiring at ①.
- ⑥ Fit the upper case and the lower case, and tighten the screws.

(B) Installation with enclosed bracket

Use this method when installaing onto a gypsum board (7 to 18mm), etc.

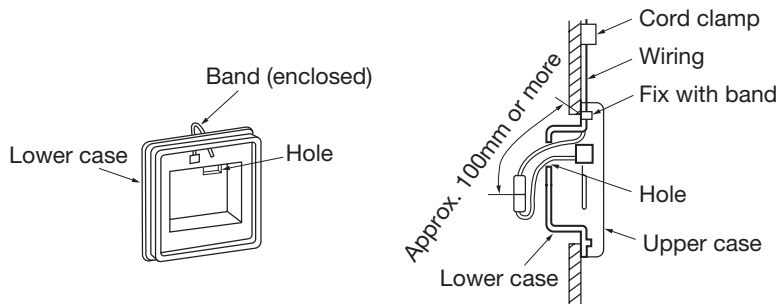


- ① Catch the two protrusion of the enclosed bracket onto the fitting as shown above, and temporarily fix with the screws. (The bracket has an Upper/Lower and front/back orientation. Confirm the Upper/Lower protrusion positions and the positional relation of the $\phi 10$ holes on the bracket and the installation hole on the lower case with the above drawing.)
- ② Insert the end of the installation fitting into the back of the ceiling from the opening, and tighten the screws to fix the bracket onto the ceiling.
- ③ Pass the wiring from the rear side through the hole on the lower case.
- ④ Fit the lower case onto the bracket, and fix the lower case to the bracket using the two installation holes shown above. (The other four holes are not used.)
- ⑤ Follow step ① to ⑥ for (A) to complete the installation.

③ How to install the receiver (continued)

(C) Exposed installation

Use the following procedure when installing the case with the wiring exposed.



- ① Cut off the thin section on the side of the upper case with a pair of nippers or a knife, and remove the burrs with a file, etc. (The wiring is passed through this section.)
- ② Pass the enclosed band through the wiring outlet hole on the lower case.
- ③ Use one of the light detection adaptor installation methods (A) or (B) explained in section 3, and fix the lower case onto the wall. Do not pass the wiring through the hole on the lower case.
- ④ Fix the wiring using the band while leaving the wiring length from the band fixing section to the end of the wiring connector at 100mm or more.
- ⑤ Connect the wiring with the wiring protruding from the upper case using a connector.
- ⑥ Pass the connected connector and the excess wiring through the hole on the lower case.
- ⑦ Fit the upper case onto the lower case, and tighten the screws.
- ⑧ Adequately fix the wiring with the enclosed cord clamp.

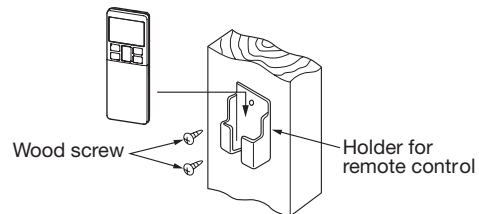
④ Wireless remote control

Installation tips for the remote control holder

Fix the remote control holder using the screws supplied with this product.

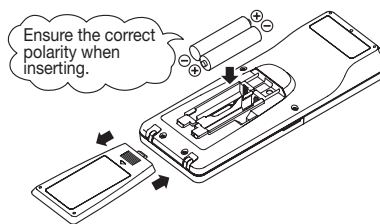
* Precautions for installing the holder

- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



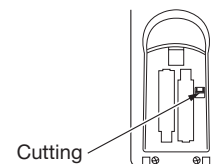
How to insert batteries

1. Detach the back lid.
2. Insert the batteries. (two AAA batteries)
3. Reattach the back lid.



Setting to avoid mixed communication

1. Detach the back lid, and remove the batteries.
2. Cut off the switching wire in the battery compartment using nippers.
3. Insert the batteries, and attach the back lid.



④ Wireless remote control (continued)

Changing the wireless remote control setting

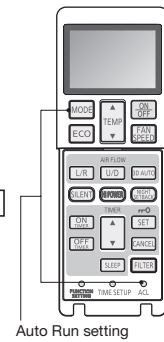
How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioner and gas heat pump series (excluding the cooling/heating free multi system).

When using the wireless remote control to operate those models, set the wireless remote control to disable the Auto Run mode.

To disable the Auto Run mode, press the **ACL** switch while holding down the **MODE** button, or insert batteries while holding down the **MODE** button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.



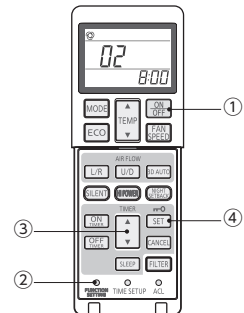
Indoor function settings

1. How to set indoor functions

- ① Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown below while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons, ▲ and ▼, to change the setting.
 - ④ Press the SET button.
- The buzzer on the wireless remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.

2. Setting details

The following functions can be set.



| Button | Number indicator | Function setting | Button | Number indicator | Function setting |
|-----------|------------------|---|---------------|----------------------------|--|
| FAN SPEED | 00 | Fun speed setting : Standard | ON TIMER | 00 | Cooling fan residual-period running : Disable |
| | 01 | Fun speed setting : Setting 1 * | | 01 | Cooling fan residual-period running : 0.5 hours |
| | 02 | Fun speed setting : Setting 2 * | | 02 | Cooling fan residual-period running : 2 hours |
| MODE | 00 | Room heating temperature adjustment : Disable | OFF TIMER | 03 | Cooling fan residual-period running : 6 hours |
| | 01 | Room heating temperature adjustment : +1°C | | 00 | Heating fan residual-period running : Disable |
| | 02 | Room heating temperature adjustment : +2°C | | 01 | Heating fan residual-period running : 0.5 hours |
| | 03 | Room heating temperature adjustment : +3°C | | 02 | Heating fan residual-period running : 2 hours |
| FILTER | 00 | Filter sign display : OFF | NIGHT SETBACK | 03 | Heating fan residual-period running : 6 hours |
| | 01 | Filter sign display : 180 hours | | 00 | Remote control signal receiver LED : Brightness High |
| | 02 | Filter sign display : 600 hours | | 01 | Remote control signal receiver LED : Brightness Low |
| | 03 | Filter sign display : 1000 hours | | 02 | Remote control signal receiver LED : OFF |
| | 04 | Filter sign display : Operation stop after 1000 hours have elapsed | | * Refer to technical data. | |
| U/P | 00 | Anti draft setting : Disable | | | |
| | 01 | Anti draft setting : Enable | | | |
| SILENT | 00 | Infrared sensor setting (Motion sensor setting) : Disable | | | |
| | 01 | Infrared sensor setting (Motion sensor setting) : Enable | | | |
| HI POWER | 00 | Infrared sensor control (Motion sensor control) : Disable | | | |
| | 01 | Infrared sensor control (Motion sensor control) : Power control only | | | |
| | 02 | Infrared sensor control (Motion sensor control) : Auto OFF only | | | |
| | 03 | Infrared sensor control (Motion sensor control) : Power control and Auto OFF | | | |

⑤ Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.
2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

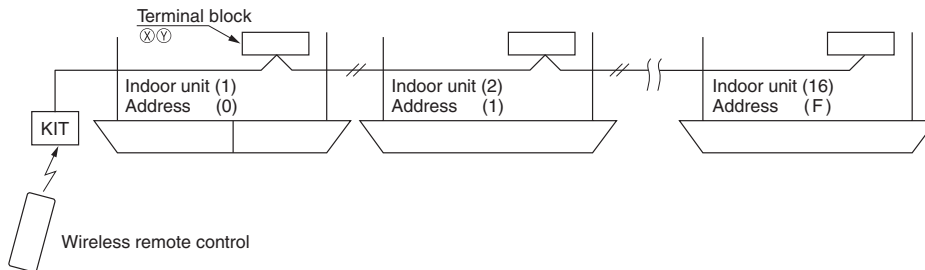
Restrictions on the thickness and length of wire (Maximun total extension 600m.)

| | | |
|----------|--------|----------------------------|
| Standard | Within | 0.3 mm ² × 100m |
| | Within | 0.5 mm ² × 200m |
| | Within | 0.75mm ² × 300m |
| | Within | 1.25mm ² × 400m |
| | Within | 2.0 mm ² × 600m |

⑤ Receiver (continued)

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

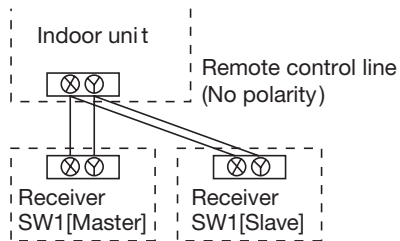


For the building air-conditioner and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses. Use the rotary switches SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.

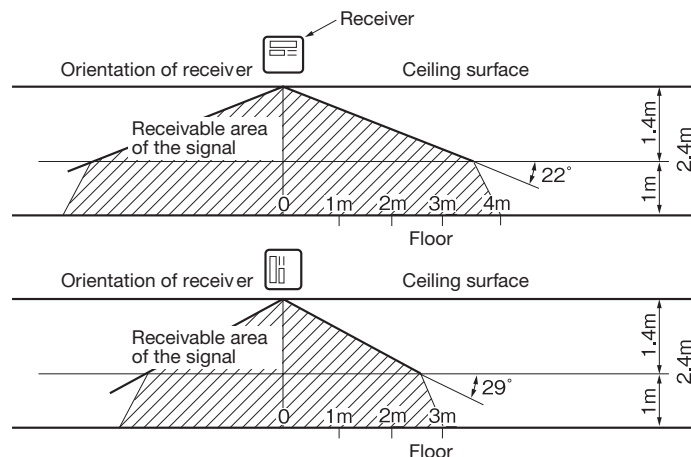


| Switch | Setting | Function |
|--------|---------|----------|
| SW2 | ON | Master |
| | OFF | Slave |

When installed on ceiling

1. Standard reachable area of the signal

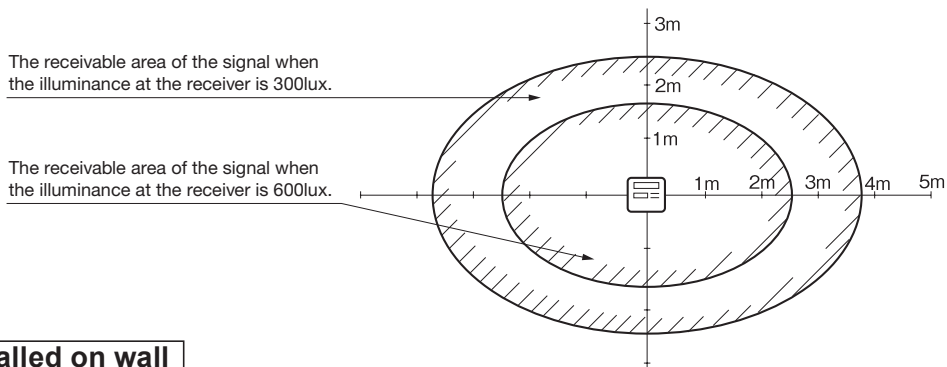
[Condition] Illuminance at the receiver : **300lux** (when no lighting is installed within 1m of the receiver in an ordinary office.)



2. Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

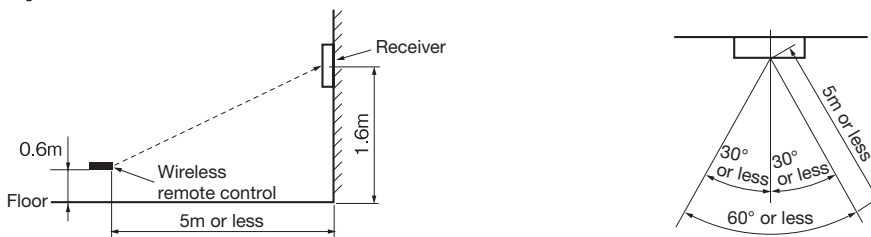
[Condition] Correlation between the reachable area of the signal and illuminance at the receiver when the wireless remote control is operated at 1m high under the condition of ceiling height of 2.4m. When the illuminance becomes double, the area is narrowed down to two third.

⑤ Receiver (continued)



When installed on wall

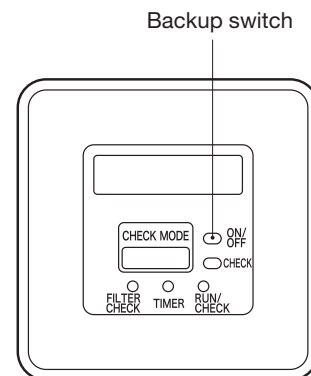
[Condition] Illuminance at the receiver : 800lux.



Backup switch

A backup switch is provided on the receiver section of the panel surface. When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

1. If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (in the case of cooling only, in the cooling mode). Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal
2. If pressed while the air-conditioner is in operation, it will stop the air-conditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the 6-digit display

A 6-digit indicator (7-segment indicator) is provided on the receiver section.

1. An indication will be displayed for one hour after power on.
2. An indication appears for 3.5 seconds when a "Stop" command is sent from the wireless remote control unit while the air-conditioner is not running.
3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
4. When there are no error records to indicate, addresses are displayed for all of the connected units.
5. When there are some error records remaining, the error records are displayed.
6. Error records can be cleared by transmitting a "Stop" command from the wireless remote control unit, while the backup switch is depressed.

PFA012D635

5.1.3 FDE series (RCN-E-E3)













Safety precautions

- Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.
- ⚠ **WARNING** Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.
- ⚠ **CAUTION** Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.
- The following pictograms are used in the text.





| | | | |
|---|-----------|---|---------------------------------------|
|  | Never do. |  | Always follow the instructions given. |
|---|-----------|---|---------------------------------------|

- Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.


⚠ WARNING

-  • **Consult your dealer or a professional contractor to install the unit.**
Improper installation made on your own may cause electric shocks, fire or dropping of the unit.
-  • **Installation work should be performed properly according to this installation manual.**
Improper installation work may result in electric shocks, fire or break-down.
-  • **Be sure to use accessories and specified parts for installation work.**
Use of unspecified parts may result in drop, fire or electric shocks.
-  • **Install the unit properly to a place with sufficient strength to hold the weight.**
If the place is not strong enough, the unit may drop and cause injury.
-  • **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
Power source with insufficient and improper work can cause electric shock and fire.
-  • **Shut OFF the main power source before starting electrical work.**
Otherwise, it could result in electric shocks, break-down or malfunction.
-  • **Do not modify the unit.**
It could cause electric shocks, fire, or break-down.
-  • **Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.**
Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.
-  • **Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.**
If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.
-  • **Do not install the unit where water vapor is generated excessively or condensation occurs.**
It could cause electric shocks, fire, or break-down.
-  • **Do not use the unit in a place where it gets wet, such as laundry room.**
It could cause electric shocks, fire, or break-down.
-  • **Do not operate the unit with wet hands.**
It could cause electric shocks.

⚠ WARNING

-  • **Do not wash the unit with water.**
It could cause electric shocks, fire, or break-down.
-  • **Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.**
Improper connections or fixing could cause heat generation, fire, etc.
-  • **When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.**
It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.
The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.
-  • **Do not leave the remote control with its PCB case removed.**
If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.









⚠ CAUTION

-  • **Do not install the wireless kit at the following places in order to avoid malfunction.**
It could cause break-down or deformation of remote control.

| | |
|---|---|
| (1) Places exposed to direct sunlight | (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight. |
| (2) Places near heat devices | (9) Places where the receiver is affected by infrared rays of any other communication devices. |
| (3) High humidity places | (10) Places where some object may obstruct the communication with the remote control |
| (4) Hot surface or cold surface enough to generate condensation | |
| (5) Places exposed to oil mist or steam directly | |
| (6) Uneven surface | |
| (7) Places affected by the direct air flow of the AC unit. | |

① Accessories

Please make sure that you have all of the following accessories.

| | | | | | | |
|-----------------------|---|---|---|-------------------------------|---|---|
| ① Receiver |  | 1 | | | | |
| ② Parts set | | 1 | → | ① Wireless remote control |  | 1 |
| ③ Installation manual |  | 1 | | ② Remote control holder |  | 1 |
| ④ Wiring |  | 1 | | ③ Screw for holder |  | 2 |
| | | | | ④ AAA dry cell battery (LR03) |  | 2 |
| | | | | ⑤ User's manual |  | 1 |

② Preparation before installation

Setting on site

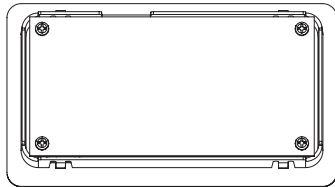
PCB on the receiver has the following switches to set the function.
Default setting is shown with mark.

| | | |
|-----|---|---|
| SW1 | Prevents interference during plural setting | <input type="checkbox"/> ON : Normal <input type="checkbox"/> OFF : Customized |
| SW2 | Receiver master/slave setting | <input type="checkbox"/> ON : Master <input type="checkbox"/> OFF : Slave |
| SW3 | Buzzer | <input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid |
| SW4 | Auto restart | <input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid |

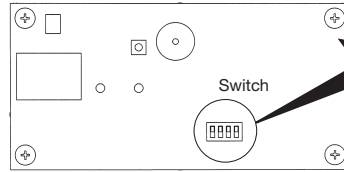
② Preparation before installation (continued)

To change setting

1. Remove four screws located on the back of the receiver and detach the board.
2. Change the setting by the switch on PCB.



Receiver backside



Default settings

Master/Slave setting when using plural remote controls

Up to two receiver or wired remote control can be installed in one indoor unit group. When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

3. When SW1 is turned to OFF position, change the wireless remote control setting. For the method of changing the setting, refer to [Setting to avoid mixed communication](#) of

⑤ Wireless remote control

*The receivable area of the signal refer to [⑥ Receiver](#).

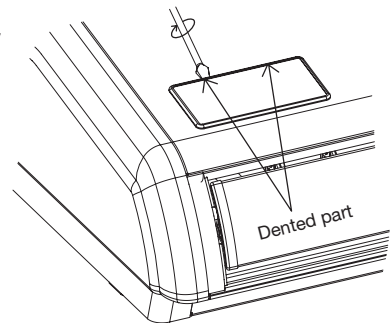
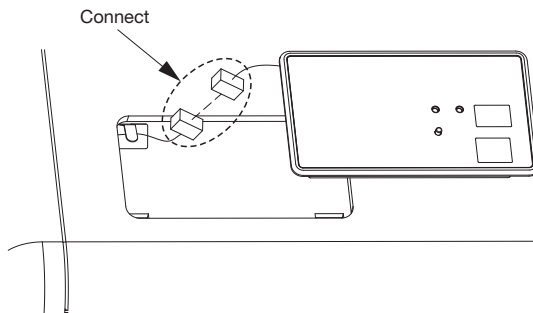
③ How to install the receiver

The receiver can be installed by replacing with a cover of the panel.

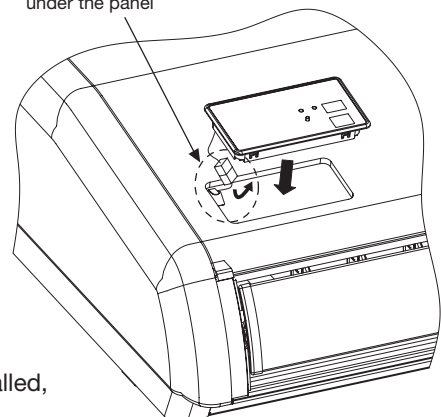
CAUTION: When installing the receiver after unit has been fixed, injury due to falling may result because of working at high place.

- ① **Remove the cover**
Insert a flat-blade screwdriver into the dented part (2 places), and wrench slightly so as not to damage panel surface.
- ② **Connect the wiring**
Connect wiring of the receiver to the wiring in the back.

ATTENTION: Do not remove the clamp fixed the wiring.



Place the connectors under the panel



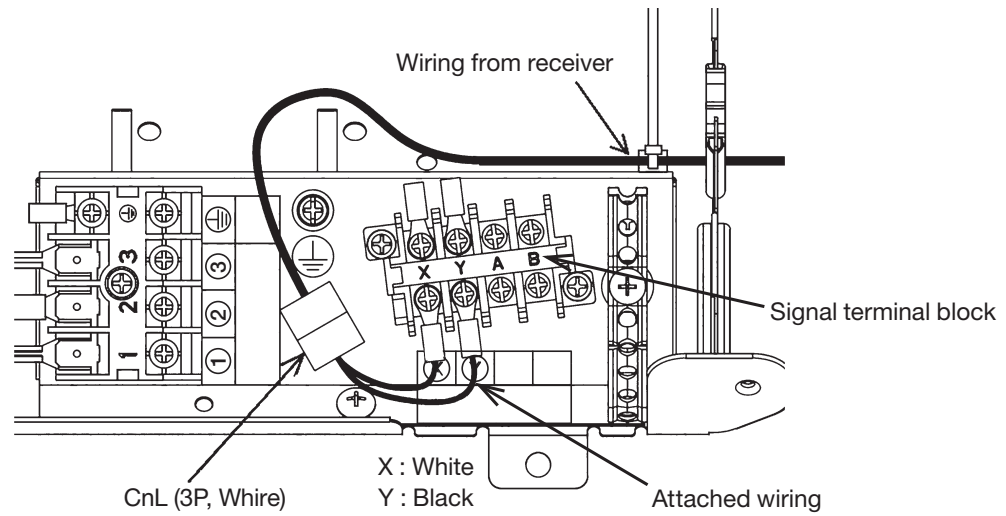
- ③ **Installation of the receiver**
Check direction of the receiver, and fix to the panel.

CAUTION: Connect the connectors before installing the receiver. In case of connecting after the receiver had been installed, it will be necessary to remove the panel.

④ How to connect the wiring for control box

Connect the attached wiring to the signal terminal block primary side XY (for grill side) in the control box, and connect to the CNL connector (3P white) from the receiver .

* This installation is unnecessary for indoor unit that have wiring is already connected from the signal terminal block to the receiver.



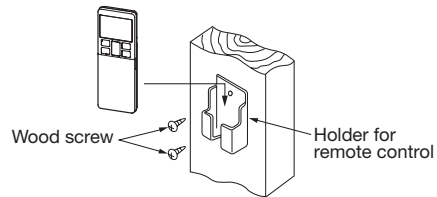
⑤ Wireless remote control

Installation tips for the remote control holder

Fix the remote control holder using the screws supplied with this product.

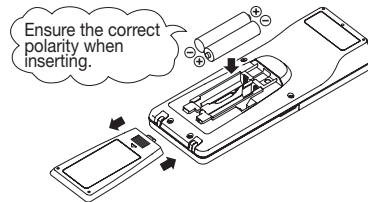
* Precautions for installing the holder

- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



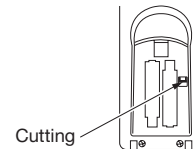
How to insert batteries

1. Detach the back lid.
2. Insert the batteries. (two AAA batteries)
3. Reattach the back lid.



Setting to avoid mixed communication

1. Detach the back lid, and remove the batteries.
2. Cut off the switching wire in the battery compartment using nippers.
3. Insert the batteries, and attach the back lid.



Changing the remote control setting

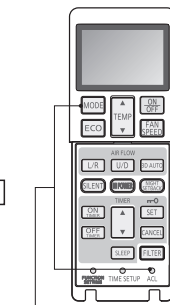
How to change the Auto Run setting

The Auto Run mode is not available on the building air conditioning and gas heat pump series (excluding the cooling/heating free multi system).

