



TECHNICAL MANUAL

VRF INVERTER MULTI-SYSTEM AIR-CONDITIONERS

(INDOOR UNIT)

FDT28KXE6F 36KXE6F 45KXE6F 56KXE6F 71KXE6F 90KXE6F 112KXE6F 140KXE6F 160KXE6F	FDTC15KXE6F 22KXE6F 28KXE6F 36KXE6F 45KXE6F 56KXE6F	FDTW28KXE6F 45KXE6F 56KXE6F 71KXE6F 90KXE6F 112KXE6F 140KXE6F	FDTQ22KXE6F 28KXE6F 36KXE6F	FDTS45KXE6F 71KXE6F	FDU45KXE6F 56KXE6F 71KXE6F 90KXE6F 112KXE6F 140KXE6F 160KXE6F 224KXZE1 280KXZE1
FDUM22KXE6F 28KXE6F 36KXE6F 45KXE6F 56KXE6F 71KXE6F 90KXE6F 112KXE6F 140KXE6F 160KXE6F	FDUT15KXE6F-E 22KXE6F-E 28KXE6F-E 36KXE6F-E 45KXE6F-E 56KXE6F-E 71KXE6F-E	FDUH22KXE6F 28KXE6F 36KXE6F	FDK22KXE6F 28KXE6F 36KXE6F 45KXE6F 56KXE6F 71KXE6F	FDE36KXZE1 45KXZE1 56KXZE1 71KXZE1 112KXZE1 140KXZE1	PDFW28KXE6F 45KXE6F 56KXE6F
FDFL71KXE6F	PDFU28KXE6F 45KXE6F 56KXE6F 71KXE6F	FDU650FKXZE1 1100FKXZE1 1800FKXZE1 2400FKXZE1			

Note:

- (1) Regarding the outdoor unit series, refer to the No. '09•KXR-DB-129•'14•KX-DB-199, 201, 203, 207, 220•'09•KXR-SM-130•'14•KX-SM-200, 202, 204, 208, 221.

CONTENTS

1. GENERAL INFORMATION	3
1.1 Table of models.....	3
1.2 Table of indoor units panel (Option).....	3
1.3 Table of remote control (Option)	3
1.4 1.5kW - Indoor units connection	4
1.5 How to read the model name	4
2. SPECIFICATIONS	5
(1) Ceiling cassette-4 way type (FDT)	5
(2) Ceiling cassette-4 way compact type (FDTC).....	7
(3) Ceiling cassette-2 way type (FDTW)	9
(4) Ceiling cassette-1 way compact type (FDTQ)	11
(5) Ceiling cassette-1 way type (FDTS)	14
(6) Duct connected-High static pressure type (FDU)	15
(7) Duct connected-Low/Middle static pressure type (FDUM).....	18
(8) Duct connected (thin)-Low static pressure type (FDUT)	20
(9) Duct connected (Compact and Flexible) type (FDUH).....	22
(10) Wall mounted type (FDK)	23
(11) Ceiling suspended type (FDE)	25
(12) Floor standing-2 way type (FDFW)	27
(13) Floor standing (with casing) type (FDFL)	28
(14) Floor standing (without casing) type (FDFU)	29
(15) Outdoor air processing unit (FDU-F).....	30
3. EXTERIOR DIMENSIONS	32
4. ELECTRICAL WIRING	68
5. NOISE LEVEL.....	94
6. CHARACTERISTICS OF FAN	102
7. TEMPERATURE AND VELOCITY DISTRIBUTION	119
8. CAPACITY TABLES	144
9. APPLICATION DATA	224
9.1 Installation of indoor unit	224
(1) Ceiling cassette-4 way type (FDT)	224
(2) Ceiling cassette-4 way compact type (FDTC).....	230
(3) Ceiling cassette-2 way type (FDTW)	236
(4) Ceiling cassette-1 way compact type (FDTQ)	248
(5) Ceiling cassette-1 way type (FDTS)	257
(6) Duct connected-High static pressure type (FDU)	269
(7) Duct connected-Low/Middle static pressure type (FDUM).....	280
(8) Duct connected (thin)-Low static pressure type (FDUT)	286
(9) Duct connected (Compact and Flexible) type (FDUH)	290
(10) Wall mounted type (FDK)	294
(11) Ceiling suspended type (FDE)	298
(12) Floor standing-2 way type (FDFW)	302
(13) Floor standing (with casing) type (FDFL)	306
(14) Floor standing (without casing) type (FDFU)	310