When using the remote control to operate those models, set the remote control to disable the Auto Run mode.

To disable the Auto Run mode, press the **ACL** switch while holding down the **MODE** button, or insert batteries while holding down the **MODE** button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.

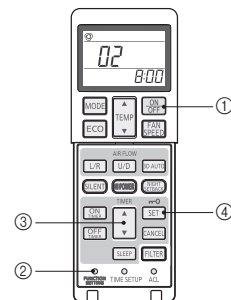


Indoor function settings

1. How to set indoor functions

- ① Press the ON/OFF button to stop the unit.
- ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
- ③ Use the selection buttons, ▲ and ▼, to change the setting.
- ④ Press the SET button.

The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



⑤ Wireless remote control (continued)

2. Setting details

The following functions can be set.

| Button | Number indicator | Function setting |
|------------------|------------------|--|
| FAN SPEED | 00 | Fan speed setting : Standard |
| | 01 | Fan speed setting : Setting 1 * |
| | 02 | Fan speed setting : Setting 2 * |
| MODE | 00 | Room heating temperature adjustment : Disable |
| | 01 | Room heating temperature adjustment : +1°C |
| | 02 | Room heating temperature adjustment : +2°C |
| | 03 | Room heating temperature adjustment : +3°C |
| FILTER | 00 | Filter sign display : OFF |
| | 01 | Filter sign display : 180 hours |
| | 02 | Filter sign display : 600 hours |
| | 03 | Filter sign display : 1000 hours |
| | 04 | Filter sign display : Operation stop after 1000 hours have elapsed |
| U/P (Up/Down) | 00 | Anti draft setting : Disable |
| | 01 | Anti draft setting : Enable |
| SILENT | 00 | Infrared sensor setting (Motion sensor setting) : Disable |
| | 01 | Infrared sensor setting (Motion sensor setting) : Enable |
| HI POWER | 00 | Infrared sensor control (Motion sensor control) : Disable |
| | 01 | Infrared sensor control (Motion sensor control) : Power control only |
| | 02 | Infrared sensor control (Motion sensor control) : Auto OFF only |
| | 03 | Infrared sensor control (Motion sensor control) : Power control + Auto OFF |
| ON TIMER | 00 | Cooling fan residual-period running : Disable |
| | 01 | Cooling fan residual-period running : 0.5 hours |
| | 02 | Cooling fan residual-period running : 2 hours |
| | 03 | Cooling fan residual-period running : 6 hours |
| OFF TIMER | 00 | Heating fan residual-period running : Disable |
| | 01 | Heating fan residual-period running : 0.5 hours |
| | 02 | Heating fan residual-period running : 2 hours |
| | 03 | Heating fan residual-period running : 6 hours |
| NIGHT SETBACK | 00 | Remote control signal receiver LED : Brightness High |
| | 01 | Remote control signal receiver LED : Brightness Low |
| | 02 | Remote control signal receiver LED : OFF |

* Refer to technical data.

⑥ Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

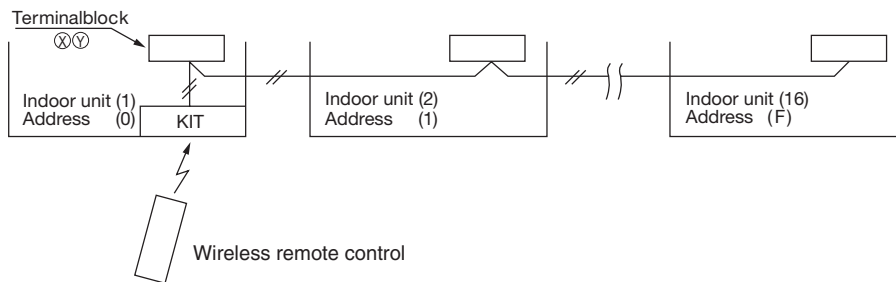
1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.
2. For Packaged air conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [1] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire (Maximum total extension 600m.)

| | | |
|----------|--------|----------------------------|
| Standard | Within | 0.3 mm ² × 100m |
| | Within | 0.5 mm ² × 200m |
| | Within | 0.75mm ² × 300m |
| | Within | 1.25mm ² × 400m |
| | Within | 2.0 mm ² × 600m |

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.



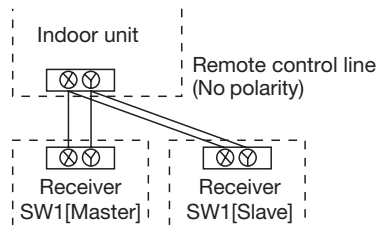
For the building air-conditioning and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses.

Use the rotary switches SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.



| Switch | Setting | Function |
|--------|---------|----------|
| SW2 | ON | Master |
| | OFF | Slave |

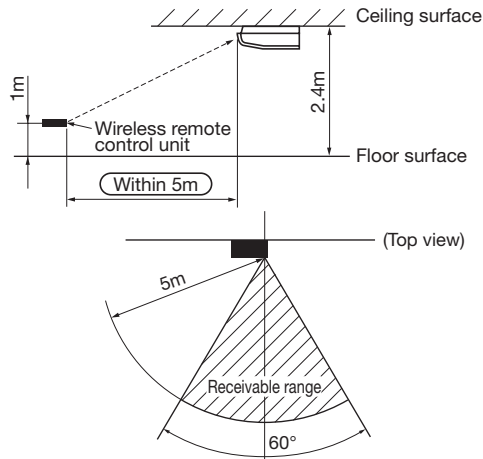
⑥ Receiver (continued)

Wireless remote control's operable area

1. Standard signal receiving range

[Condition]

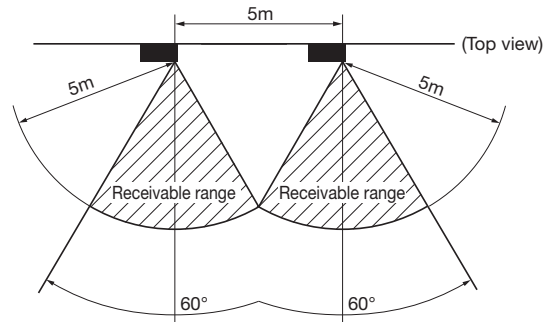
Illuminance at the receiver area: 300 lux.
(When no lighting fixture is located within 1m of indoor unit in an ordinary office)



2. Points for attention in connecting a plural number of indoor units

[Condition]

Illuminance at the receiver area: 300 lux.

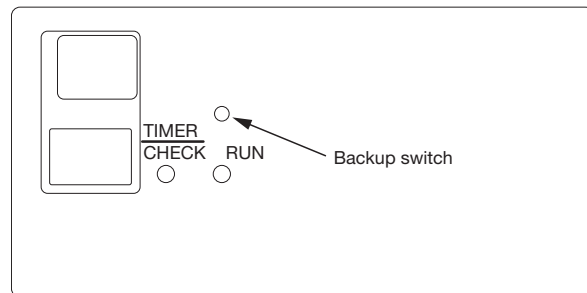


Backup switch

A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

- If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (in the case of cooling only, in the cooling mode).
Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal.
- If pressed while the air-conditioner is in operation, it will stop the air-conditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the two-digit display

A two-digit indicator (7-segment indicator) is provided on the receiver section.



- An indication will be displayed for one hour after power on.
- An indication appears for 3.5 seconds when a "Stop" command is sent from the wireless remote control unit while the air-conditioner is not running.
- An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- When there are no error records to indicate, addresses are displayed for all of the connected units.
- When there are some error records remaining, the error records are displayed.
- Error records can be cleared by transmitting a "Stop" command from the wireless remote control unit, while the backup switch is depressed.

5.2 MOTION SENSOR KIT

PJF012D504


5.2.1 FDTC series (LB-TC-5W-E)

WARNING

- Connect the wiring to the PCB in the control box on the indoor unit and fix the wiring securely so as not to apply unexpected stress on the PCB. Loose connection or fixing will cause abnormal heat generation or fire. 
- Make sure the power source is turned off during electrical wiring work. Otherwise, electric shock, malfunction and abnormal operation may occur. 

CAUTION

- Do not install the motion sensor kit at the following places in order to avoid malfunction.

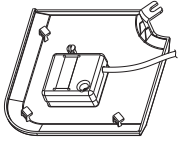
| | |
|--|---|
| <ul style="list-style-type: none"> (1) Places exposed to direct sunlight (2) Places near heat-generating devices (3) High humidity places (4) Hot surface or cold surface enough to generate condensation (5) Places directly exposed to oil mist or steam (6) Places affected by the direct air flow of the indoor unit (7) Places where the motion sensor may be influenced by fluorescent lamp or sunlight | <ul style="list-style-type: none"> (8) Places where the motion sensor may be affected by infrared rays of any other communication devices (9) Places where some object may obstruct the motion sensor (10) Places where there may be impact on the motion sensor (11) Places with strong radio wave or static electricity (12) Dusty place where the motion sensor lens may become tainted or be damaged |
|--|---|
- Do not leave the motion sensor without the cover. In case the cover needs to be detached, protect the motion sensor with a packaging or bag in order to keep it away from water and dust. 

Attention

- Instruct the customer how to operate the motion sensor kit correctly by referring to the instruction manual.
- For the installation method of the air-conditioner itself, refer to the installation manual enclosed in the package.

① Accessories

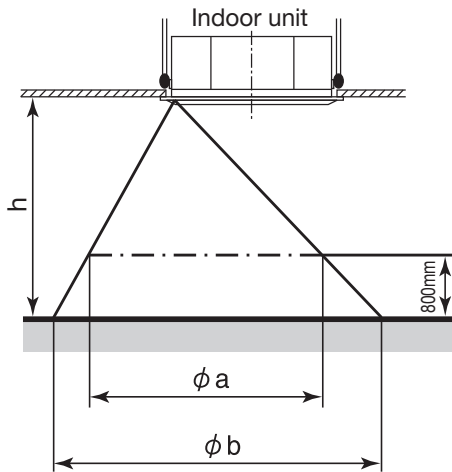
Please make sure that all components are in the package.

| | | |
|---------------|---|---|
| Motion sensor |  | 1 |
|---------------|---|---|

② Installing the motion sensor

It is possible to install the motion sensor by replacing the corner lid on the panel.

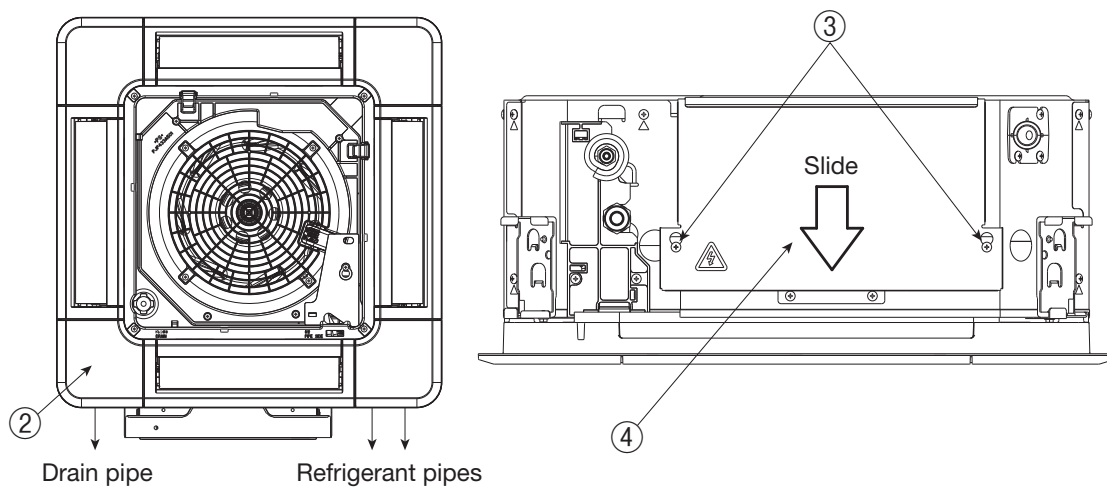
The detectable area



| | | | | |
|-----------------------|--------|-----------|-----------|-----------|
| Height of the ceiling | h[m] | 2.7 | 3.5 | 4.0 |
| Detectable area① | φ a[m] | about 4.5 | about 6.4 | about 7.6 |
| Detectable area② | φ b[m] | about 6.4 | about 8.3 | about 9.5 |

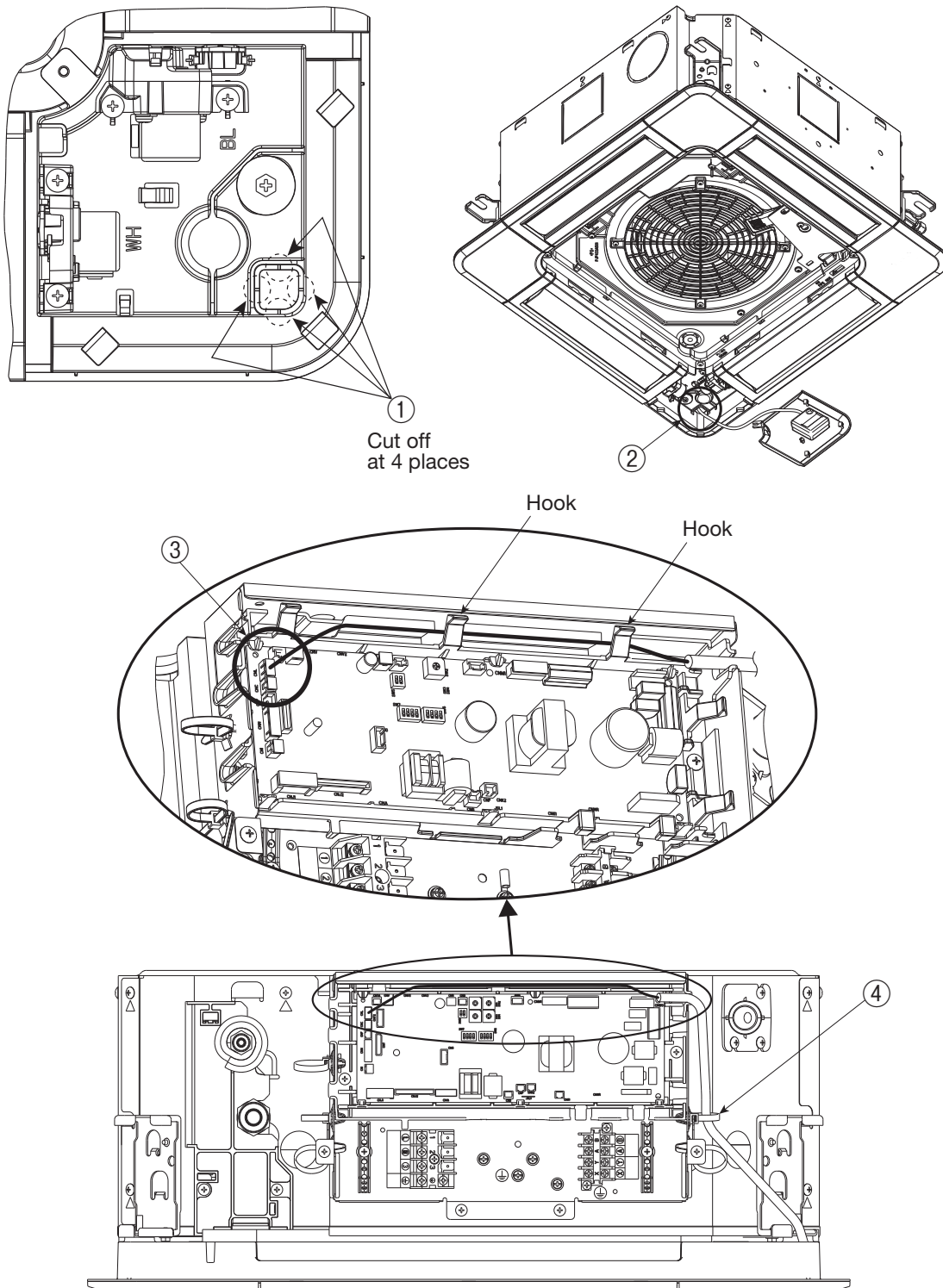
Preparation before installation

- ① Remove the inlet grille according to the installation manual of the panel.
- ② Remove the corner lid at the drain pipe side.
- ③ Loosen screws (2 pcs) on the control box of the unit. (It is not necessary to remove the screws.)
- ④ Slide the control lid in the arrow direction, and remove it.



Installation of the motion sensor

- ① Cut the half blanking (4 sections) of the panel as shown in the following figure.
- ② Pass the motion sensor wiring through the opening of the panel.
- ③ Connect the wiring connector to CNL (3P, black) on the PCB in the control box.
- ④ Fix the wiring with a band as shown below.
- ⑤ Install the motion sensor on the panel according to the installation manual of the panel.
- ⑥ Install the control lid with care not to pinch the wiring, and reinstall the control lid with screws (2 pcs.).



③ Setting the motion sensor



The motion sensor will not function if it is only installed.
Set the function of the motion sensor by the wired or wireless remote control.
Refer to the manual instruction of each remote control for the setting procedure.

Note: It is not possible to set by the following remote control models or older ones.
Wired: RC-EX1A, RC-E5, RCH-E3
Wireless: RCN-E1R

PJZ012D122 


5.2.2 FDU, FDUM series (LB-KIT)

WARNING

- Connect the wiring to the PCB in the control box on the indoor unit and hold the wiring securely so as not to apply unexpected stress on the PCB. Loose connection or hold will cause abnormal heat generation or fire. 
- Make sure the power source is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur. 

CAUTION

- Do not install the motion sensor kit at the following places in order to avoid malfunction.






| | |
|---|--|
| <ul style="list-style-type: none"> (1) Places exposed to direct sunlight (2) Places near heat devices (3) High humidity places (4) Hot surface or cold surface enough to generate condensation (5) Places exposed to oil mist or steam directly (6) Places affected by the direct air flow of the Indoor unit (7) Places where the motion sensor is influenced by the fluorescent lamp or sunlight | <ul style="list-style-type: none"> (8) Places where the motion sensor is affected by infrared rays of any other communication devices (9) Places where some object may obstruct the motion sensor (10) Place that the motion sensor have a shock (11) Place with the strong radio wave or Static electricity (12) Place that motion sensor lens become tainted or have damaged. Dusty place (13) Place where it runs in parallel with strong voltage lines such as power source wiring |
|---|--|
- Do not leave the motion sensor without the cover. In case the cover needs to be detached, protect the motion sensor with a packaging or bag. In order to keep it away from water and dust. 

Attention

- This manual describes how to install the motion sensor kit.
- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air-conditioner itself, refer to the installation manual enclosed in the package.

Accessories

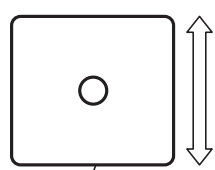
Please make sure that all components are in the package.

| Motion sensor | Wiring <1> | Wiring <2> | 2 screws | Manual |
|---|---|--|---|---|
|  | In case of CnL connector on the indoor unit PCB (FDT/FDK/FDTC)  | In case of CnL connector is not on the indoor unit PCB  |  |  |

※ Please prepare a relay wiring for connecting the motion sensor and indoor unit on site. (0.2 mm² or thicker, triplex (red, white and black) cable for communication, with the maximum length of 8 m.)

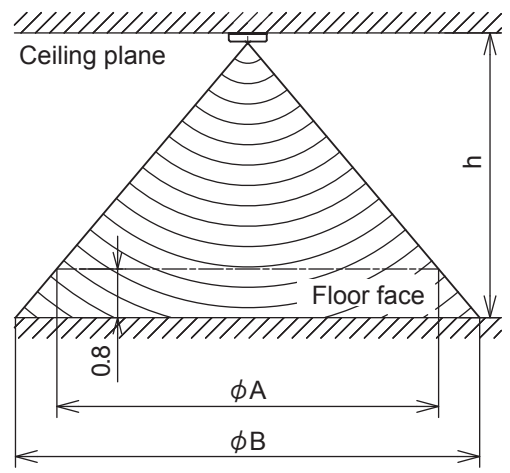
② Installing the motion sensor

- The recommended height is lower than 4000 mm for motion sensor. When the installation height is higher, motion detection accuracy might be reduced.
- Sensor will detect the object with a different temperature from the surrounding.
- Motion sensor is more sensitive to motions in the direction of ⇄ mark.
- Sensor may not detect small children or infants with little motion.
- Although motion sensor can be installed on a wall, it is recommended to install it on the ceiling plane.
- If the sensor is installed on the wall, the sensing distance in the front direction is about 5 m, covering the angle of about 100 degrees.



Side of screws for fixing the case

The detectable area



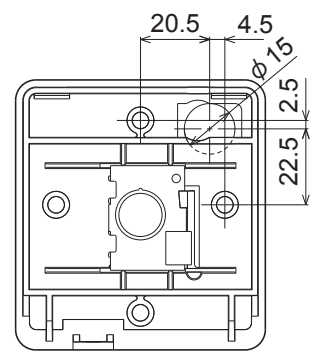
| | | | | |
|-----------------------|---------|-----|-----|-----|
| Height of the ceiling | h (m) | 2.7 | 3.5 | 4.0 |
| Detectable area | φ A (m) | 4.5 | 6.4 | 7.6 |
| Detectable area | φ B (m) | 6.4 | 8.3 | 9.5 |

Installing the motion sensor

There are the following 3 methods to install the motion sensor on the ceiling plane or wall surface (hereinafter called "ceiling plane"). Select the method according to the installation position.

<How to install>

- (A) Direct installation by screws to the ceiling plane with the wiring in the ceiling space.
- (B) Direct installation by screws to the ceiling plane with the wiring in the room.
- (C) Installation with switch box (prepare at the site)

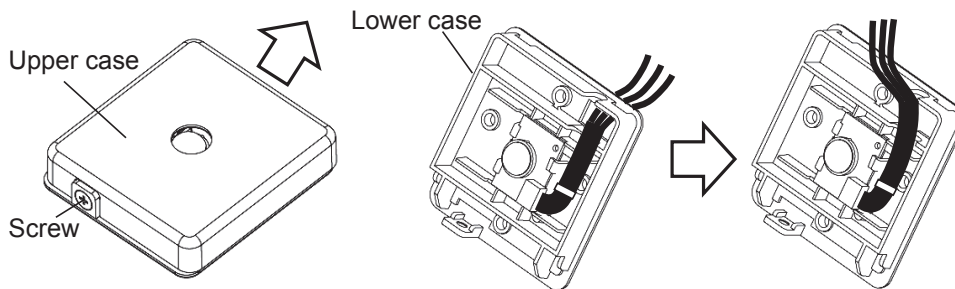
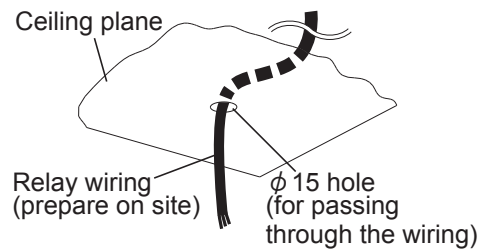


Positional relation for pulling out relay wiring hole and installing holes.

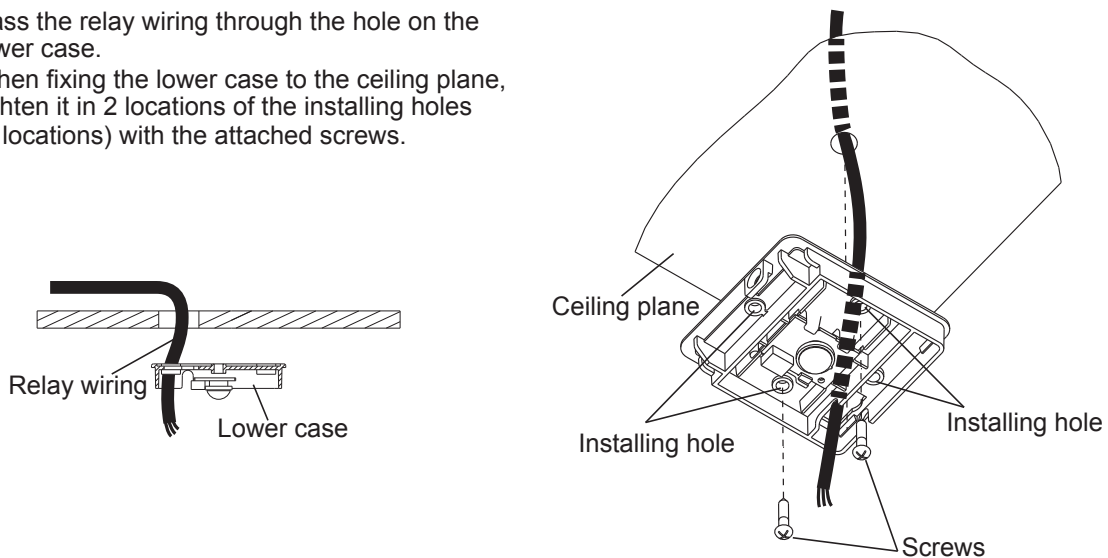
Option (A)

►Select this method if the ceiling plane has sufficient strength to install the motion sensor directly with screws.

- ① Prepare a relay wiring on site and lay out the wiring in advance.
- ② Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow.
- ③ Pull the wiring of the motion sensor as below.



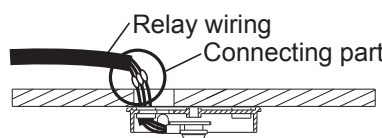
- ④ Pass the relay wiring through the hole on the lower case.
- ⑤ When fixing the lower case to the ceiling plane, tighten it in 2 locations of the installing holes (4 locations) with the attached screws.



- ⑥ Using a crimping terminal, etc., connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor.



- ⑦ Place the connecting part inside of the ceiling space.
- ⑧ Seal the wiring hole on the lower case with putty.
- ⑨ Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws.

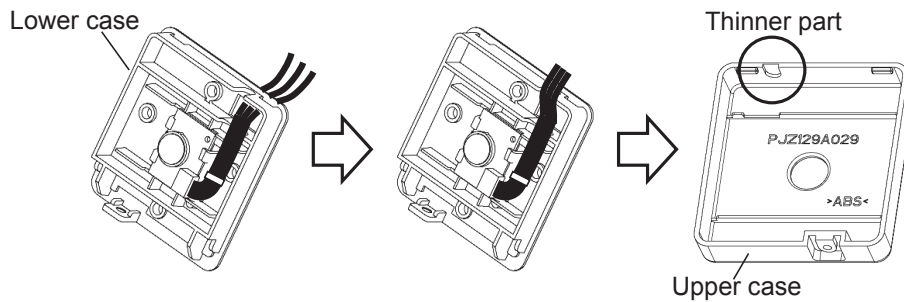


Caution:
In order to prevent tracking, be sure to perform construction so as not to clog up the connecting part with dust, etc.

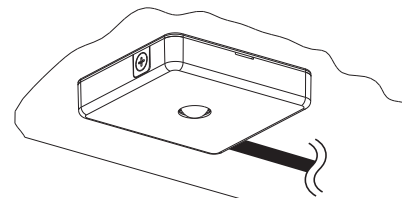
Option (B)

► Select this method if the ceiling plane has sufficient strength to install the motion sensor directly with screws.

- ① Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow. (The same as ② of Option (A))
- ② Pull the wiring of the motion sensor toward the side. Cut off the thinner part of the upper case.

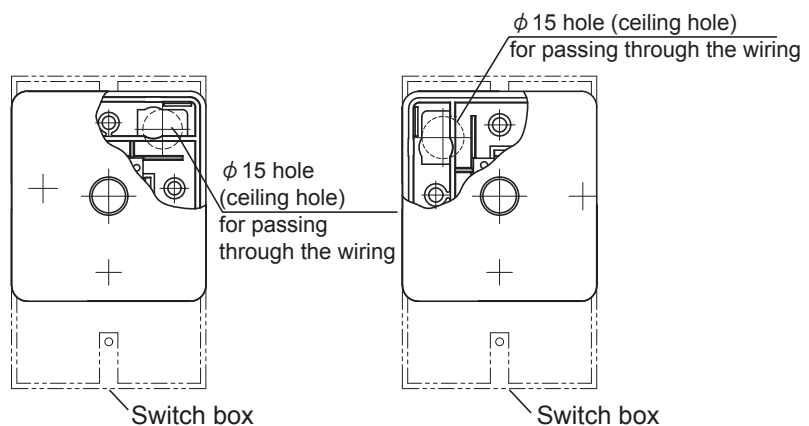


- ③ When fixing the lower case to the ceiling plane, tighten it in 2 locations of the installing holes (4 locations) with the attached screws. (The same as ⑤ of Option (A))
- ④ Using a crimping terminal, etc., connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor. (The same as ⑥ of Option (A))
- ⑤ Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws. (The same as ⑨ of Option (A))
- ⑥ Seal the cut part at Step ② with putty.

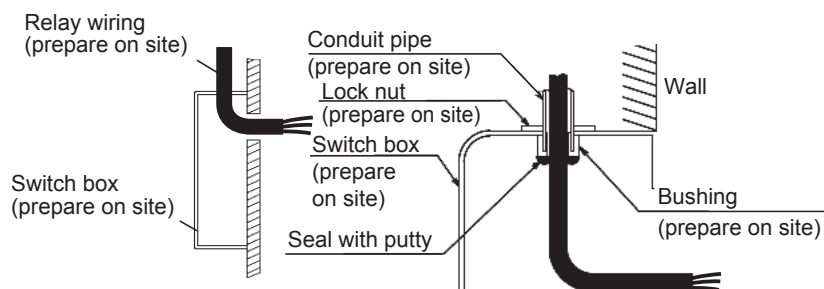


Option (C)

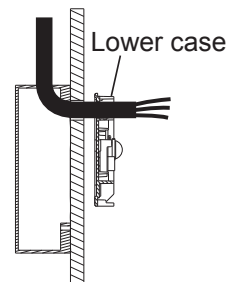
- ① Set up the switch box and relay wiring (prepare on site) in advance. Seal the relay wiring inlet with putty.



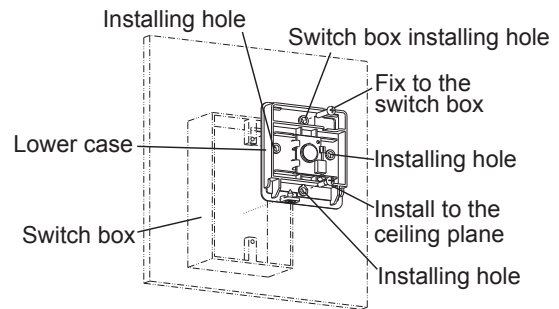
Positional relation for the switch box and installing holes



- ② Remove the screw at the side of the motion sensor and slide the upper case in the direction of the arrow. (The same as ② of Option (A))
- ③ Pull the wiring of the motion sensor. (The same as ③ of Option (A))
- ④ Pass the relay wiring through the hole on the lower case from switch box.

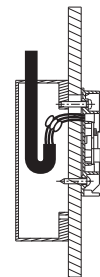


- ⑤ Fix the lower case to switch box using the installing hole (1 place).

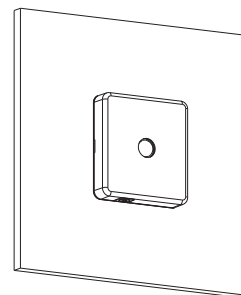


- ⑥ Connect the same color to the relay wiring (prepare on site) and the wiring of motion sensor. (The same as ⑥ of Option (A))

- ⑦ Place the connecting part between switch box and the hole of the lower case through passed the wiring at step ④ .



- ⑧ Taking care not to pinch the wirings, slip the upper case into the lower case, and tighten the screws. (The same as ⑧ of Option (A))

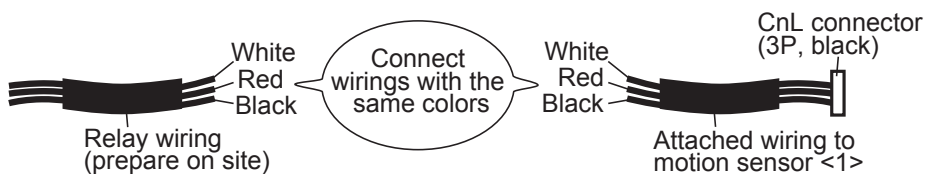


Wiring connection in the control box of indoor unit

CAUTION: Attached wirings to the motion sensor vary depending on the model of the indoor unit. Make sure your model before installing.

<In case of the CnL connector is on the indoor unit PCB (FDT/FDK/FDTC)>



- ① Connect the same color to the relay wiring (prepare on site) and the attached wiring <1>.
- ② Remove the control box cover from the indoor unit.
- ③ Connect CnL connector (3P, black) to the PCB.




PFA012D633 


5.2.3 FDE series (LB-E)

WARNING

- Connect the wiring to the PCB in the control box on the indoor unit and hold the wiring securely so as not to apply unexpected stress on the PCB. Loose connection or hold will cause abnormal heat generation or fire. 
- Make sure the power source is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur. 

CAUTION

- Do not install the motion sensor kit at the following places in order to avoid malfunction. 

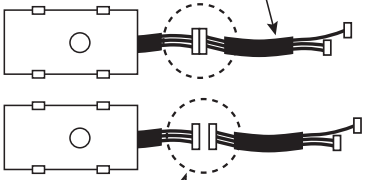

| | |
|---|--|
| <ul style="list-style-type: none"> (1) Places exposed to direct sunlight (2) Places near heat devices (3) High humidity places (4) Hot surface or cold surface enough to generate condensation (5) Places exposed to oil mist or steam directly (6) Places affected by the direct air flow of the Indoor unit (7) Places where the motion sensor is influenced by the fluorescent lamp or sunlight | <ul style="list-style-type: none"> (8) Places where the motion sensor is affected by infrared rays of any other communication devices (9) Places where some object may obstruct the motion sensor (10) Place that the motion sensor have a shock (11) Place with the strong radio wave or Static electricity (12) Place that motion sensor lens become tainted or have damaged. Dusty place |
|---|--|
- Do not leave the motion sensor without the cover. In case the cover needs to be detached, protect the motion sensor with a packaging or bag. In order to keep it away from water and dust. 

Attention

- This manual describes how to install the motion sensor kit.
- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air-conditioner itself, refer to the installation manual enclosed in the package.

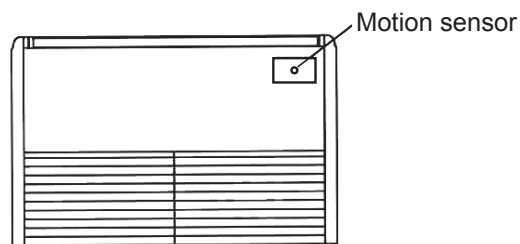
① Accessories

Please make sure that all components are in the package.

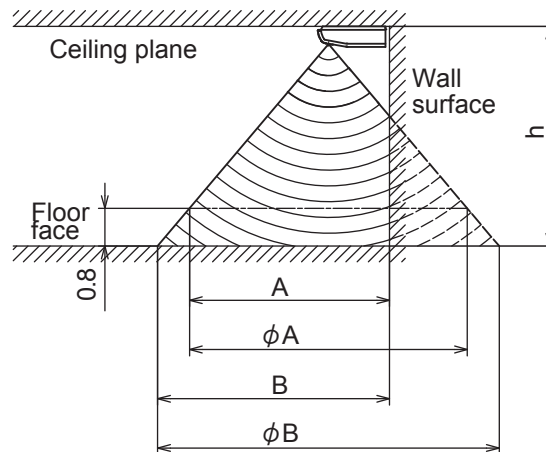
| Motion sensor (※) | Manual |
|--|---|
| <p>Attached wiring to the motion sensor kit</p>  <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>※ Wiring from the motion sensor and the attached wiring to the motion sensor kit have been connected when shipped from the factory. Remove the connector at the position of ○ mark and connect it to the attached wiring to the indoor unit before use.</p> </div> |  |

② Installing the motion sensor

- It is possible to install the motion sensor by replacing the indoor unit.
- The recommended height is lower than 4000 mm for motion sensor. When the installation height is higher, motion detection accuracy might be reduced.
- Sensor will detect the object with a different temperature from the surrounding.
- Sensor may not detect small children or infants with little motion.
- Use the separate motion sensor so that person's activity can be detected when the detectable area differs from the person's activity area.
- Use the separate motion sensor when using both wireless remote control and motion sensor together.



The detectable area



| | | | | |
|-----------------------|--------------|-----|-----|-----|
| Height of the ceiling | h (m) | 2.7 | 3.5 | 4.0 |
| Detectable area | A (m) | 2.9 | 3.9 | 4.5 |
| Detectable area | ϕA (m) | 4.5 | 6.4 | 7.6 |
| Detectable area | B (m) | 3.9 | 4.8 | 5.4 |
| Detectable area | ϕB (m) | 6.4 | 8.3 | 9.5 |

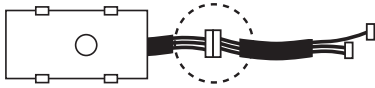
Installing the motion sensor (before installing the unit)

Motion sensor can be installed by replacing with a cover of the panel.

CAUTION: Install the motion sensor before installing the unit.

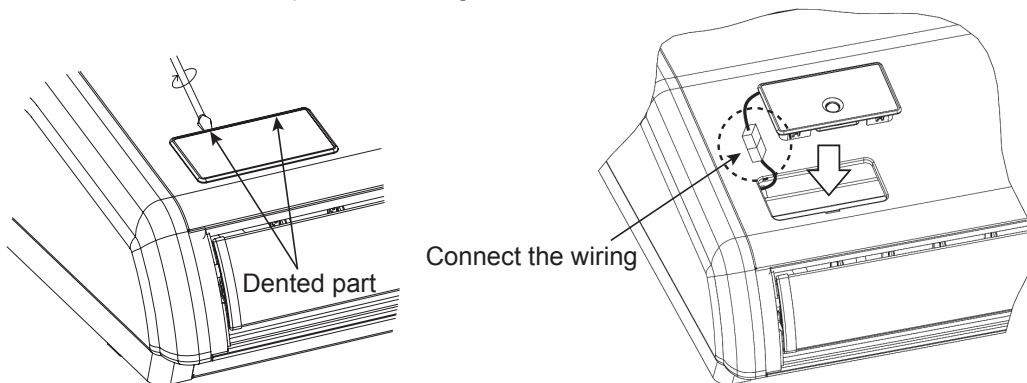
When installing the motion sensor after unit has been fixed, injury due to falling may result because of working at high place.

- ① Remove the connector that connects the motion sensor and the wiring.



- ② Insert a tool into the dented part (2 places) of the panel cover, and wrench slightly not to damage the paintwork of the panel to remove the cover.
- ③ Connect the wiring from the panel's hole (attached to the indoor unit, color of the wiring: white, red and black, connector: 3P, white) to the wiring from the motion sensor. Make sure to install the motion sensor in the correct direction.

CAUTION: Do not remove the clamp fixed the wiring.



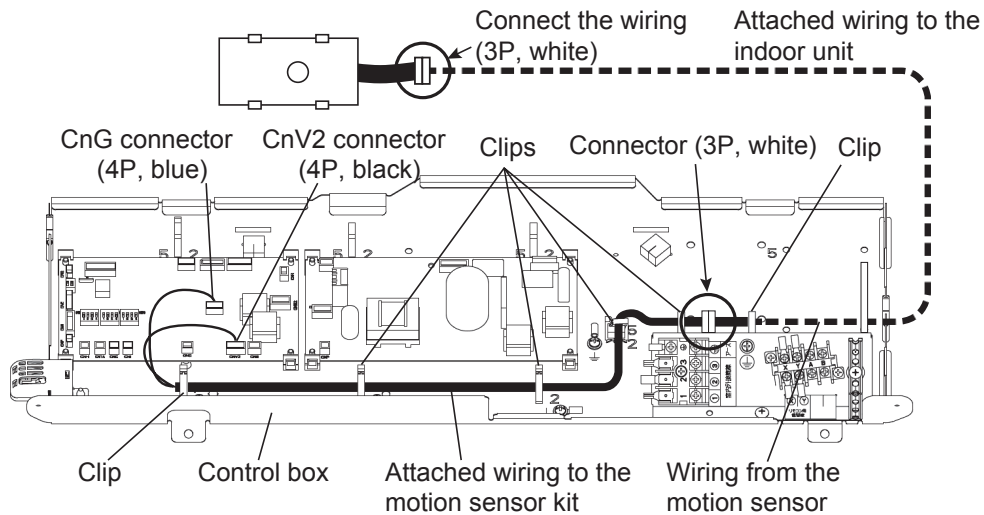
- ④ Install the motion sensor
Place the connector under the panel and install it to the panel with careful attention to the direction of the motion sensor.

CAUTION: Connect the connectors before installing the motion sensor.

In case of connecting after the motion sensor has been installed, it will be necessary to remove the panel.

Wiring connection in the control box

- ① Connect the wiring from the motion sensor (attached to the indoor unit, color of the wiring: white, red and black, connector: 3P, white) to the attached wiring to the motion sensor kit.
- ② Fix the wiring with clips (6 places).
- ③ Connect CnG connector (4P, blue) to the PCB.
- ④ Connect CnV2 connector (4P, black) to the PCB.



③ Setting the motion sensor

The motion sensor will not function if it is only installed.

Set the function of the motion sensor by the wired or wireless remote control. Refer to the manual instruction of each remote control for the setting procedure.

Note: It is not possible to set by the following remote control models or older.

Wired: RC-EX1A, RC-E5, RCH-E3

Wireless: RCN-E1R

5.2.4 USER'S MANUAL (FDU, FDUM FDE series)

SAFETY PRECAUTIONS

⚠ WARNING

- **If a child, person with disease or other persons needed for assist uses this product, people around the person should take sufficient care.** **!**
A halt of the air-conditioner due to abnormal situation or motion sensor's control may cause a feeling of sickness or accident.

ATTENTION

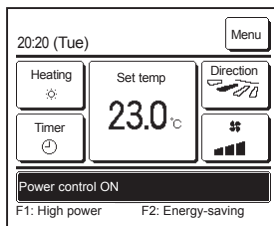
- The sensor may not detect a person near the border of detection range.
- Installation near an object with a different temperature from the surrounding may cause a false detection of human.
- Due to correction of temperature setting, some people may feel chilly.

This product uses infrared sensor to detect person's activity level to support control of air-conditioner. Please set the control you like from the remote control.

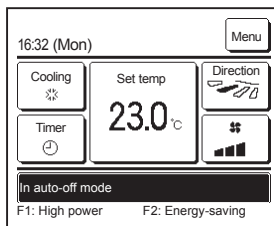
| Indoor unit control | Detective situation | Description of control | Display of eco touch remote control |
|--------------------------------|---------------------------------|---|-------------------------------------|
| ① Power control | Activity level is large | Lower the indoor temperature setting for comfort. | Power control ON |
| | Activity level is small | Raise the indoor temperature setting for energy-saving. | Power control ON |
| ② Auto-off | No one is detected for 1 hour | Stop operation and stand by | In auto-off mode |
| | No one is detected for 12 hours | Stop operation | - |
| ① + ② | Any combination of the above | Any of the above | Any of the above |
| All disabled (default setting) | - | Standard control | - |

If the sensor is disconnected or defective, the control will be set as if it no detects (or less) activity level.

Refer to the next section for setting method.



- When power control is enabled
The amount of human motion is detected by a motion sensor to adjust the Set temp.
During power control, "Power control ON" will be displayed on the message display.

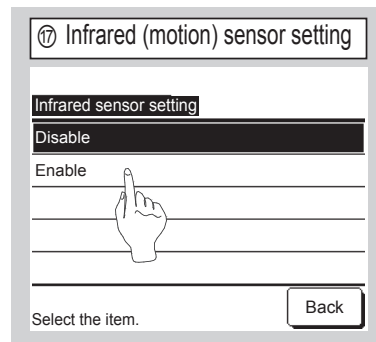
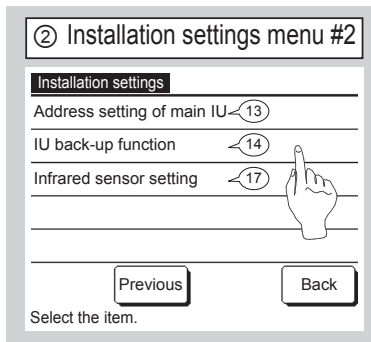
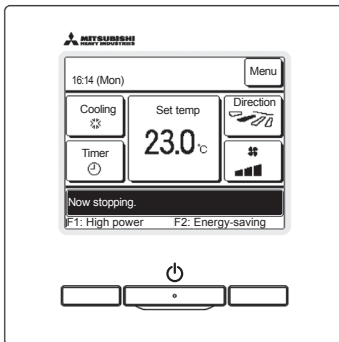


- When auto-off is enabled
The unit will enter the "Operation wait" state when an hour has elapsed since the last time a human presence was detected and will be in "Complete stop" state after another 12 hours.
"Operation wait"...The unit stops but will resume operation when human presence is detected. When the unit is in "Complete stop", "In auto-off mode" will be displayed on the message display.
"Complete stop"...When auto-off is enabled, the unit stops. The unit will not resume operation even when human presence is detected. The message "In auto-off mode" will disappear from the message display, and the operation lamp will turn off.

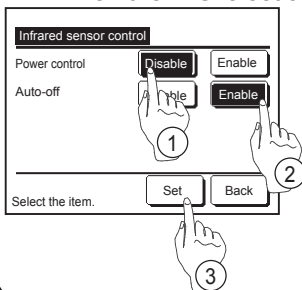
Control setting (from eco touch remote control)

- Refer to the installation manual for eco touch remote control to activate the infrared sensor (motion sensor).

TOP screen **Menu** ⇒ **Service setting** ⇒ **Installation settings** ⇒ **Service password**



- Refer to the installation manual for eco touch remote control to set control mode.
 - Infrared sensor (motion sensor) control (for IUs with motion sensors)
Presence of humans and the amount of motion are detected by a motion sensor to perform various controls.
 - When the R/C is set as the sub R/C, the infrared sensor (motion sensor) control cannot be set.



Tap the **Menu** button on the TOP screen and select **Energy-saving setting** ⇒ **Infrared sensor control** or **Motion sensor control**.

The Infrared sensor control screen and contents of the current settings are displayed.