(15) Outdoor air processing unit (FDU-F).....	314
9.2 Electric wiring work instruction	319
9.3 Installation for wired remote control (Option parts)	323
10. OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER	336
10.1 Remote control (Option parts).....	336
10.2 Operation control function by the wired remote control.....	339
10.3 Operation control function by the indoor control.....	342
11. SYSTEM TROUBLESHOOTING PROCEDURE	358
11.1 Basics of troubleshooting	358
11.2 Contents of troubleshooting	359
11.3 Instruction of how to replace PCB	392
12. OPTION PARTS	407
12.1 Wireless kit	407
(1) FDT series (RCN-T-36W-E).....	407
(2) FDTC series (RCN-TC-24W-ER).....	415
(3) FDTW series (RCN-TW-E)	423
(4) FDTS series (RCN-TS-E)	430
(5) FDK series (RCN-K-E • RCN-K71-E)	437
(6) FDE series (RCN-E-E).....	444
(7) FDFW series (RCN-FW-E)	448
(8) Except for FDT, FDTC, FDTW, FDTS, FDK, FDE & FDFW series (RCN-KIT3-E)....	452
12.2 Simple wired remote control (RCH-E3)	458
12.3 Filter kit (FDUM, FDUH series)	464
12.4 FDUT series	468

1. GENERAL INFORMATION

1.1 Table of models

Model	Capacity													
	15	22	28	36	45	56	71	90	112	140	160	224	280	
Ceiling cassette-4 way type (FDT)			○	○	○	○	○	○	○	○	○			
Ceiling cassette-4 way compact type (FDTC)	○	○	○	○	○	○								
Ceiling cassette-2 way type (FDTW)			○		○	○	○	○	○	○				
Ceiling cassette-1 way compact type (FDTQ)		○	○	○										
Ceiling cassette-1 way type (FDTS)					○		○							
Duct connected-High static pressure type (FDU)					○	○	○	○	○	○	○	○	○	
Duct connected-Low/Middle static pressure type (FDUM)		○	○	○	○	○	○	○	○	○	○			
Duct connected (thin)-Low static pressure type (FDUT)	○	○	○	○	○	○	○							
Duct connected (Compact and Flexible) type (FDUH)		○	○	○										
Wall mounted type (FDK)		○	○	○	○	○	○							
Ceiling suspended type (FDE)				○	○	○	○		○	○				
Floor standing-2 way type (FDFW)			○		○	○								
Floor standing (with casing) type ⁽¹⁾ (FDFL)							○							
Floor standing (without casing) type ⁽¹⁾ (FDFU)			○		○	○	○							
Outdoor air processing unit (FDU-F)								○ (650)		○ (1100)		○ (1800)	○ (2400)	

Note (1) Models 50Hz only.