- ① Enable/disable power control.
- ② Enable/disable auto-off.
- ③ After you set each item, tap the **Set** button.
The display returns to the Energy-saving setting menu screen.

Control setting (from wireless remote control)

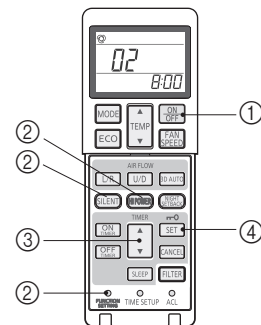
- Refer to the installation manual for wireless remote control to enable motion sensor in **Indoor function settings**

Indoor function settings

1. How to set indoor functions

- ① Press the ON/OFF button to stop the unit.
- ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
- ③ Use the selection buttons, ▲ and ▼, to change the setting.
- ④ Press the SET button.

The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



2. Setting details

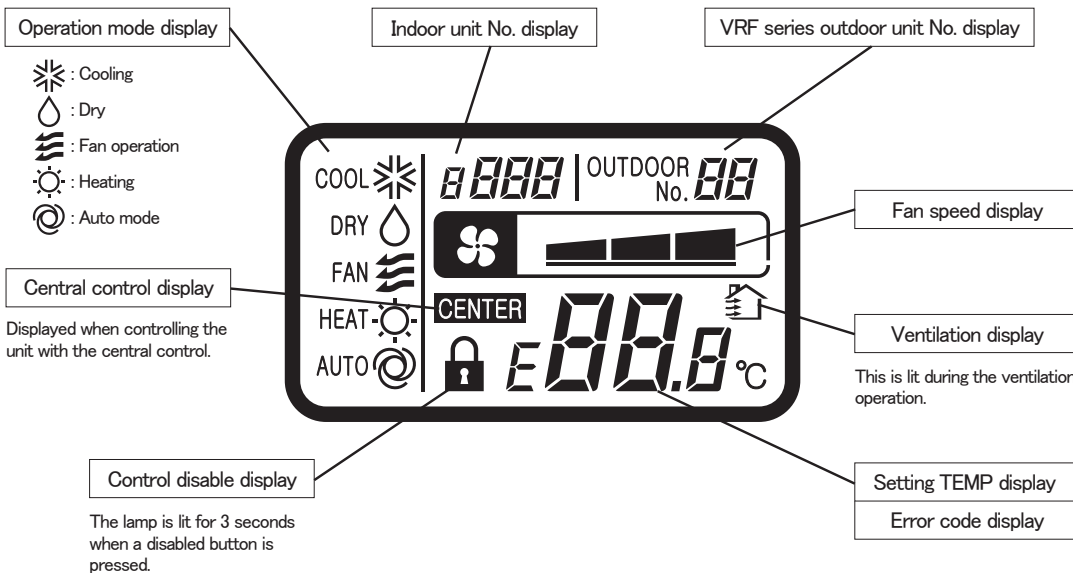
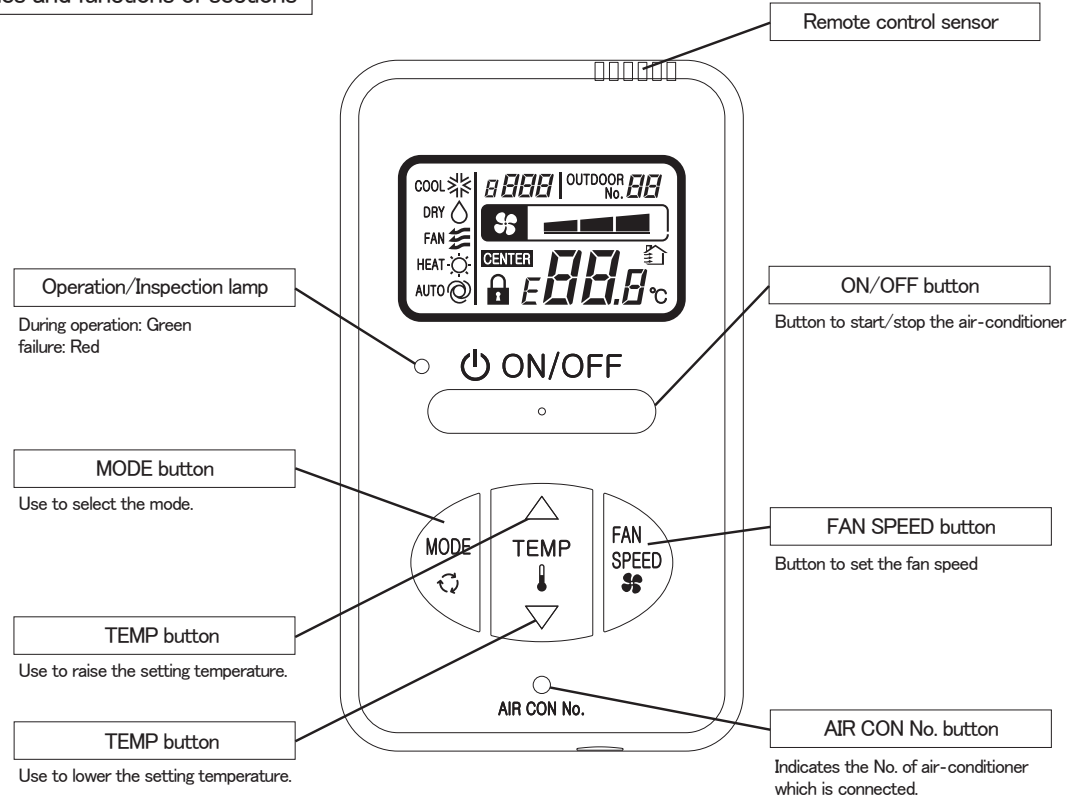
| Button | Number indicator | Function setting |
|----------|------------------|--|
| SILENT | 00 | Infrared sensor setting (Motion sensor setting) : Disable |
| | 01 | Infrared sensor setting (Motion sensor setting) : Enable |
| HI POWER | 00 | Infrared sensor control (Motion sensor control) : Disable |
| | 01 | Infrared sensor control (Motion sensor control) : Power control only |
| | 02 | Infrared sensor control (Motion sensor control) : Auto OFF only |
| | 03 | Infrared sensor control (Motion sensor control) : Power control and Auto OFF |

5.3 SIMPLE WIRED REMOTE CONTROL (RCH-E3)

Note:

Following functions of FDU indoor unit series are not able to be set with this simple wired remote control (RCH-E3).
 1. 4-fan speed setting (P-Hi/Hi/Me/Lo) → 3-fan speed setting (Hi/Me/Lo)

Names and functions of sections



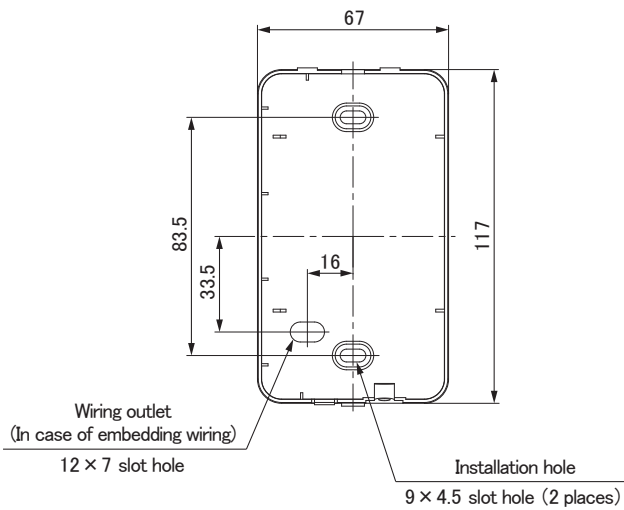
Installation of remote control

Do not install the remote control at the following places in order to avoid malfunction.

- (1) Places exposed to direct sunlight
- (2) Places near heat devices
- (3) High humidity places
- (4) Hot surface or cold surface enough to generate condensation
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface

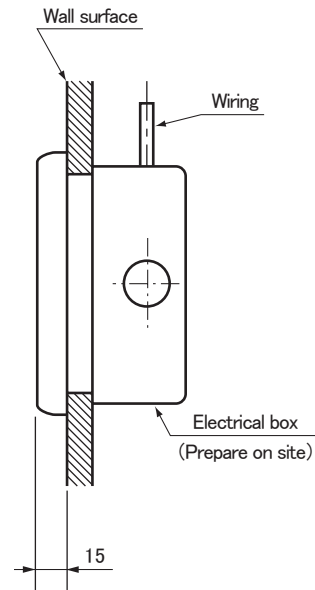
PJZ000Z272

Remote control installation dimensions

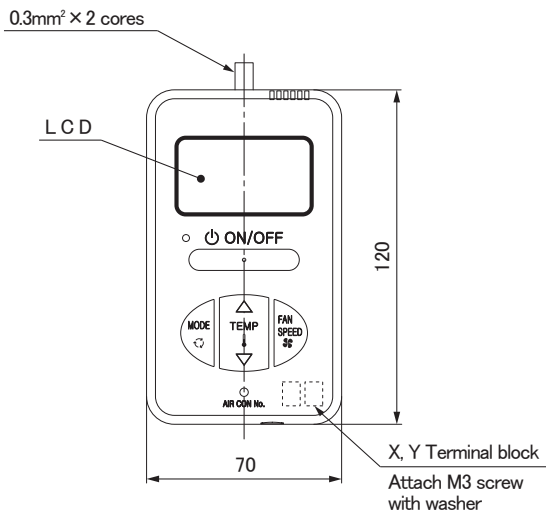


Note: Installation screw for remote control
M4 screw (2 pieces)

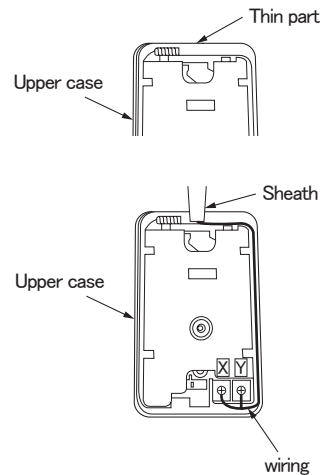
In case of embedding wiring



In case of exposing wiring

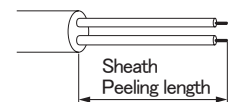


The remote control wiring can be extracted from the upper center.
After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.



The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm



Wiring specifications


- (1) Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- (2) Maximum prolongation of remote control wiring is 600m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote control case should be 0.3mm² (recommended) to 0.5mm².
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

Unit:mm

| Length | Wiring thickness |
|-------------|-------------------------------|
| 100 to 200m | 0.5mm ² × 2 cores |
| Under 300m | 0.75mm ² × 2 cores |
| Under 400m | 1.25mm ² × 2 cores |
| Under 600m | 2.0mm ² × 2 cores |



Adapted to **RoHS** directive

Simple Remote Control Installation Manual


PJZ012D069 


Read together with indoor unit's installation manual.

⚠ WARNING

- **Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.** 
Loose connection or hold will cause abnormal heat generation or fire.
- **Make sure the power source is turned off when electric wiring work.** 
Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

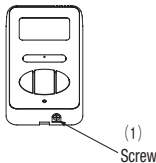
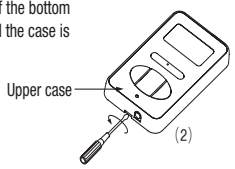
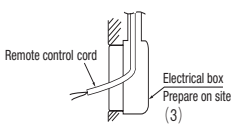
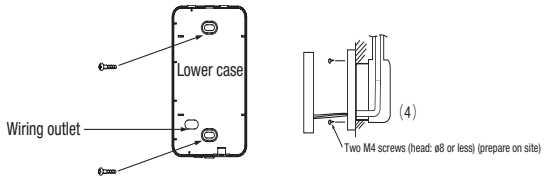
- **Do not install the remote control at the following places in order to avoid malfunction.** 

| | |
|---------------------------------------|---|
| (1) Places exposed to direct sunlight | (4) Hot surface or cold surface enough to generate condensation |
| (2) Places near heat devices | (5) Places exposed to oil mist or steam directly |
| (3) High humidity places | (6) Uneven surface |
- **Do not leave the remote control without the upper case.** 
In case the upper case needs to be detached, protect the remote control with a packaging box or bag in order to keep it away from water and dust.

| | |
|-----------------|---|
| Accessories | Remote control, wood screw (φ 3.5×16) 2 pieces |
| Prepare on site | Remote control cord (2 cores) (Refer to [2. Installation and wiring of remote control]) [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed) |

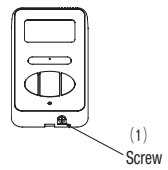
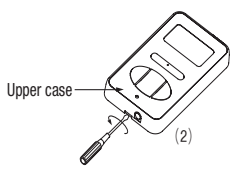
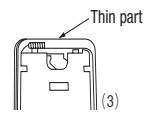
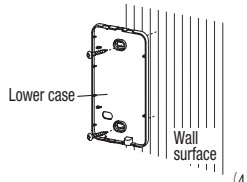
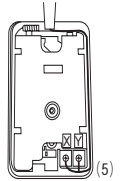
1. Installation procedure

In case of embedding cord

- (1) **Make certain to remove** the screw on the bottom surface of the remote control. 
- (2) Remove the upper case of the remote control. Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed. 
- (3) Pre-bury the electrical box and remote control cord. 
- (4) Prepare two M4 screws (recommended length: 12 – 16mm), and install the lower case to the electrical box. Do not use a screw whose screw head is larger than the height of the wall around the screw hole. 

- (5) Connect the remote control cord to the terminal block. Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.

In case of exposing cord

- (1) **Make certain to remove** a screw on the bottom surface of the remote control. 
- (2) Remove the upper case of the remote control. Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed. 
- (3) The remote control cord can be extracted from the upper center. After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file. 
- (4) The lower case of the remote control is mounted to a flat wall with two accessory wood screws. 
- (5) Connect the remote control cord to the terminal block. Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
The wiring route is as shown in the right. 

The wiring in the remote control case should be 0.3 mm² (recommended) to 0.5 mm² at maximum.

Further, peel off the sheath.

The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm



- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.
- (7) In the case of exposing installation, secure the remote control cord to the wall surface with a cord clamp so as not to loosen the remote control cord.

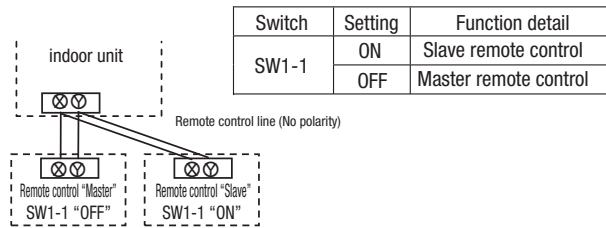
2. Installation and wiring of remote control

- (1) Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- (2) Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote control case should be 0.3mm² (recommended) to 0.5mm².
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

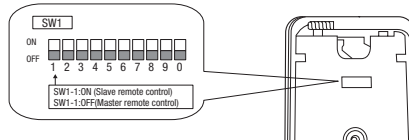
100 - 200m ······ 0.5mm² × 2 cores
Under 300m ······ 0.75mm² × 2 cores
Under 400m ······ 1.25mm² × 2 cores
Under 600m ······ 2.0mm² × 2 cores

3. Master/ slave setting when more than one remote control are used

- (1) Up to two remote controls can be connected to one unit (or one group) of indoor unit.

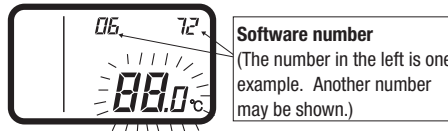


- (2) Set the switch SW1-1 of the slave remote control as "Slave" (ON). The factory default is set as "Master" (OFF).
 (Note) • The remote control temperature sensor enabled setting can be set only to the master remote control.
 • Install the master remote control at the position to detect room temperature.
 • The air-conditioner operation follows the last operation of the remote control in case of the master / slave setting.



4. The indication when power source is supplied

- (1) At the time of turning the power source on, after the light is on for the first 2 seconds, the display becomes as shown below.
 The number displayed on the upper side of LCD in the remote control is the software number, and this is not an error code.



- (2) Then, "88.0 °C" blinks on the remote control until the communication between the remote control and the indoor unit is established.
 (3) In the case of connecting one remote control with one unit (or one group) of indoor unit, make certain to set the master remote control (factory default).
 If the slave remote control is set, a communication cannot be established.
 (4) If a state where the communication between the remote control and the indoor unit cannot be established continues about for 30 minutes, "E" is displayed. Confirm the wiring of the indoor unit and the outdoor unit and master/slave setting of the remote control.



5. Confirmation method for return air temperature

Return air temperature can be confirmed by the remote control operation.

- (1) Press **AIR CON No.** button for over 5 seconds.
 "88" blinks on the temperature setting indicator.
 ("88" blinks for approximately 2 seconds while data is read.)

Then, the return air temperature is displayed.

(Example) return air temperature: "27 °C" (blinking)

(Note) For the return air temperature, in the normal case, the return air temperature of the indoor unit is displayed; however, in the case that the remote control temperature sensor is effective, detected temperature by the remote control temperature sensor is displayed.



- (2) Press **ON/OFF** button.
 End.

[In the case that the remote temperature sensor is ineffective and plural indoor units are connected to one remote control]

- (1) Press **AIR CON No.** button for over 5 seconds.
 indoor unit No. indicator: "U 000" (blinking)
 (Among the connected indoor units, the lowest number is displayed.)

- (2) Press **TEMP** button or **TEMP** button.
 Select the indoor unit No.

- (3) Press **MODE** button.
 Decider the indoor unit No.

(Example) indoor unit No. indicator: "U 000"

"88" blinks on the temperature setting indicator. (blinking for approximately 2 to 10 seconds while data is read) Then, the return air temperature is displayed. When **AIR CON No.** is pressed, return to the indoor unit selection display (example, "U 000").

- (4) Press **ON/OFF** button.
 End.



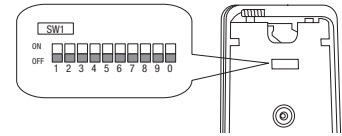
6. Function setting

Each function of the remote control and the indoor unit is automatically set to the initial setting, which is the standard use, on the occasion of connecting the remote control with the indoor unit. In the case of the standard use, the setting change is unnecessary. However, if you would like to change the initial setting "○", change the setting for only the item of the function number. Record the setting contents and stored them.

(1) Function setting item by switch on PCB

| Switch No. | Setting | Setting detail | Initial setting |
|------------|---------|--|-----------------|
| SW1-1 | ON | Slave remote control | |
| | OFF | Master remote control | ○ |
| SW1-2 | ON | Remote control temperature sensor enabled | |
| | OFF | Remote control temperature sensor disabled | ○ |
| SW1-3 | ON | "MODE" button prohibited | |
| | OFF | "MODE" button enabled | ○ |
| SW1-4 | ON | "ON/OFF" button prohibited | |
| | OFF | "ON/OFF" button enabled | ○ |

| Switch No. | Setting | Setting detail | Initial setting |
|-------------|---------|--------------------------------|-----------------|
| SW1-5 | ON | "TEMP" button prohibited | |
| | OFF | "TEMP" button enabled | ○ |
| SW1-6 | ON | "FAN SPEED" button prohibited | ※ Note 1 |
| | OFF | "FAN SPEED" button enabled | ※ Note 1 |
| SW1-7 | ON | Auto restart function enabled | |
| | OFF | Auto restart function disabled | ○ |
| SW1-8, 9, 0 | ON | Not used | |
| | OFF | Not used | |



- As for the slave remote control, function setting is impossible other than SW1-1.
- In the indoor unit with only one fan speed, "FAN SPEED" button cannot be enabled.

(2) Function setting item by button operation

| Classification | Function No. | Function | Setting No. | Setting | Initial setting | Remarks |
|-------------------------|---|--|--|--|--|--|
| Remote control function | 01 | Indoor unit fan speed | 01 | Fan speed: three steps | ※ Note 1 | The fan speed is three steps. ■■■ - ■■ - ■. |
| | | | 02 | Fan speed: two steps (Hi-Lo) | ※ Note 1 | The fan speed is two steps, ■■■ - ■. |
| | | | 03 | Fan speed: two steps (Hi-Me) | | The fan speed is two steps, ■■■ - ■■. |
| | | | 04 | Fan: one step | ※ Note 1 | The fan speed is fixed to one step. |
| | 03 | Remote control thermistor at the time of cooling | 01 | Remote control temperature sensor: no offset | ○ | |
| | | | 02 | Remote control temperature sensor: +3.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at +3.0 °C. |
| | | | 03 | Remote control temperature sensor: +2.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at +2.0 °C. |
| | | | 04 | Remote control temperature sensor: +1.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at +1.0 °C. |
| | | | 05 | Remote control temperature sensor: -1.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at -1.0 °C. |
| | | | 06 | Remote control temperature sensor: -2.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at -2.0 °C. |
| | | | 07 | Remote control temperature sensor: -3.0 °C | | At the time of cooling, in the case of remote control temperature sensor enabled, offset temperature at -3.0 °C. |
| | 04 | Remote control thermistor at the time of heating | 01 | Remote control temperature sensor: no offset | ○ | |
| | | | 02 | Remote control temperature sensor: +3.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at +3.0 °C. |
| | | | 03 | Remote control temperature sensor: +2.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at +2.0 °C. |
| 04 | | | Remote control temperature sensor: +1.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at +1.0 °C. | |
| 05 | | | Remote control temperature sensor: -1.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at -1.0 °C. | |
| 06 | | | Remote control temperature sensor: -2.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at -2.0 °C. | |
| 07 | | | Remote control temperature sensor: -3.0 °C | | At the time of heating, in the case of remote control temperature sensor enabled, offset temperature at -3.0 °C. | |
| 05 | Ventilator setting | 01 | No ventilator connection | ○ | | |
| | | 02 | Ventilator links air-conditioner | | In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit. | |
| 06 | "Auto" operation setting | 01 | "Auto" operation enabled | ※ Note 1 | | |
| | | 02 | "Auto" operation disabled | ※ Note 1 | "Auto" operation disabled | |
| 07 | Operation permission/prohibition | 01 | Disabled | ○ | | |
| | | 02 | Enabled | | Operation permission/prohibition control is enabled. | |
| 08 | External input | 01 | Level input | ○ | | |
| | | 02 | Pulse input | | | |
| 09 | Fan speed setting | 01 | Standard | Note2 | | |
| | | 02 | High speed 1 | Note2 | | |
| | | 03 | High speed 2 | Note2 | | |
| 10 | Fan remaining operation at the time of cooling | 01 | No remaining operation | ○ | After cooling stopped, no fan remaining operation | |
| | | 02 | 0.5 hours | | After cooling stopped, fan remaining operation for 0.5 hours | |
| | | 03 | 1 hour | | After cooling stopped, fan remaining operation for 1 hour | |
| | | 04 | 6 hours | | After cooling stopped, fan remaining operation for 6 hours | |
| 11 | Fan remaining operation at the time of heating | 01 | No remaining operation | ○ | After heating stopped or after heating thermostat OFF, no fan remaining operation | |
| | | 02 | 0.5 hours | | After heating stopped or after heating thermostat OFF, fan remaining operation for 0.5 hours | |
| | | 03 | 2 hours | | After heating stopped or after heating thermostat OFF, fan remaining operation for 2 hours | |
| | | 04 | 6 hours | | After heating stopped or after heating thermostat OFF, fan remaining operation for 6 hours | |
| 12 | Setting temperature offset at the time of heating | 01 | No offset | ○ | | |
| | | 02 | Setting temperature offset + 3.0 °C | | The setting temperature at the time of heating is offset by +3.0 °C. | |
| | | 03 | Setting temperature offset + 2.0 °C | | The setting temperature at the time of heating is offset by +2.0 °C. | |
| | | 04 | Setting temperature offset + 1.0 °C | | The setting temperature at the time of heating is offset by +1.0 °C. | |
| 13 | Heating fan controller | 01 | Low fan speed | ※ Note 1 | At the time of heating thermostat OFF, operate with low fan speed. | |
| | | 02 | Setting fan speed | | At the time of heating thermostat OFF, operate with the setting fan speed. | |
| | | 03 | Intermittent operation | ※ Note 1 | At the time of heating thermostat OFF, intermittently operate. | |
| | | 04 | Fan off | | At the time of heating thermostat OFF, a fan will be stopped. When the remote control thermistor is enabled, automatically set to "Fan off". Do not set at the time of the indoor unit temperature sensor. | |
| 14 | Return air temperature offset | 01 | No offset | ○ | | |
| | | 02 | Return air temperature offset +2.0 °C | | Offset the return air temperature of the indoor unit by +2.0 °C. | |
| | | 03 | Return air temperature offset +1.5 °C | | Offset the return air temperature of the indoor unit by +1.5 °C. | |
| | | 04 | Return air temperature offset +1.0 °C | | Offset the return air temperature of the indoor unit by +1.0 °C. | |
| | | 05 | Return air temperature offset -1.0 °C | | Offset the return air temperature of the indoor unit by -1.0 °C. | |
| | | 06 | Return air temperature offset -1.5 °C | | Offset the return air temperature of the indoor unit by -1.5 °C. | |
| | | 07 | Return air temperature offset -2.0 °C | | Offset the return air temperature of the indoor unit by -2.0 °C. | |

Note 1: The symbol "※" in the initial setting varies depending upon the indoor unit and the outdoor unit to be connected, and this is automatically determined as follows:

| Switch No. / Function No. | Function | Setting | Product model |
|----------------------------|--------------------------|--|--|
| SW1-6 | "FAN SPEED" button | "FAN SPEED" button prohibited | Product model whose indoor fan speed is only one step |
| | | "FAN SPEED" button enabled | Product model whose indoor fan speed is two steps or three steps |
| Remote control function 01 | Indoor unit fan speed | Fan speed: three steps | Product model whose indoor unit fan speed is three steps |
| | | Fan speed: two steps (Hi-Lo) | Product model whose indoor unit fan speed is two steps |
| Remote control function 06 | "Auto" operation setting | Fan: one step | Product model whose indoor unit fan speed is only one step |
| | | "Auto" operation enabled | Product model where "Auto" mode is selectable |
| Indoor unit function 13 | Heating fan control | "Auto" operation disabled | Product model without "Auto" mode |
| | | Low fan speed / Intermittent operation | Product model except FDUS |

Note 2: Fan speed of "High speed" setting

| Fan speed setting | Indoor unit fan speed setting | | |
|-------------------|-------------------------------|-----------|----------|
| | Hi - Mid - Lo | Hi - Mid | Hi - Hi |
| Standard | Hi - Mid - Lo | Hi - Mid | Hi - Hi |
| High speed 1・2 | UHI - Hi - Mid | UHI - Mid | UHI - Hi |

Initial setting of some indoor unit is "High speed".

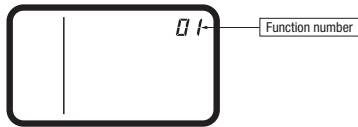
Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.

But only master indoor unit is received the setting change of indoor unit function "07 Operation permission/prohibition" and "08 External input".

7. How to set functions by button operation

- (1) Stop air-conditioner, and simultaneously press **AIR CON No.** and **MODE** buttons at the same time for over three seconds.

The function number "01" blinks in the upper right.

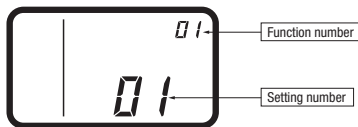


- (2) Press **TEMP▲** or **TEMP▼** button.
Select the function number.

- (3) Press **MODE** button.
Decide the function number.

- (4) [In the case of selecting the remote control function (01-06)]

- ① The current setting number of the selected function number blinks
(Example)
Function number: "01" (lighting)
Setting number: "01" (blinking)



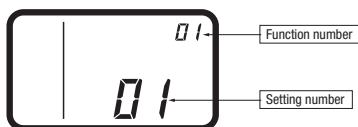
- ② Press **TEMP▲** or **TEMP▼** button.
Select the setting number.

- ③ Press **MODE** button.
The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

- Function number: "01" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



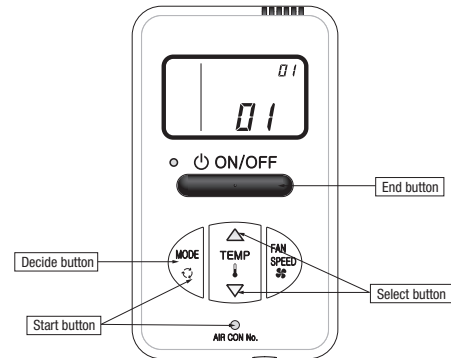
Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

- (5) Press **ON/OFF** button.
The setting is completed.

- Even if **ON/OFF** button is pressed during setting, the setting is ended. However, any details where the setting has not been completed will be ineffective.
- The setting contents are stored in the control, and even if the power failure occur, this will not be lost.

[Confirmation method for current setting]

According to the operation, the "setting number" displayed first after selecting "function number" and pressing **MODE** button is the currently set content. (However, in the case of selecting "U ALL" (all units), the setting number of the lowest number among the indoor units is displayed.)



- [In the case of selecting the indoor unit function (07-14)]

- ① "88" blinks on the temperature setting indicators.

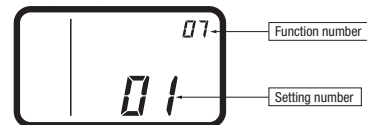
(blinking for approximately 2 to 10 seconds while data are read)



After that, the current setting number of the selected function number blinks.

(Example)

- Function number: "07" (lighting)
Setting number: "01" (blinking)



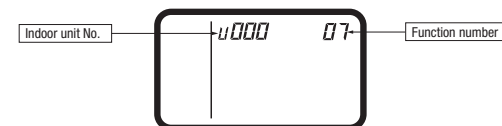
Proceed to ②.

[Note]

- a. In the case of connecting one remote control to plural indoor units, the display will be as follows:

Indoor unit No. display: "U 000" (blinking)

(Display the lowest number among the connected indoor units.)



- b. Press **TEMP▲** or **TEMP▼** button.
Select the indoor unit No. to be set.

If "U ALL" is selected, the same setting can be set to all units.

- c. Press **MODE** button.

Decide the indoor unit No.

"88" blinks on the temperature setting indicators. (blinking for 2 to 10 seconds while data is read)

When **AIR CON No.** button is pressed, go back to the indoor unit selection display (for example, "U 000" blinking).

- ② Press **TEMP▲** or **TEMP▼** button.
Select the setting number

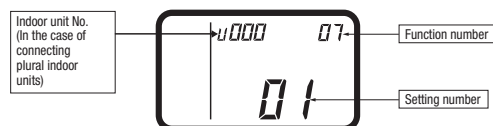
- ③ Press **MODE** button.

The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

- Indoor unit No.: "U 000" (lighting for 3 to 20 seconds)
Function number: "07" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

5.4 OA SPACER (FDTC series)

PJZ012D125

This manual describes the installation methods for OA spacer (TC-OAS-E2) and the duct joint (TC-OAD-E).

⊙ This OA spacer is designed for assembling on the indoor unit (FDTC Series), not for be using independently.

| | |
|-------------------|-------------------------------|
| Application model | FDTC15-56KXZE1 FDTC25-60VH |
|-------------------|-------------------------------|

⊙ Prepare the duct (size: ø75) and the booster fan at site.

⊙ For the installation of indoor unit, refer to the installation manual attached to the indoor unit.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.

⚠ WARNING

- **Installation should be performed by the specialist.**

If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.



- **Install the system correctly according to these installation manuals.**

Improper installation may cause explosion, injury, water leakage, electric shock, and fire.



- **Use the genuine accessories and the specified parts for installation.**

If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.



- **Turn off the power source during servicing or inspection work.**

If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.



- **Shut off the power before electrical wiring work.**

It could cause electric shock, unit failure and improper running.



⚠ CAUTION

- **Do not install and use the unit where corrosive gas (such as sulfuric acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**

It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.



① Before installation

- Confirm the following parts are included:

OA spacer (TC-OAS-E2)

| Spacer | Bracket 1 | Bracket 2 | Bracket 3 | Bracket 4 | Bolt |
|--------|-----------|-----------|-----------|-----------|------|
| | | | | | |
| 1 | 2 | 2 | 2 | 2 | 8 |

Duct joint (TC-OAD-E)

| Duct Joint | Screw | Insulation 1 (120 × 54) | Insulation 2 (40 × 60) |
|------------|-------|----------------------------|---------------------------|
| | | | |
| 1 | 6 | 1 | 2 |

② Prior study before installation (Usage limitation)

(1) Temperature conditions for OA spacer

- Adjust the temperature conditions of mixed air with outdoor air and indoor air within the usage range of suction air temperature for the air-conditioner.
- The usage temperature conditions of intake outdoor air and indoor air around the ducts are shown in the following table.
- If the temperature conditions of intake outdoor air do not meet, process the outdoor air before intaking.

| Operation mode | Usage temperature conditions | |
|----------------|--------------------------------------|--|
| | Intake outdoor air | Indoor air around the ducts |
| In heating | 5°C DB or higher | 18.5°C WB or lower and 60% RH or lower |
| In cooling | 29°C DB or lower and 80% RH or lower | 20°C DB or higher |

(2) Intake outdoor air volume

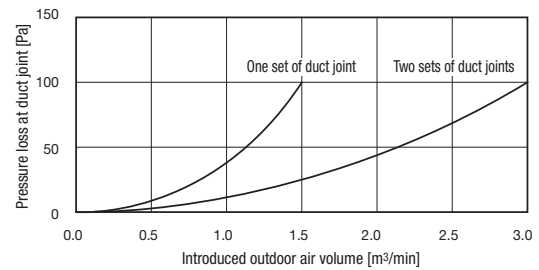
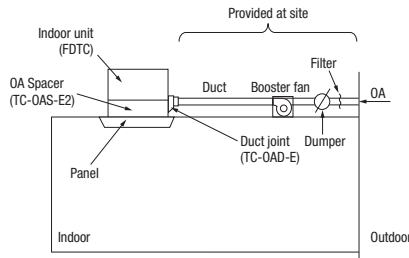
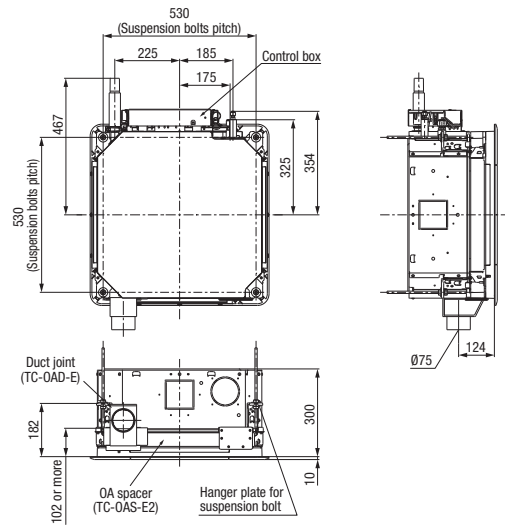
- Intake outdoor air volume is 3.0 m³/min at the maximum (when two sets of duct joints are used). Up to two sets of duct joint can be installed on OA spacer.
- In case one set of duct joint is installed: 1.5 m³/min max.
- In case two sets of duct joint is installed: 3.0 m³/min max.

(3) Selection of booster fan

- Select the booster fan based on the duct resistance plus the pressure loss at the duct joint. (See the figure)

(4) Other conditions

- Determine the capacity of air conditioner based on the calculation of air-conditioning load including the heat load of intake outdoor air.
- Install the filter for the intake outdoor air and the reverse flow prevention dumper during the duct work at site.
- Insulate the duct and duct joint in order to prevent dewing.
- Interlock the operation of booster fan with ON/OFF operation of the indoor unit. (See Section 7.)

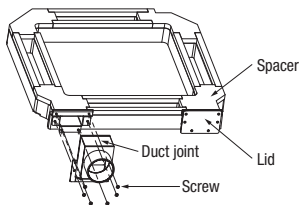


③ Installation of duct joint (TC-OAD-E) onto OA spacer

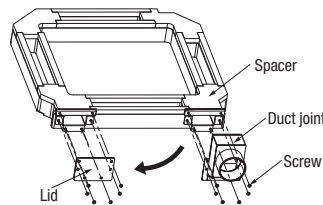
- There are two places where the duct joint can be installed.

When installing one duct joint

Install OA spacer at either one of two installation places on the duct joint.

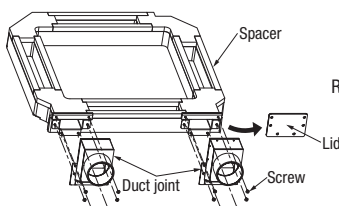


To install the duct joint, screw it in as shown at left.



When installing the duct joint at the lid side, remove the lid and reinstall it at the other end before installing the duct joint.

When installing two duct joints



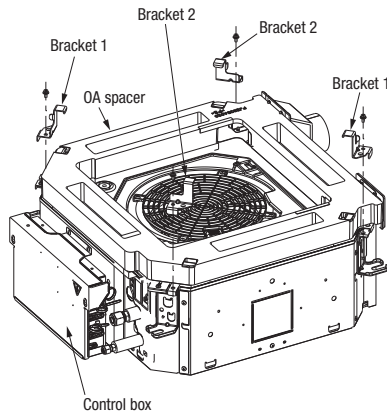
Remove the lid and then install two pieces of duct joint.

4 Installation of OA spacer on the indoor unit

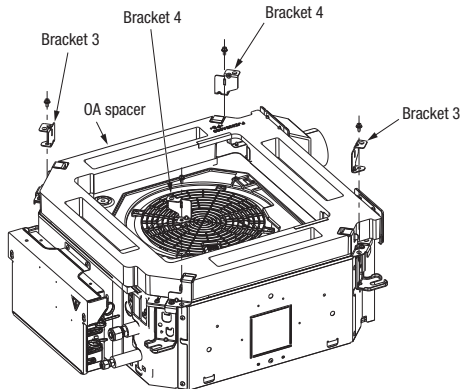
OA spacer can be installed regardless whether the indoor unit has already been hanged or not.
(It is recommended to install before hanging the unit for convenience of installation.)

1-1. When installing OA spacer before hanging the indoor unit

- ① Placing OA spacer on the indoor unit, fix the brackets 1 and 2 (2 pieces each) with bolts.
Install OA spacer in the appropriate position that the duct joint side of OA spacer becomes opposite to the control box of indoor unit (FDTC).



- ② Fix the brackets 3 and 4 (2 pieces each) with bolts.

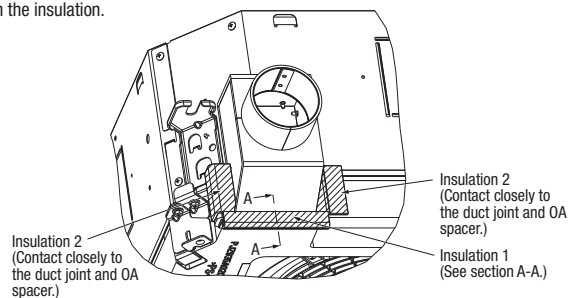
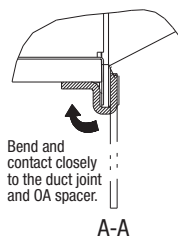


2. Applying insulation

Applying the insulation attached to duct joint set (TC-OAD-E)

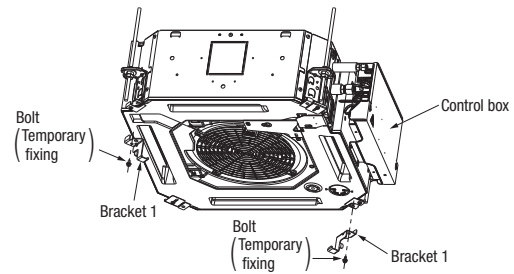
- ① Applying the insulation 1 as shown in the figure.
- ② Applying the insulation 2 as shown in the figure.

* Be sure to cover the entire surface of sheet metal of the duct joint with the insulation.

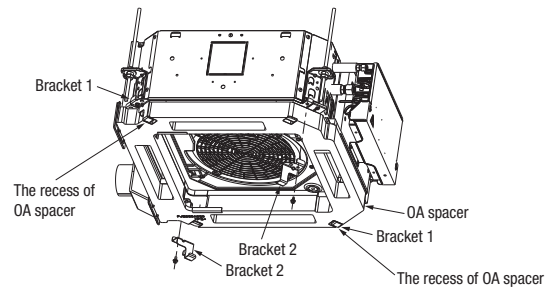


1-2. When installing OA spacer after hanging the indoor unit

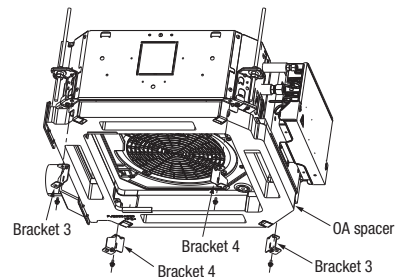
- ① After hanging the indoor unit (*), fix the bracket 1 (2 pieces) temporarily with bolt by 2 turns as shown in the figure.
* For the height (position) of hanging the indoor unit, refer to Section 5.



- ② Install OA spacer.
 - i. Install it in the way that the recess of OA spacer will fit on the bracket 1 fixed temporarily at the step ①.
 - ii. Tighten the bolt of bracket 1.
 - iii. Fix the bracket 2 with bolt. (Tighten up)



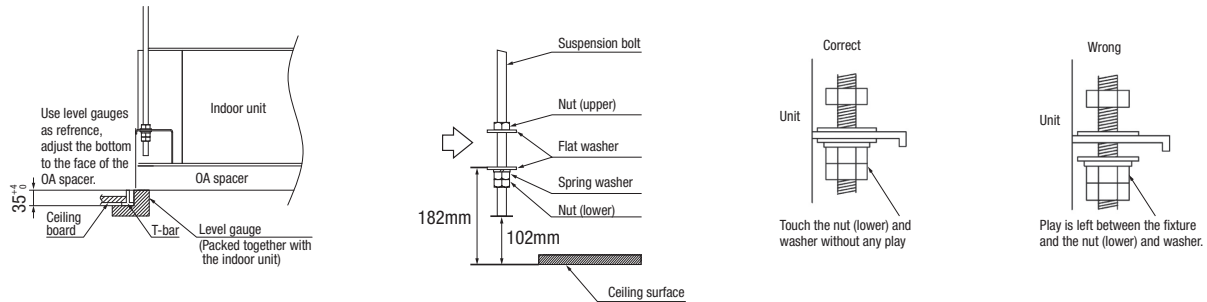
- ③ Fix the brackets 3 and 4 (2 pieces each) with bolts.



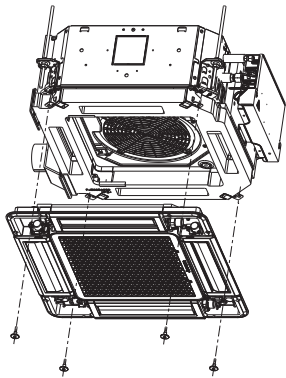
5 Installation of indoor unit

Work procedure

- This unit is designed for 2 × 2 grid ceiling.
If necessary, please detach the T bar temporarily before you install it.
If it is installed on a ceiling other than 2 × 2 grid ceiling, provide an inspection port on the control box side.
- Arrange the suspension bolt at the right position (530mm/530mm).
- Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
- Ensure that the lower end of the suspension bolt should be 102mm above the ceiling plane. Temporarily put the four lower nuts 182mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.
- Adjust the indoor unit position after hanging it by inserting the level gauge (Packed together with the indoor unit.) attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. (*) In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer.
* Use the level gauge only when OA spacer has been installed before hanging (④ 1-1 only).



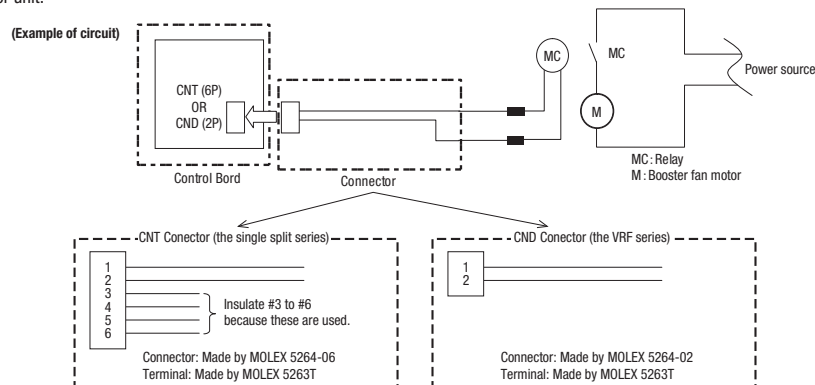
6 Installation of panel



Tighten the panels to the brackets 3 and 4 with bolts.
For further details, refer to the installation manual of panel.
(Caution) Connect the connector of lower motor within the control box.

7 Interlocking with the indoor unit fan

- Connect the Single split series and the VRF series to CNT on the indoor PCB and to CND on the indoor PCB respectively. If a ventilation device is connected, be geared with the motion of indoor device (ON: DC12V output, OFF: 0V output), the ventilation device is operated/stopped.
- Set it at "VENT LINK" by selecting "No. 11 VENT LINK SET" from the functional setting by remote control. For details, refer to the "ELECTRIC WIRING WORK INSTRUCTION" of indoor unit.



(Caution) Although the indoor unit fan stops during the defrosting or oil return operation, the booster fan is operating.
Use a total heat exchanger, if necessary.

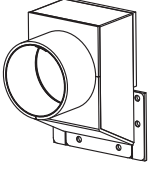
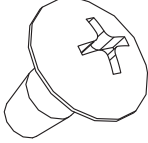


5.5 DUCT JOINT (FDTC series)

PJZ012D073

- This product is used by assembling on the spacer (TC-OAS-E2)

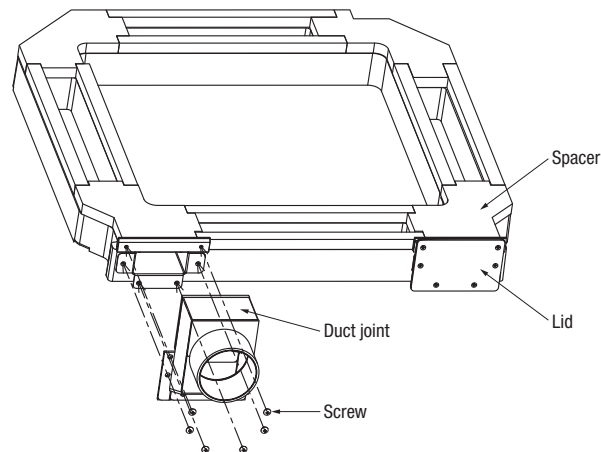
1. Before installation

- Confirm the following parts are included:

| Duct joint | Screw | Insulation 1 (120 × 54) | Insulation 2 (40 × 60) |
|---|---|---|---|
|  |  |  |  |
| 1 | 6 | 1 | 2 |

2. Regarding the use of this product

- Fix the product on the spacer (TC-OAS-E2) as shown below.
- For the installation method, refer to the installation manual of the spacer.