1.2 Table of indoor units panel (Option)

Model	Capacity	Parts model
FDT	28,36,45,56,71,90,112,140,160	T-PSA-3BW-E
FDTC	15,22,28,36,45,56	TC-PSA-25W-E
FDTW	28,45,56,71	TW-PSA-26W-E
	90,112,140	TW-PSA-46W-E
FDTQ (Direct blow panel)	22,28,36	TQ-PSA-15W-E
		TQ-PSB-15W-E
FDTQ (Duct panel)	22,28,36	QR-PNA-14W-ER
		QR-PNB-14W-ER
FDTS	45,71	TS-PSA-3AW-E

1.3 Table of remote control (Option)

(1) Wired remote control

Model	Remote control model	Type
All models	RC-EX1A	Eco touch
	RC-E5	Standard
	RCH-E3	Simple

(2) Wireless kit (Wireless remote control)

Model		Wireless kit
FDT		RCN-T-36W-E
FDTC		RCN-TC-24W-ER
FDTW		RCN-TW-E
FDTS		RCN-TS-E
FDK	22 - 56	RCN-K-E
	71	RCN-K71-E
FDE		RCN-E-E
FDFW		RCN-FW-E
FDTQ,FDU,FDUM,FDUT, FDUH,FDFL,FDFU,FDU-F		RCN-KIT3-E

1.4 1.5kW-indoor units connection

1.4.1 1.5kW-Indoor units

Model
FDTC15KXE6F
FDUT15KXE6F-E

1.4.2 Connectable KX6 outdoor units

FDC224~335KXE6 /service code A and there after
FDC400~1360KXE6 /service code F and there after

- FDC112~155KXE6, KXR and refresh KX series are not connectable.
- In case of connection with not the connectable outdoor units, error display (E22) will be appeared on the remote control.

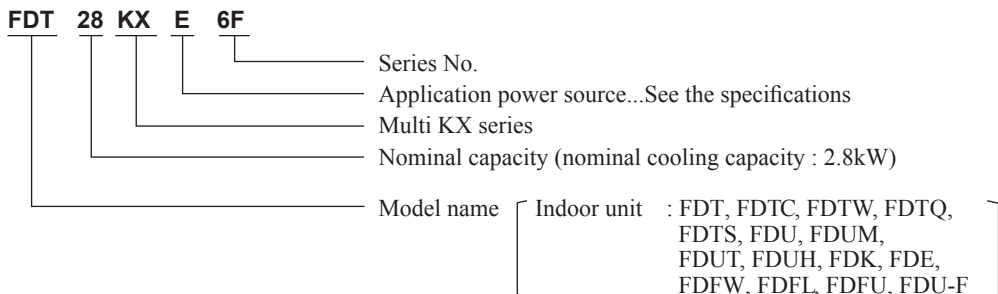
1.4.3 Installation limitation on 1.5kW-indoor units connection

- ① KX6 outdoor unit must have total indoor unit connection capacity ratio of 100% or more.
 <Example>
FDC680KXE6 /service code F connecting with one or more 1.5kW-indoor units must have total indoor unit capacity 680 or more.
- ② Total piping length between outdoor unit and indoor units must be 150m or more, including both main and branch piping.
- ③ When one or more 1.5kW-indoor units are in the system, outdoor temperature condition in the cooling operation must be 10°C or more. Without 1.5kW-indoor units connection in the system, the outdoor lowest temperature for FDC112 - 335KXE6 is -15°C and that for FDC400 - 1360KXE6 is -5°C.

1.5 How to read the model name

● Indoor unit

Example:



2. SPECIFICATION

(1) Ceiling cassette-4 way type (FDT)