5.6 FILTER KIT (FDUM series)

PJZ012D076A 

This manual contains installation points and operating instructions for the filter kit manufactured by MHI. Carry out the work following the instructions below.

This manual also contains information on the usage after installation, so keep this manual properly with USER'S MANUAL provided with the indoor unit.

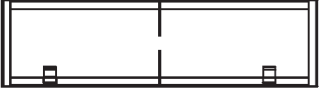
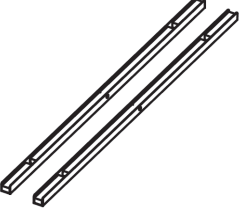
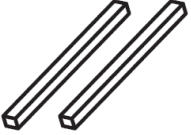



CAUTION

- After unpacking, carry out this work on the ground.
- Do not carry out the work during operation, or there is a danger of being entangled in the rotating parts and getting injured.
- Clean the air filter regularly.
- Be sure to entrust qualified serviceman to performance on the air filter.
- Be sure to cut off the power and stop the unit before performing maintenance.

1. Table of filter kit parts No. and corresponding object models

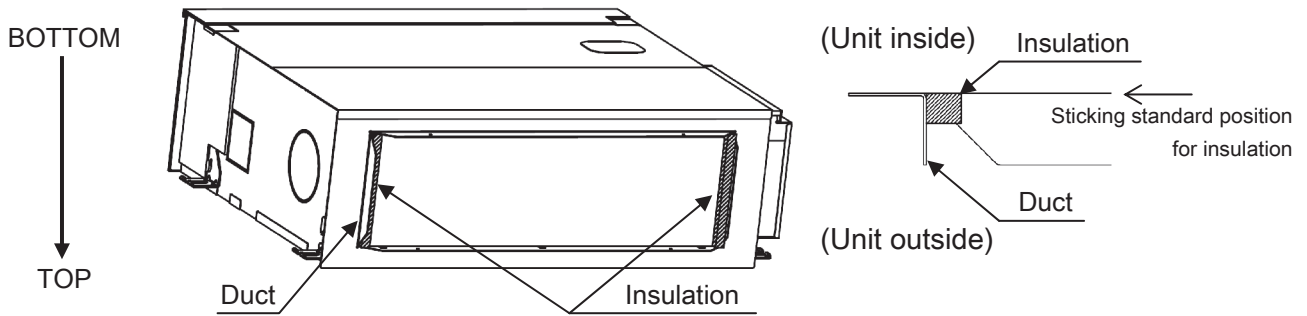
| | Small model | Medium model | Large model |
|-------------|-------------|--------------|-------------|
| Single type | 40, 50 | 60, 71 | 100 - 140 |
| Multi type | 22 - 56 | 71, 90 | 112 - 160 |
| Filter Kit | UM-FL1EF | UM-FL2EF | UM-FL3EF |

2. Parts list of filter kit

| Filter | Rail | Insulation |
|---|---|--|
|  |  |  |
| 1 pc. | 2 pcs. | 2 pcs. |
| Bracket | Parts set(screw) | |
|  |  |  |
| 1 pc. | (small and medium model : 5 pcs.) | (large model : 7 pcs.) |
| | 1 pc. | |

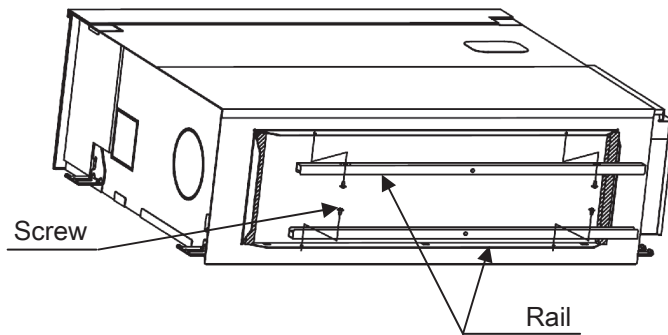
3. Installation Points

(1) Stick the insulation on both inner sides of the duct, leaving no space up and down.

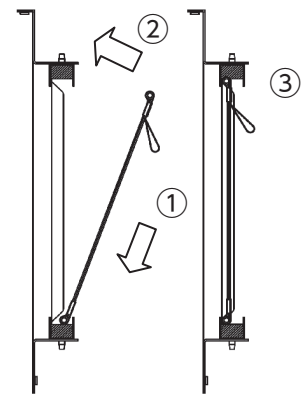
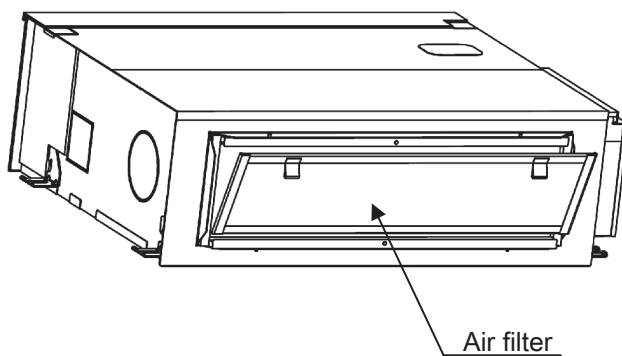


(*) After unpacking, bottom side of the unit is located at the upper side.

(2) Install the rail on both inner sides of the duct with the screw.

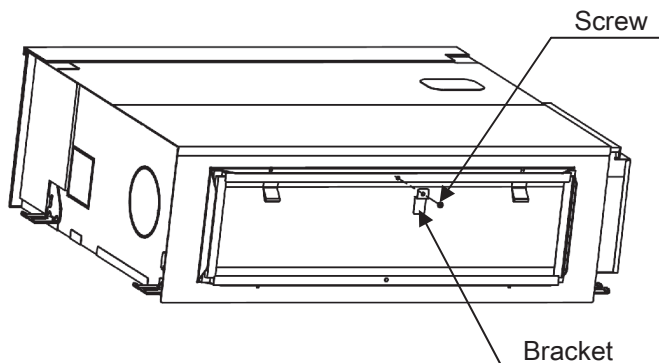


(3) Install the air filter on the rails.



Installation procedure

(4) Install the bracket on the rail with the screw.



(**) When the unit is installed, bottom side of the unit is located at the lower side.

5.7 BASE HEATER KIT (CW-H-E1)

PCZ012D007A 


Model Name: CW-H-E1

WARNING

- Follow the instruction and installation manual for outdoor unit when installing the heater.
- This heater must be installed by authorized personnel.
- Turn off the power source when the kit is installed.
- Failure to follow the above will result in serious accident like electrical shock or fire.

AREAS TO BE APPLIED

This kit is to be used in an area where the lowest temperature drops below zero.

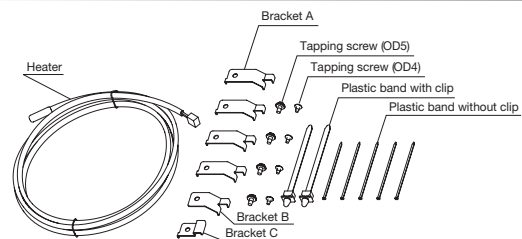
 **Caution:** In case the heater is not applied on the unit which is installed in an area mentioned above, it may be regarded as installation failure and warranty may not be given.

CAUTION

- Follow the law or regulation of the country where it is installed.
- Do not alter the heater.
- Lay down the heater so that the edge of the sheet metal does not damage the heater.
- Bending radius must be bigger than 25mm.
- Do not use the heater near flammable substances.
- Be sure to check the electrical insulation before use.
- Be sure to check the drain is not trapped by the heater.
- Do not leave refrigerant oil on the base.

Components

- Heater : 1pc
- Bracket A : 4pcs
- Bracket B : 1pcs
- Bracket C : 1pcs
- Tapping screw (OD5) : 4pcs
- Tapping screw (OD4) : 4pcs
- Plastic band with clip : 2pcs
- Plastic band : 5pcs

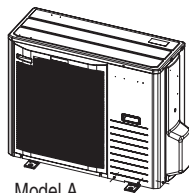


Applicable model

This heater kit is applicable for 3 different models.

<Model A>

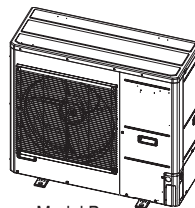
Single fan with plastic fan guard model



Model A

<Model B>

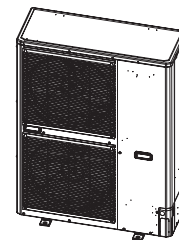
Single fan model



Model B

<Model C>

Double fan model

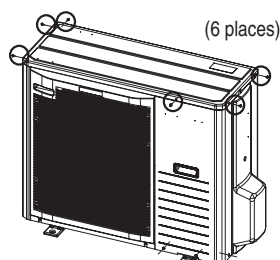


Model C

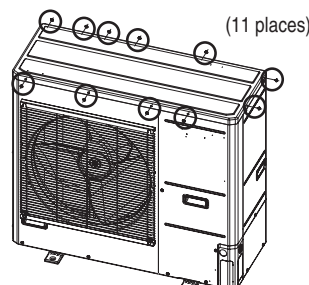
Installation procedure

Step 1

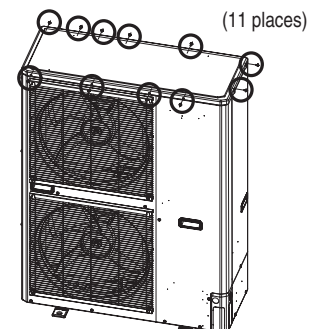
1. Remove the top panel of the outdoor unit.



Model A

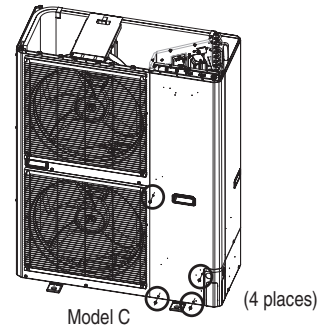
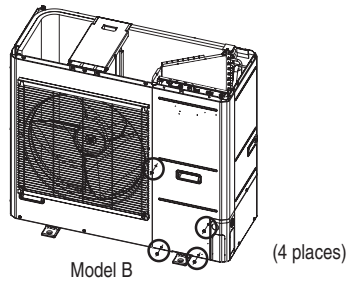
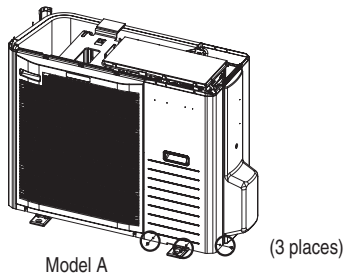


Model B

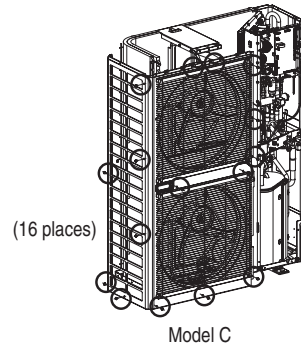
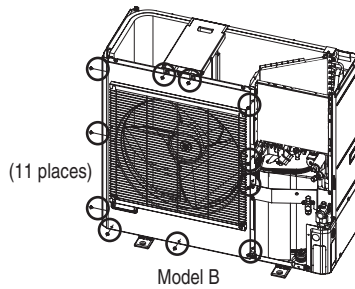
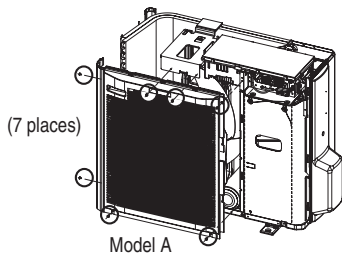


Model C

Step 2 2. Remove the service panel.

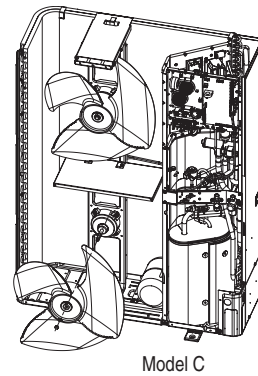
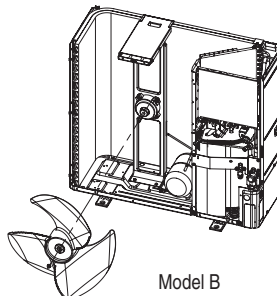
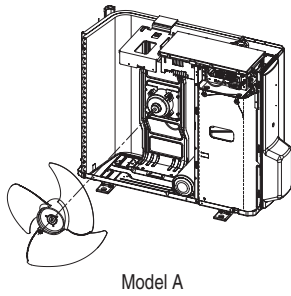


Step 3 3. Remove the front panel.
Pull the panel straightforward so that the panel doesn't touch the fan blade.

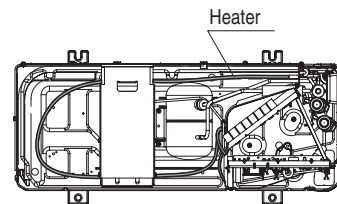
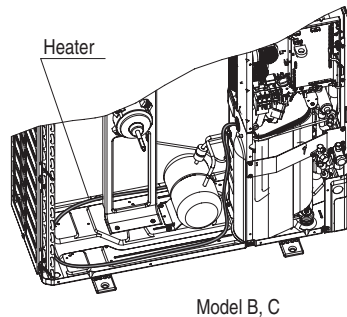
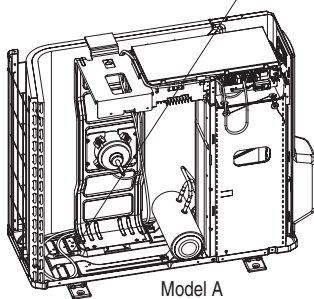
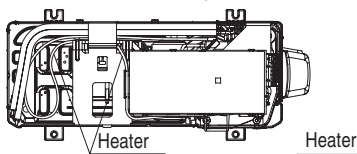


Step 4 4. Remove the fan blade if necessary. **<Note>**

Do not rotate the axis of fan motor when removing the fan blade. It may cause malfunction of the fan motor.

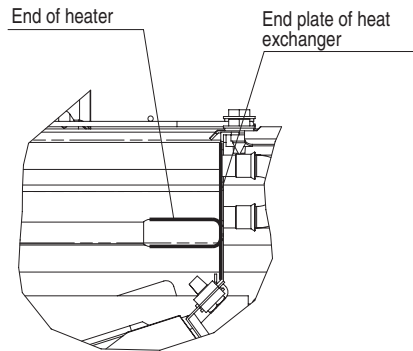


Step 5 5. Lay down the drain pan heater on the base.
For model A, put the cables rear the fan motor bracket.



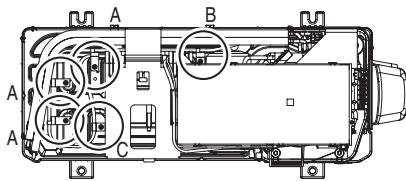
Step 6

6. Put the heater underneath the heat exchanger and align the end of heater with the end plate of heat exchanger.

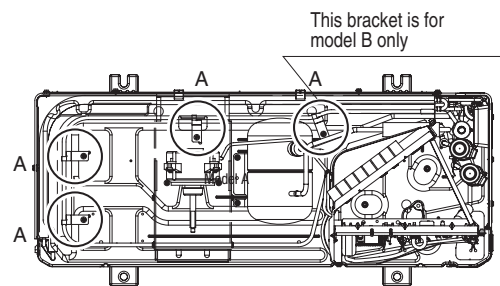


Step 7

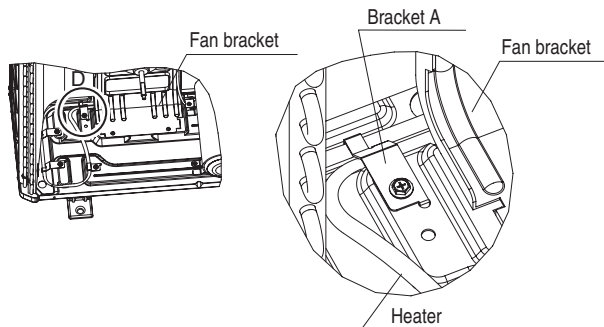
7. Fix the heater with brackets.



For model A, use 3 pcs of bracket A, 1pc of bracket B and C. Fix bracket A and C with the attached screw (OD4), and fix bracket B with the removed screw which is fastened at the same place.

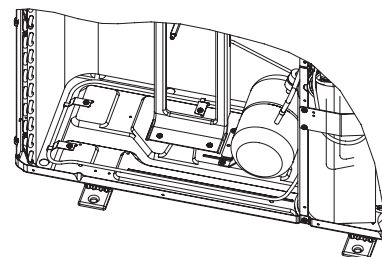


For model B and C, fix bracket A with the attached screw (OD5).



Model A

Detail view D



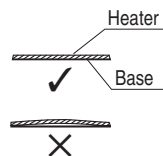
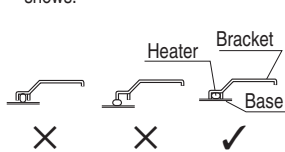
Model B, C

<Note for model A>

- 1) Put the end of heating part just after the bracket C.
- 2) Fix the incoming and out going cable with one bracket A on the left of fan bracket as figure shows.

<Note>

- 1) Fix the heater so that the bracket doesn't pinch the heater as figure shows.
- 2) Place the heater so as to touch the base completely.
- 3) In bending position, twist the heater to make it easier to bend, and get back to be able to fix it with bracket.
- 4) Be careful not to be injured by aluminum fin when fixing the heater with screw.



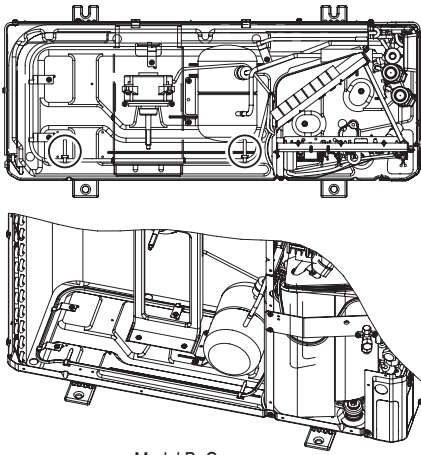
Step 8

8. Insert the plastic band with clip on the designated place (2 places), and fix the heater. (Model B,C only)

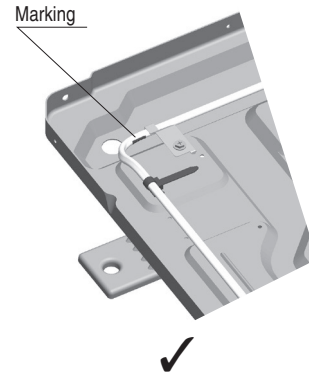
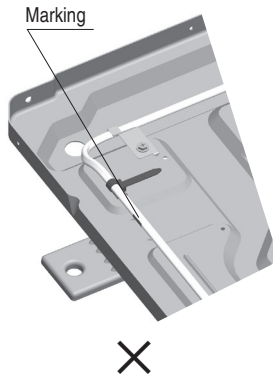
<Note>

1) Do not fasten the heating part with the plastic band. There is a marking on the end of heating part.

2) When the heater is laid down correctly, the end of heating part comes to the corner of the base.



Model B, C



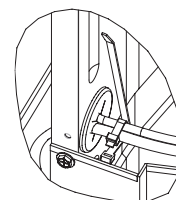
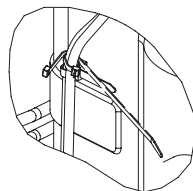
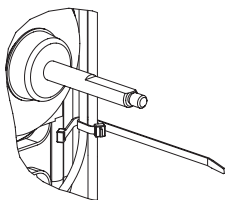
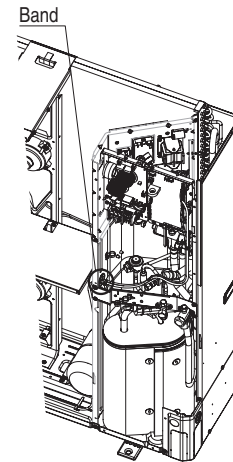
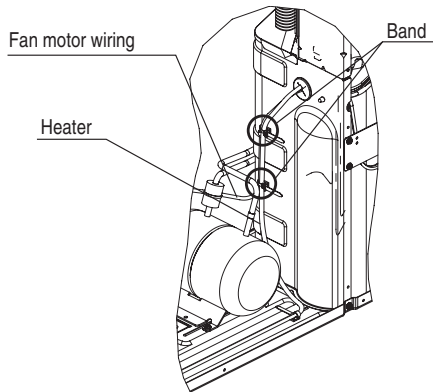
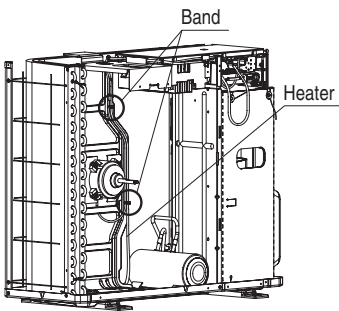
Step 9

9. Lay down the wiring on the same route of fan motor wiring, and fix the wire with attached plastic band at the same place where the fan motor wiring is banded.

Model A

Model B

Model C



<Note>

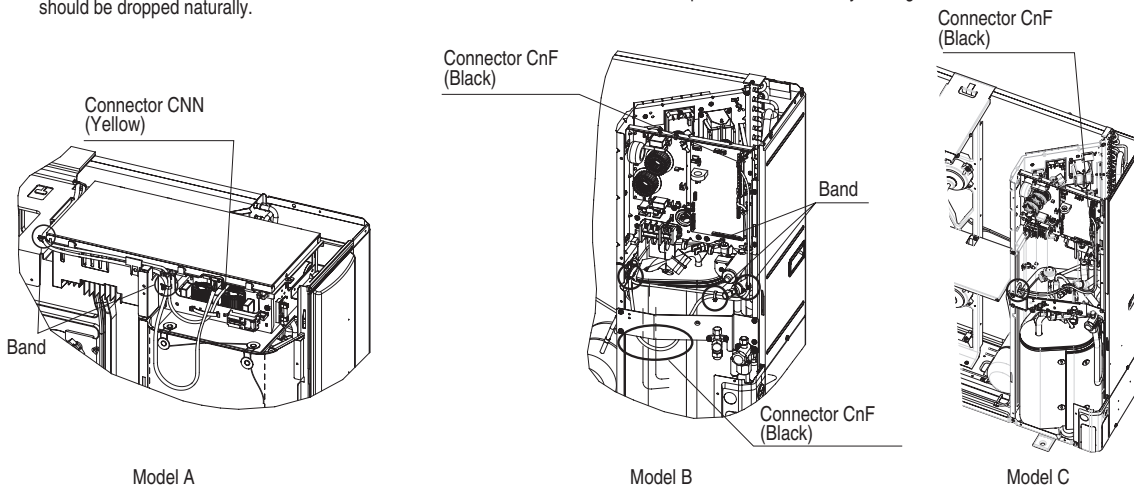
Fan motor wiring is banded on the bracket so that it doesn't loosen. Do not loose the band for the motor wiring to band the heater wire together but use the attached plastic band.

Step 10

10. Insert the connector to the port (Model A: CNN, Model B,C:CNF) on the PCB, and fix the wire with bands. Excess part of the wire should be dropped naturally.

<Note>

Be sure to cut the excess part of plastic band. It may cause abnormal noise when hit by fan blade or misassembly of panels. Do not bundle excess part of the wire. It may damage the heater.

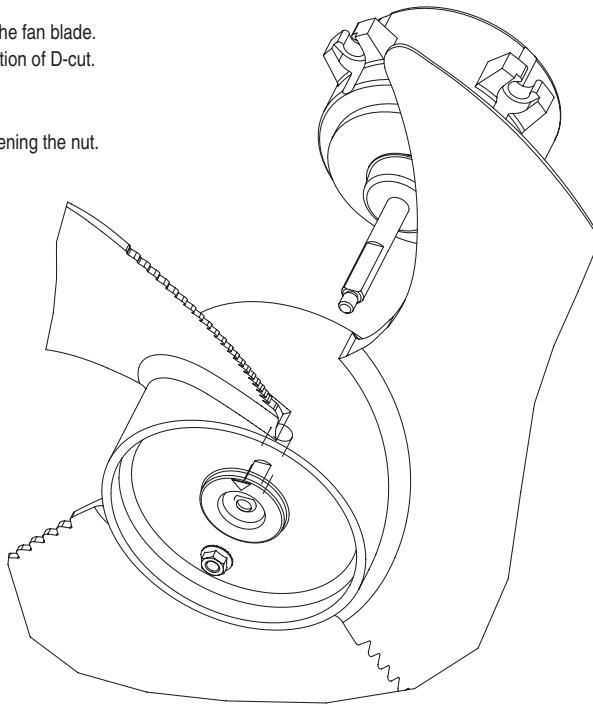


Step 11

11. Reassemble the fan blade.
Take care to align the D-cut of motor shaft and the fan blade.
▽ mark on the center of the fan shows the position of D-cut.

<Note>

1. Tightening torque of the nut is 4.0-4.9 N·m.
2. Do not rotate the axis of fan motor when tightening the nut.
It may cause malfunction of the fan motor.



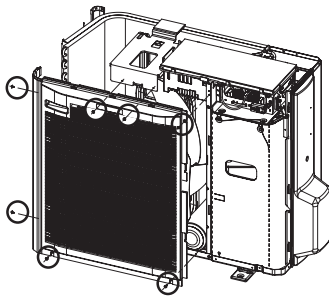
<Note>

- This heater should have bending radius of at least 25mm including non-heating part. Do not bundle the excess part of the wire. It may cause disconnection of the heater or insufficient capacity.
- Be sure to prevent the heater from touching any refrigerant piping.
Especially, pay close attention not to make it touch with pipes which are close to the wiring route such as suction pipe, check valve and check joint.

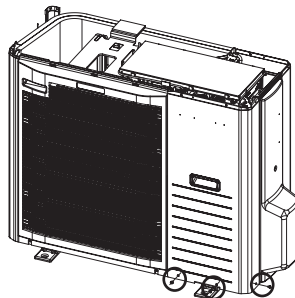
Step 12

12. Reassemble the panels.

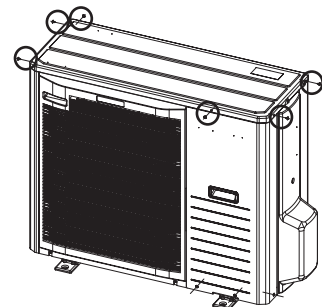
[Model A]



Front panel

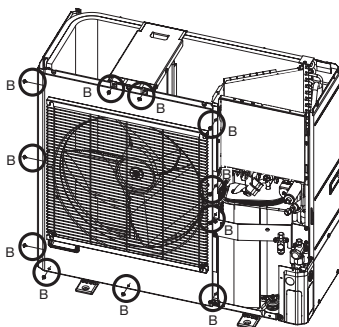


Service panel

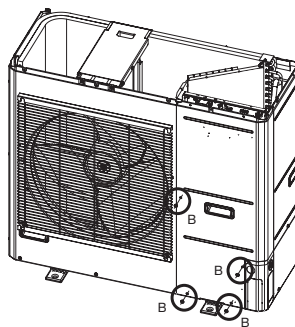


Top panel

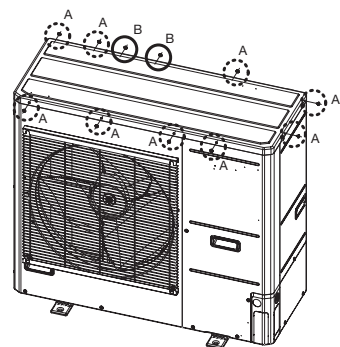
[Model B]



Front panel

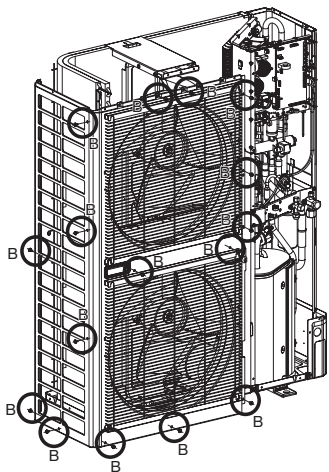


Service panel

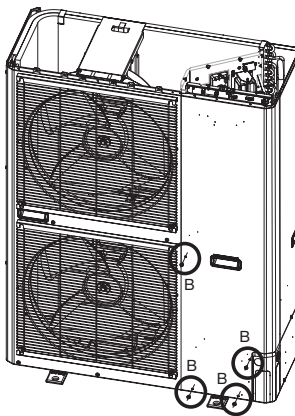


Top panel

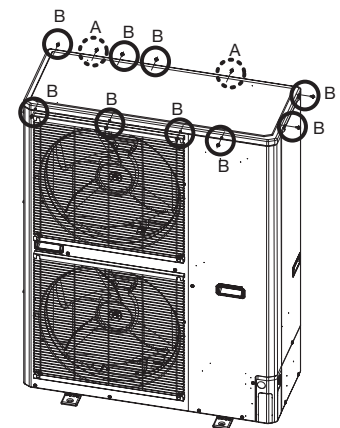
[Model C]



Front panel



Service panel



Top panel

<Note>

- 1) When reassembling the service panel, take care not to damage the front panel with the edge.
- 2) Top panel of model B and model C is fixed with two different screws.
Be sure to use correct screw as figure shows.



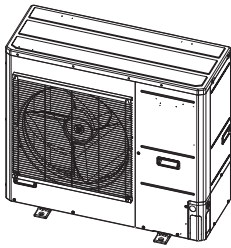
A



B

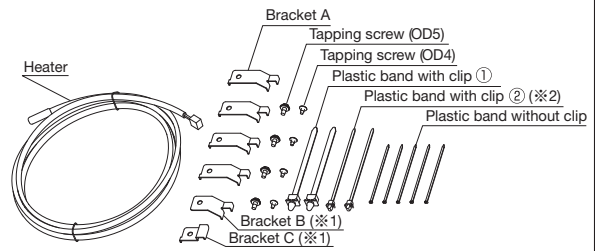
Applicable model

Model name : FDC100VNP
 <Model D>
 Single fan model



Components

- Heater : 1pc
- Bracket A : 4pcs
- Bracket B : 1pcs (※1)
- Bracket C : 1pcs (※1)
- Tapping screw (OD5) : 4pcs
- Tapping screw (OD4) : 4pcs
- Plastic band with clip ① : 2pcs
- Plastic band with clip ② : 2pcs (※2)
- Plastic band : 5pcs

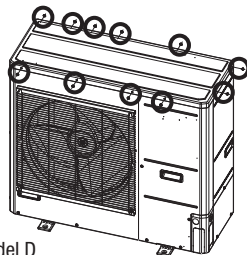


※1 This part is not used for FDC 100VNP
 ※2 These parts are equipped with FDC 100VNP as accessory part

Installation procedure

Step 1

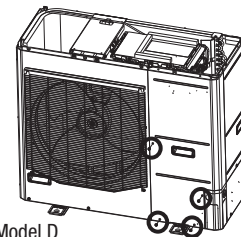
1. Remove the top panel of the outdoor unit (11 pcs of tapping screws).



Model D

Step 2

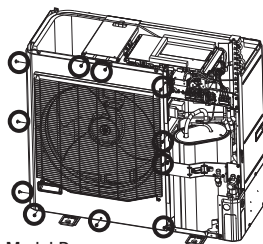
2. Remove the service panel (4 pcs of tapping screws).



Model D

Step 3

3. Remove the front panel (11 pcs of tapping screws). Pull the panel straightforward so that the panel doesn't touch the fan blade.



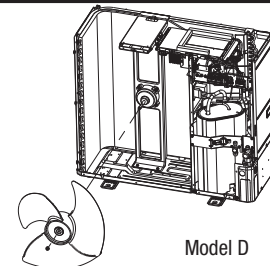
Model D

Step 4

4. Remove the fan blade if necessary.

<Note>

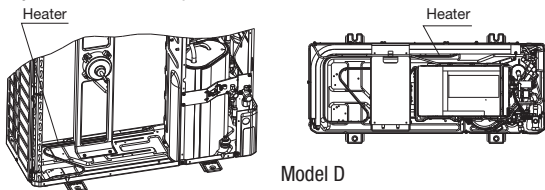
Do not rotate the axis of fan motor when removing the fan blade. It may cause malfunction of the fan motor.



Model D

Step 5

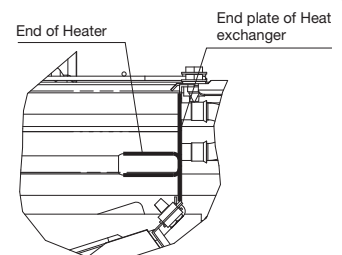
5. Lay down the drain pan heater on the base.



Model D

Step 6

6. Put the heater underneath the heat exchanger and align the end of heater with the end plate of heat exchanger.

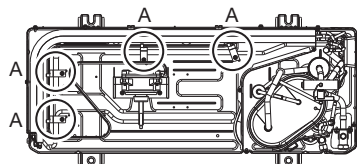


Step 7

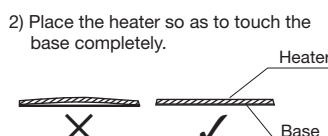
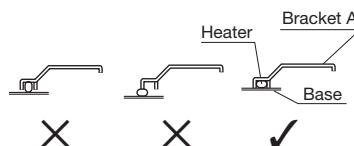
7. Fix the heater with 4 brackets.

<Note>

- 1) Fix the heater so that the bracket doesn't pinch the heater as figure shows.
- 2) Place the heater so as to touch the base completely.
- 3) In bending position, twist the heater to make it easier to bend, and get back to be able to fix it with bracket.
- 4) Be careful not to be injured by aluminum fin when fixing the heater with screw.



Model D



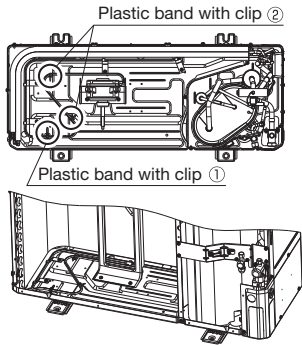
Step 8

8. Insert the plastic band with clip on the designated place (3 places), and fix the heater.

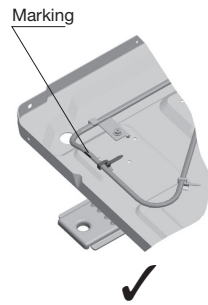
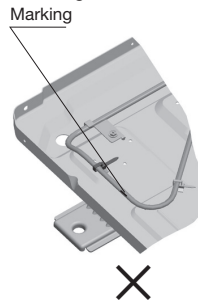
<Note>

1) Do not fasten the heating part with the plastic band. There is a marking on the end of heating part.

2) When the heater is laid down correctly, the end of heating part comes to the corner of the base.

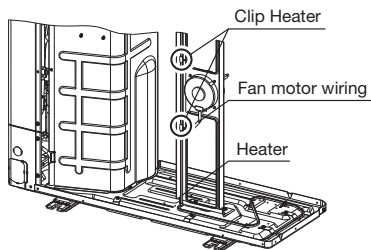


Model D



Step 9

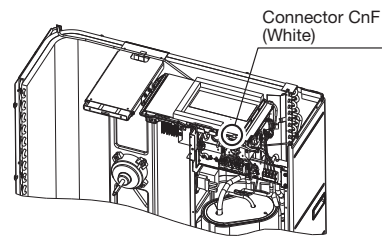
9. Lay down the wiring on the same route of fan motor wiring.



Model D

Step 10

10. Insert the connector to the port CnF (White).



Model D

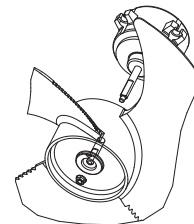
Step 11

11. Reassemble the fan blade.

Take care to align the D-cut of motor shaft and the fan blade. ▽ mark on the center of the fan shows the position of D-cut.

<Note>

1. Tightening torque of the nut is 4.0-4.9 N·m.
2. Do not rotate the axis of fan motor when tightening the nut. It may cause malfunction of the fan motor.

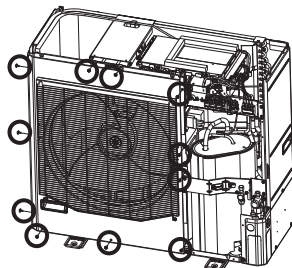


Step 12

12. Reassemble the panels.

1) Front panel

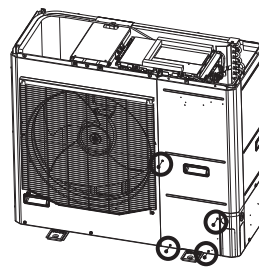
Use screw B for all places.



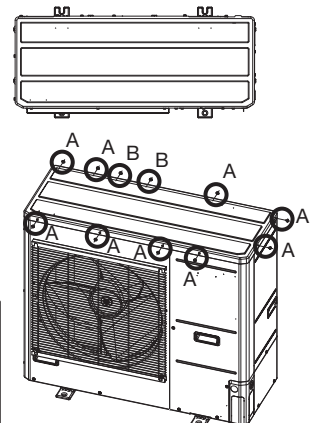
Model D

2) Service panel

Use screw B for all places.



3) Top panel



<Note>

- 1) When reassembling the service panel, take care not to damage the front panel with the edge.
- 2) There are two different length of screws. Be sure to use correct screw.
Long screw A: used for Top panel other than fixing fan bracket.
Short screw B: other place than A.



<Note>

- This heater should have bending radius of at least 25mm including non-heating part. Do not bundle the excess part of the wire. It may cause disconnection of the heater or insufficient capacity.
- Be sure to prevent the heater from touching any refrigerant piping. Especially, pay close attention not to make it touch with pipes which are close to the wiring route such as suction pipe, check valve and check joint.

5.8 INTERFACE KIT (SC-BIKN2-E)

※ When RC-EX3A is connected, please use SC-BIKN2-E by all means.

RKZ012A099

Accessories included in package

Be sure to check all the accessories included in package.

| No. | Part name | Quantity |
|-----|---|----------|
| ① | Indoor unit's connection cable (cable length: 1.8m) | 1 |
| ② | Wood screws (for mounting the interface: ø4x25) | 2 |
| ③ | Tapping screws (for the cable clamp and the interface mounting bracket) | 3 |
| ④ | Interface mounting bracket | 1 |
| ⑤ | Cable clamp (for the indoor unit's connection cable) | 1 |
| ⑥ | CnT terminal connection cable (total cable length: 0.5m) | 1 |

Safety precautions

Before use, please read these Safety precautions thoroughly before installation.

- All the cautionary items mentioned below are important safety related items to be taken into consideration, so be sure to observe them at all times.

Warning Incorrect installation could lead to serious consequences such as death, major injury or environmental destruction.

- Symbols used in these precautions

! Always go along these instruction.

- After completed installation, carry out trial operation to confirm no anomaly, and ask the user to keep this installation manual in a good place for future reference.

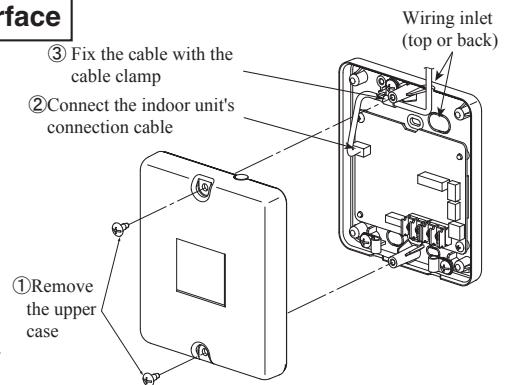
Warnings



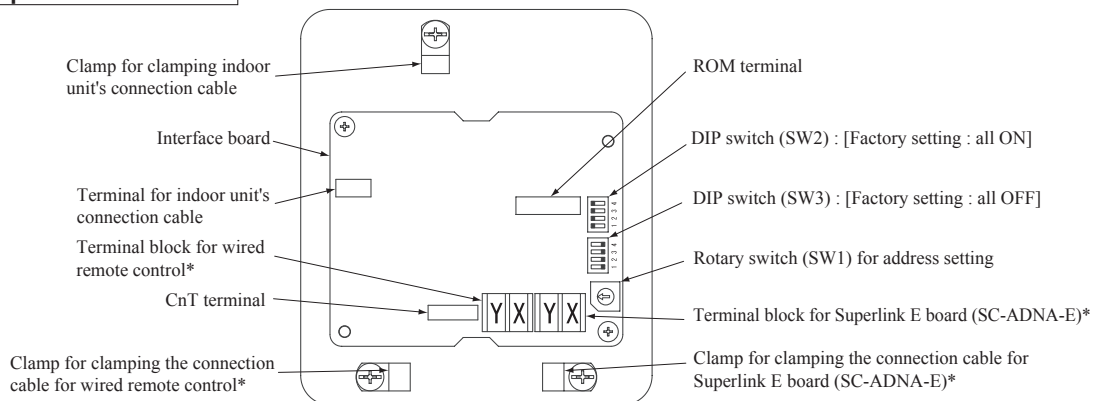
- **Installation must be carried out by a qualified installer.**
If you install it by yourself, it may cause an electric shock, fire and personal injury, as a result of a system malfunction.
- **Install it in full accordance with the installation manual.**
Incorrect installation may cause an electric shock, fire and personal injury.
- **Electrical work must be carried out by a qualified electrician in accordance with the technical standard for electrical equipment, the indoor wiring standard and this installation manual.**
Incorrect installation may cause an electric shock, fire and personal injury.
- **Use the specific cables for wiring. And connect all the cables to terminals or connectors securely and clamp them with cable clamps in order for external forces not to be transmitted to the terminals directly.**
Incomplete connection may cause malfunction, and lead to heat generation and fire.
- **Use the original accessories and specified components for installation.**
If the parts other than those prescribed by us are used, it may cause an electric shock, fire and personal injury.

Connecting the indoor unit's connection cable to the interface

- ① Remove the upper case of the interface.
 - Remove 2 screws from the interface casing before removal of upper casing.
- ② Connect the indoor unit's connection cable to the interface.
 - Connect the connector of the indoor unit connection cable to the connector on the interface's circuit board.
- ③ Fix the indoor unit's connection cable with the cable clamp.
 - Cable can be brought in from the top or from the back.
 - Cut out the punch-outs for the connection cables running into the casing with cutter.
- ④ Connect the indoor unit's connection cable to the indoor control PCB.
 - Connect the indoor unit's connection cable to the indoor control PCB securely.
 - Clamp the connection cable to the indoor control box securely with the cable clamp provided as an accessory.
 - Regarding the cable connection to the indoor unit, refer to the installation manual for indoor unit.



Name of each part of the interface



*Either the connection cables of Superlink E board (SC-ADNA-E) or of wired remote control is connectable.

| Switch | Setting | Function | Switch | Setting | Function |
|--------|---------|--------------------------------|--------|---------|--|
| SW2-1 | ON** | CnT level input | SW2-3 | ON** | External input (CnT input) |
| | OFF | CnT pulse input | | OFF | Operation permission/prohibition (CnT input) |
| SW2-2 | ON** | Wired remote control : Enable | SW2-4 | ON** | Annual cooling : Enable*** |
| | OFF | Wired remote control : Disable | | OFF | Annual cooling : Disable*** |

** Factory setting

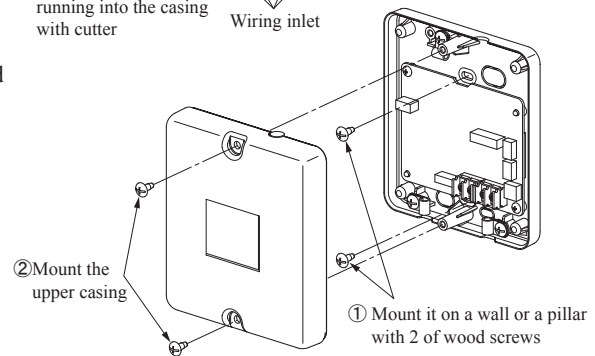
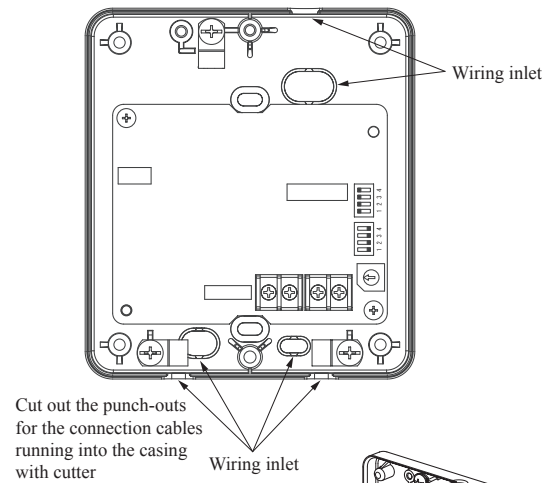
*** Indoor fan control at low outdoor air temperature in cooling

Installation of the interface

- Install the interface within the range of the connection cable length (approximately 1.3m) from the indoor unit.
 - Be sure not to extend the connection cable on site. If the connection cable is extended, malfunction may occur.
 - Fix the interface on the wall, pillar or the like.
- Don't install the interface and wired remote control at the following places.
- Places exposed to direct sunlight
 - Places near heating devices
 - High humidity places
 - Surfaces where are enough hot or cold to generate condensation
 - Places exposed to oil mist or steam directly
 - Uneven surface

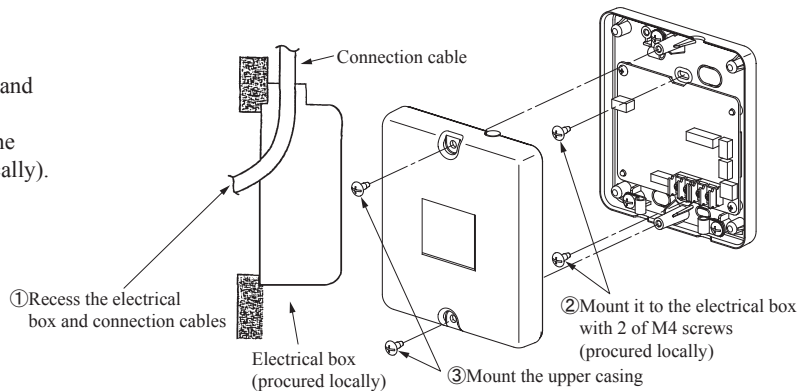
Mounting the interface directly on a wall

- ① Mount the lower casing of the interface on a flat surface with wood screws provided as standard accessory.
- ② Mount the upper casing.



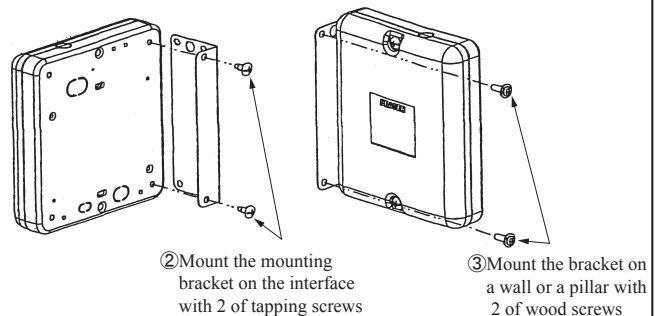
Recessing the interface in the wall

- ① Recess the electrical box (procured locally) and connection cables in the wall.
- ② Mount the lower casing of the interface to the electrical box with M4 screws (procured locally).
- ③ Mount the upper casing.



Mounting the interface with the mounting bracket

- ① Mount the upper casing.
- ② Mount the mounting bracket to the interface with tapping screws provided as standard accessory.
- ③ Mount the mounting bracket on wall or the like with wood screws provided as standard accessory.



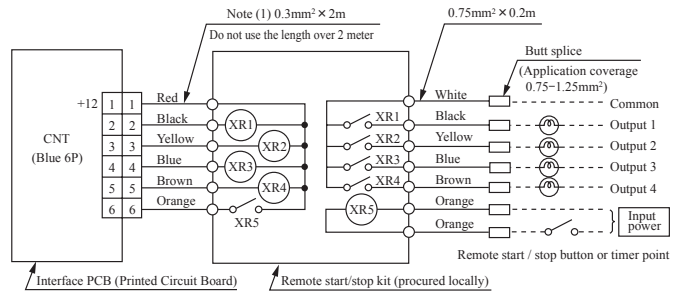
Installation check items

- Are the connection cables connected securely to the terminal blocks and connectors?
- Are the thickness and length of the connection cables conformed with the standard?

Functions of CnT connector

It is available to operate the air-conditioner and to monitor the operation status with the external control unit (remote display) by sending the input/output signal through CnT connector on the indoor control PCB.

- ① Connect a external remote control unit (procured locally) to CnT terminal.
- ② In case of the pulse input, switch OFF the DIP switch SW2-1 on the interface PCB.
- ③ When setting operation permission/prohibition mode, switch OFF the DIP switch SW2-3 on the interface PCB.



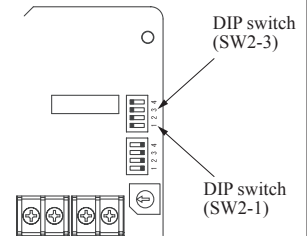
| Input/Output | Function | Output signal | | Content |
|--------------|-----------------------------|-----------------|--------|----------------------------------|
| | | Relay | ON/OFF | |
| Output 1 | Operation output | XR ₁ | ON | During air-conditioner operation |
| Output 2 | Heating output | XR ₂ | ON | During heating operation |
| Output 3 | Compressor operation output | XR ₃ | ON | During compressor running |
| Output 4 | Malfunction output | XR ₄ | ON | During anomalous stop |

- XR₁₋₄ are for the DC 12V relay
- XR₅ is a DC 12/24V or AC 220-240V relay
- CnT connector (local) maker, model

| | | |
|-----------|-------|---------|
| Connector | Molex | 5264-06 |
| Terminals | Molex | 5263T |

| Input/Output | Function | SW2-1 | | SW2-3 | | Air-conditioner | Operation by remote control | | | |
|--------------|------------------------|---------|-------------|--------------|-----------------|------------------|---|------------------|-------------|-------------|
| | | Setting | | Input signal | | | | | | |
| | | | | Level/Pulse | XR ₅ | | | | | |
| Input | External control input | ON* | Level input | ON* | Level | OFF→ON ON→OFF | External input | ON OFF | Allowed | |
| | | | | OFF | Level | OFF→ON ON→OFF | Operation permission Operation prohibition | OFF OFF | | Not allowed |
| | | OFF | Pulse input | ON* | Pulse | OFF→ON | External input | OFF→ON ON→OFF | ON OFF | |
| | | | | OFF | Level | OFF→ON ON→OFF | Operation permission Operation prohibition | ON OFF | Not allowed | |

* Factory setting



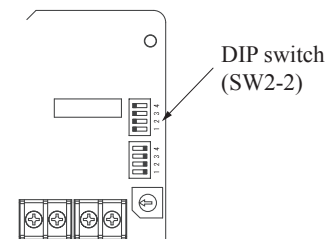
In case of the remote control (RC-EX3 or later model), the external outputs (1 – 4) and the external input can be changed using the function setting of remote control. For the setting method, refer to the installation manual. Also refer to the technical manual to know how it is adapted to the function setting for the external outputs and input, at the indoor unit side.

Connection of Superlink E board

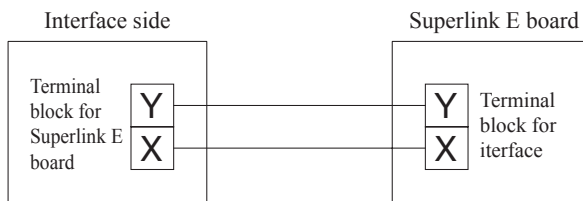
Regarding the connection of Superlink E board, refer to the installation manual of Superlink E board.

For electrical work, power source for all of units in the Superlink system must be turned OFF.

- ① Switch ON the DIP switch SW2-2 (Factory setting: ON) on the interface PCB.
Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.



- ② Wiring connection between the interface and the Superlink E board.



| No. | Names of recommended signal wires |
|-----|---|
| 1 | Shielded wire |
| 2 | Vinyl cabtyre round cord |
| 3 | Vinyl cabtyre round cable |
| 4 | Vinyl insulated wire vinyl sheathed cable for control |

Within 200 m 0.5 mm² × 2 cores
 Within 300 m 0.75 mm² × 2 cores
 Within 400 m 1.25 mm² × 2 cores
 Within 600 m 2.0 mm² × 2 cores

- ③ Clamp the connection cables with cable clamps.

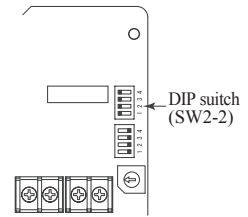
Connection of wired remote control

Regarding the connection of wired remote control, refer to the installation manual of wired remote control.

- ① Switch ON the DIP switch SW2-2 (Factory setting : ON) on the interface PCB.

Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.

- ② Wiring connection between the interface and the wired remote control.



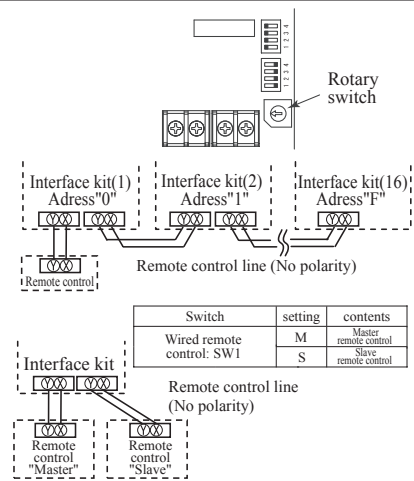
Installation and wiring of wired remote control

- Install the wired remote control with reference to the attached installation manual of wired remote control.
 - 0.3mm² × 2 cores cable should be used for the wiring of wired remote control.
 - Maximum length of wiring is 600m.
If the length of wiring exceeds 100m, change the size of cable as mentioned below.
100m-200m: 0.5mm² × 2 cores, 300m or less: 0.75mm² × 2 cores, 400m or less: 1.25mm² × 2 cores, 600m or less: 2.0mm² × 2 cores
However, cable size connecting to the terminal of wired remote control should not exceed 0.5mm². Accordingly if the size of connection cable exceeds 0.5mm², be sure to downsize it to 0.5mm² at the nearest section of the wired remote control and waterproof treatment should be done at the connecting section in order to avoid contact failure.
 - Don't use the multi-core cable to avoid malfunction.
 - Keep the wiring of wired remote control away from grounding (Don't touch it to any metal frame of building, etc.).
 - Connect the connection cables to the terminal blocks of the wired remote control and the interface securely (No polarity).
- ③ Clamp the connection cables with cable clamps.

Control of multiple units by a single wired remote control

Multiple units (up to 16) can be controlled by a single wired remote control. In this case, all units connected with a single wired remote control will operate under the same mode and same setting temperature.

- ① Connect all the interface with 2 cores cables of wired remote control line.
- ② Set the address of indoor unit for remote control communication from "0" to "F" with the rotary switch SW1 on the interface PCB.
- ③ After turning the power ON, the address of indoor unit can be displayed by pressing [AIR CON No.] button on the wired remote control.
Make sure all indoor units connected are displayed in order by pressing [▲] or [▼] button.



Master/Slave setting wired when 2 of wired remote control are used

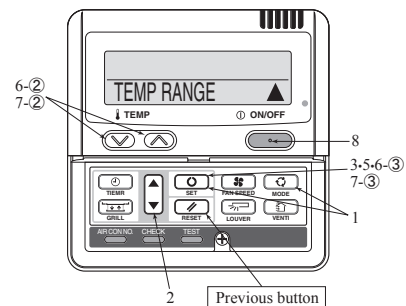
Maximum two wired remote control can be connected to one indoor unit (or one group of indoor units)

- ① Set the DIP switch SW1 on the wired remote control to "Slave" for the slave remote control. (Factory setting : Master)
○ Caution : Remote control sensor of the slave remote control is invalid.

- When using the wireless remote control in parallel with the wired remote control; Since temperature setting range of wired remote control is different from that of wireless remote control, please adjust the setting range of wired remote control to be the same setting range of wireless remote control by following procedure. (The set temperature may not be displayed correctly on the wireless remote control, unless change of temperature setting range is done.) Changing procedure of temperature setting range is as follows.

How to set upper and lower limit of temperature setting range

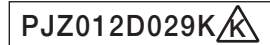
1. Stop the air-conditioner, and press [○] (SET) and [▽] (MODE) button at the same time for 3 seconds or more.
The indication changes to "FUNCTION SET ▼"
2. Press [▼] button once, and change to the "TEMP RANGE ▲" indication.
3. Press [○] (SET) button, and enter the temperature range setting mode.
4. Confirm that the "Upper limit ▼" is shown on the display.
5. Press [○] (SET) button to fix.
6. ① Indication: "∅ ∇ ^ SET UP" → "UPPER 28°C ∇ ^"
② Select the upper limit value 30°C with temperature setting button [∇]. "UPPER 30°C ∇" (blinking)
③ Press [○] (SET) button to fix. "UPPER 30°C" (Displayed for two seconds)
After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".
7. Press [▼] button once, "LOWER LIMIT ▲" is selected, press [○] (SET) button to fix.
① Indication: "∅ ∇ ^ SET UP" → "LOWER 20°C ∇ ^"
② Select the lower limit value 18°C with temperature setting button [∇]. "LOWER 18°C ^" (blinking)
③ Press [○] (SET) button to fix. "LOWER 18°C" (Displayed for two seconds)
After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼"
8. Press [ON/OFF] button to finish.
Temperature setting range



- It is possible to quit in the middle by pressing [ON/OFF] button, but the change of setting is incompleated.
- During setting, if pressing [○] (RESET) button, it returns to the previous screen.

| Mode | Temperature setting range |
|-----------------------------|---------------------------|
| Cooling, Heating, Dry, Auto | 18-30°C |

5.9 SUPERLINK E BOARD (SC-ADNA-E)



- Read and understand the instructions completely before starting installation.
- Refer to the instructions for both indoor and outdoor units.

Safety precautions

- Carefully read “Safety precautions” first. Follow the instructions for installation.
- Precautions are grouped into “Warning⚠” and “Caution⚠”. The “Warning⚠” group includes items that may lead to serious injury or death if not observed. The items included in the “Caution⚠” group also may lead to serious results under certain conditions. Both groups are crucial for safety installation. Read and understand them carefully.
- After installation, conduct the test operation of the device to check for any abnormalities. Describe how to operate the device to the customer following the installation instruction manual. Instruct the customer to keep this installation instruction for future reference.

⚠ Warning

- This device should be installed by the dealer where you purchase the device or a licensed professional shop. If the device is incorrectly installed by the customer, it may result in electric shock or fire.
- Install the device carefully following the installation instruction. If the device is incorrectly installed, it may result in electric shock or fire.
- Use the accessory parts and specified parts for installation. If any parts that do not match the specifications are used, it may result in electric shock or fire.
- A person with the electrical service certification should conduct the service based on the “Technical standards for electrical facilities”, “Electrical Wiring Code”, and the installation instruction. If the work is done incorrectly, it may result in electric shock or fire.
- Wiring should be securely connected using the specified types of wire. No external force on the wire should be applied to any terminals. If a secure connection is not achieved, it may result in electric shock or fire.

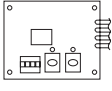
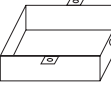
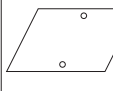
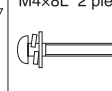
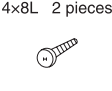

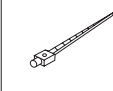

⚠ Caution

- Provide ground connection.
The ground line should never be connected to the gas supply piping, the water supply piping, the lightning conductor rod, nor the telephone ground. If the grounding is improper, it may result in electric shock.
- Do not install the device in the following locations.
 1. Where there is mist/spray of oil or steam such as kitchens.
 2. Where there is corrosive gases such as sulfuric acid gas.
 3. Where there is a device generating electromagnetic waves.
These may interfere with the control system resulting in the device becoming uncontrollable.
 4. Where flammable volatile materials such as paint thinner and gasoline may exist or where they are handled. This may cause a fire.

1 Application

Indoor-to-outdoor three core communication specification type 3 (since October 2007)

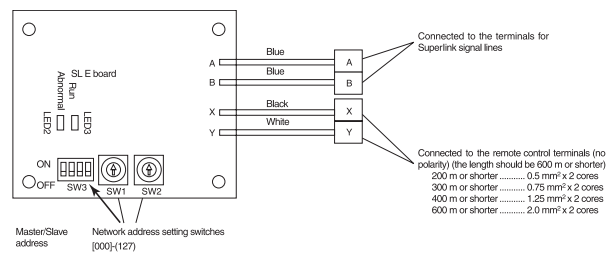
2 Accessories

| | | | |
|--|---|---|---|
| SL E board  | Metal box  | Metal cover  | Screw for ground M4x8L 2 pieces  |
| Pan head screws φ4x8L 2 pieces  | Locking supports To secure the print board and the metal box Made of nylon 4 pieces  | Binding band  | Grommet  |

5 Connection outline

Note for setting the address

- Set the address between 00 and 47 for the previous Superlink connection and between 000 and 127 for the new Superlink connection. (*1)
- Do not set the address overlapping with those of the other devices in the network. (The default is 000)



(*1) Whether the actual link is either the new Superlink or the previous Superlink depends on the models of the connected outdoor and indoor units. Consult the agent or the dealer.

3 Function

Allowing the central control SL1N-E, SL2NA-E, and SL4-AE/BE to control and monitor the commercial air-conditioner unit.

4 Control switching

Settings can be changed by the DIP switch SW3 on the SL E board as in the following.

| Switch | Symbol | Switch | Remarks |
|--------|--------|---------------|---|
| SW3 | 1 | ON | Master |
| | | OFF (default) | Slave |
| | 2 | ON | Fixed previous protocol |
| | | OFF (default) | Automatic adjustment of Superlink protocol |
| | 3 | ON | Indicates the forced operation stop when abnormality has occurred. |
| | | OFF (default) | Indicates the status of running/stop as it is, when abnormality has occurred. |
| | 4 | ON | The hundredth address activated “1” |
| | | OFF (default) | The hundredth address activated “0” |

Signal line specification

| Communication method | Previous Superlink | New Superlink |
|------------------------------|----------------------------|--------------------------|
| Line type | MVVS | MVVS |
| Line diameter | 0.75 - 1.25mm ² | 0.75/1.25mm ² |
| Signal line (total length) | up to 1000m | up to 1500/1000m (*2) |
| Signal line (maximum length) | up to 1000m | up to 1000m |

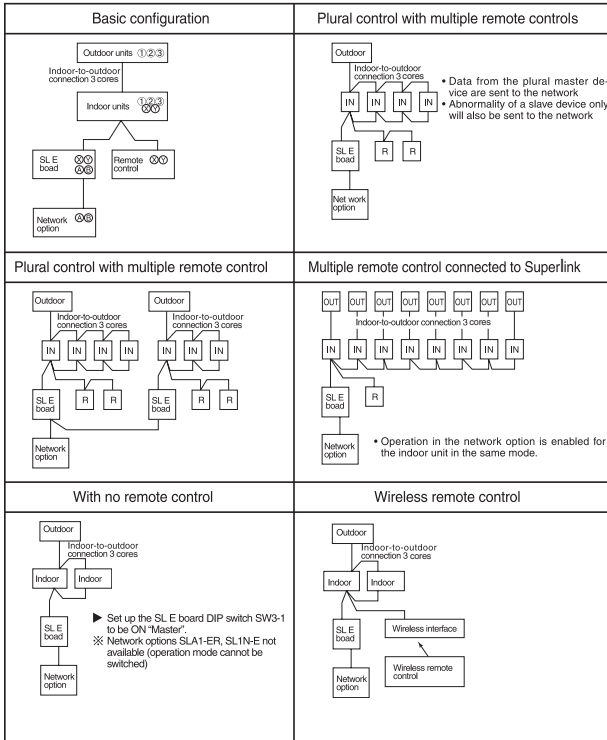
(*2) Up to 1500 m for 0.75 mm², and up to 1000 m for 1.25 mm².

Do not use 2.0 mm². It may cause an error.

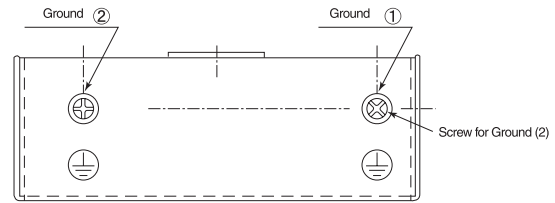
(*3) Connect grounding on both ends of the shielding wire.

For the grounding method, refer to the section “6 Installation”.

- (1) Set the Superlink network address with SW1 (tens place), SW2 (ones place), and SW3 (hundreds place).
- (2) Set the SL E board SW3-1 to be ON (Master) when using this without any remote control (no wired remote controller nor wireless remote control).
- (3) Set up the plural master/slave device using the DIP switches on the indoor unit board.
- (4) Set up the remote control master/slave device using the slide switch on the remote control board.
- (5) Set up "0" to "F" using the address rotary switch on the indoor unit board when controlling the indoor unit with the multiple remote control.

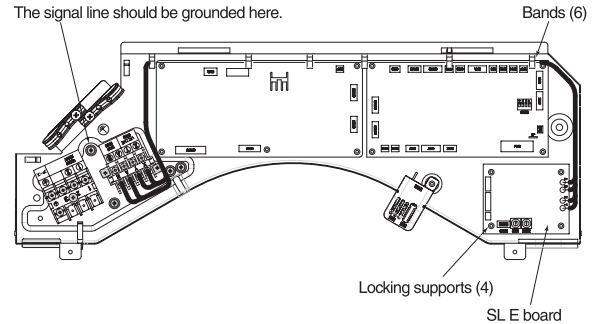


Connect grounding. Connect grounding for the power line to Ground ①, and grounding for the signal line to Ground ② or to the Ground on the indoor unit control box.



2. When connecting to the indoor unit control box (ceiling-concealed type and FDT type only):

- (1) Mount the SL E board in the control box using the locking supports.
- (2) Remove 6 bands from the box and put the wiring through the bands to be secured.



Electrical shock hazard! make sure to turn the power off for servicing. Be cautious so that no abnormal force should be applied to the wiring. Do not let the SL E board hung by the wiring. Do not damage the board with a screw driver. The board is sensitive to static electricity. Release the static electricity of your body before servicing.
(You can do this by touching the control board which is grounded).

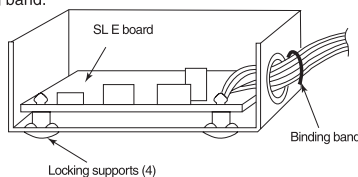
Location of installation

Install the device at the location where there are no electromagnetic waves nor where there is water and dust. The specified temperature range of the device is 0 to 40°C. Install the device at the location where the ambient temperature stays within the range. If it exceeds the specification, make sure to provide solution such as installing a cooling fan. When used outside of the range, it may cause abnormal operation.

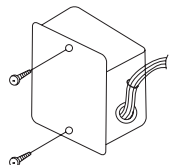
6 Installation

1. When using the metal box (mounted on the indoor unit / mounted on the back of the remote control):

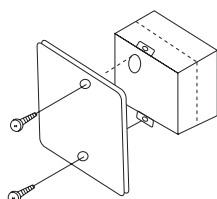
- (1) Mount the SL E board in the metal box using the locking supports.
- (2) Wiring should go through the provided grommet since then through the wiring to the hole on the Metal box.
Secure the grommet after inserting the grommet into the Metal box as shown in below figure, then tie the wiring at the outlet of the unit using a binding band.



▲ When installed outside the indoor unit, put the metal cover on.



▲ When installed on the back of the remote control, mount it directly on the remote control bottom case.



7 Indicator display

Check the LED 3 (green) and LED 2 (red) on the SL E board for flashing.

| SL E board LEDs | | Inspection mode | Display on the integrated network control device |
|-----------------|----------|---|--|
| Red | Green | | |
| Off | Flashing | Normal communication | |
| Off | Off | <ul style="list-style-type: none"> Disconnection in the remote control communication line (X or Y) Short-circuit in the remote control communication line (between X and Y) Faulty indoor unit remote control power Faulty remote control communication circuit Faulty CPU on SL E board | No corresponding unit number |
| One flash | Flashing | <ul style="list-style-type: none"> Disconnection in the Superlink signal line (A or B) Short-circuit in the Superlink signal line (between A and B) Faulty Superlink signal circuit | |
| Two flashes | Flashing | <ul style="list-style-type: none"> Faulty address setting for the SL E board (Set up the address for previous SL E board : more than 48 new SL E board : more than 128) | |
| Three flashes | Flashing | <ul style="list-style-type: none"> SL E board parent not set up when used without a remote control Faulty remote control communication circuit | E1 |
| Four flashes | Flashing | <ul style="list-style-type: none"> Address overlapping for the SL E board and the Superlink network connected indoor unit | E2 |
| Off | Flashing | <ul style="list-style-type: none"> Number of connected devices exceeds the specification for the multiple indoor unit control | E10 |

INVERTER PACKAGED AIR-CONDITIONERS



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