Models FDT28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

Model		FDT28KXE6F	FDT36KXE6F	FDT45KXE6F	FDT56KXE6F	FDT71KXE6F
Panel model (Option)		T-PSA-3BW-E	T-PSA-3BW-E	T-PSA-3BW-E	T-PSA-3BW-E	T-PSA-3BW-E
Nominal cooling capacity*1	kW	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity*2		3.2	4.0	5.0	6.3	8.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.04 - 0.04 / 0.04	0.08 - 0.08 / 0.08
	Heat	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.04 - 0.04 / 0.04	0.08 - 0.08 / 0.08
Running current	Cool	0.27 - 0.25 / 0.27	0.27 - 0.25 / 0.27	0.27 - 0.25 / 0.27	0.36 - 0.33 / 0.36	0.73 - 0.67 / 0.73
	Heat	0.27 - 0.25 / 0.27	0.27 - 0.25 / 0.27	0.27 - 0.25 / 0.27	0.36 - 0.33 / 0.36	0.73 - 0.67 / 0.73
Sound pressure level	dB(A)	P-Hi : 37 Hi : 33 Me : 31 Lo : 30	P-Hi : 37 Hi : 33 Me : 31 Lo : 30	P-Hi : 37 Hi : 33 Me : 31 Lo : 30	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	P-Hi : 46 Hi : 33 Me : 31 Lo : 30
Exterior dimensions Height x Width x Depth	mm	Unit : 246 × 840 × 840 Panel : 35 × 950 × 950	Unit : 246 × 840 × 840 Panel : 35 × 950 × 950	Unit : 246 × 840 × 840 Panel : 35 × 950 × 950	Unit : 246 × 840 × 840 Panel : 35 × 950 × 950	Unit : 246 × 840 × 840 Panel : 35 × 950 × 950
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight	kg	Unit : 22 Panel : 5.5	Unit : 22 Panel : 5.5	Unit : 22 Panel : 5.5	Unit : 24 Panel : 5.5	Unit : 24 Panel : 5.5
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Turbo fan × 1	Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor	W	58	58	58	58	58
Starting method		Direct line start	Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	P-Hi : 28 Hi : 18 Me : 16 Lo : 14
Available static pressure	Pa	0	0	0	0	0
Outside air intake		Possible	Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ6.35 (1/4") Gas line: φ9.52 (3/8")	Liquid line: φ6.35 (1/4") Gas line: φ12.7 (1/2")	Liquid line: φ6.35 (1/4") Gas line: φ12.7 (1/2")	Liquid line: φ6.35 (1/4") Gas line: φ12.7 (1/2")	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25	Connectable with VP25	Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping		Necessary(both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					ISO-T1
Cooling*1	27°C	19°C	35°C	24°C	
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting(Hi-Me-Lo) only.

Model		FDT90KXE6F	FDT112KXE6F	FDT140KXE6F	FDT160KXE6F
Panel model (Option)		T-PSA-3BW-E	T-PSA-3BW-E	T-PSA-3BW-E	T-PSA-3BW-E
Nominal cooling capacity*1	kW	9.0	11.2	14.0	16.0
Nominal heating capacity*2		10.0	12.5	16.0	18.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15
	Heat	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15	0.15 - 0.15 / 0.15
Running current	Cool	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36
	Heat	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36	1.36 - 1.25 / 1.36
Sound pressure level	dB(A)	P-Hi : 51 Hi : 40 Me : 37 Lo : 35	P-Hi : 51 Hi : 40 Me : 37 Lo : 35	P-Hi : 51 Hi : 42 Me : 40 Lo : 37	P-Hi : 51 Hi : 43 Me : 41 Lo : 38
Exterior dimensions Height x Width x Depth	mm	Unit : 298 x 840 x 840 Panel : 35 x 950 x 950	Unit : 298 x 840 x 840 Panel : 35 x 950 x 950	Unit : 298 x 840 x 840 Panel : 35 x 950 x 950	Unit : 298 x 840 x 840 Panel : 35 x 950 x 950
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight	kg	Unit : 27 Panel : 5.5	Unit : 27 Panel : 5.5	Unit : 27 Panel : 5.5	Unit : 27 Panel : 5.5
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan x 1	Turbo fan x 1	Turbo fan x 1	Turbo fan x 1
Motor	W	120	120	120	120
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 37 Hi : 27 Me : 24 Lo : 20	P-Hi : 37 Hi : 27 Me : 24 Lo : 20	P-Hi : 37 Hi : 30 Me : 27 Lo : 23	P-Hi : 37 Hi : 30 Me : 27 Lo : 23
Available static pressure	Pa	0	0	0	0
Outside air intake		Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25	Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to RoHS directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

(2) Ceiling cassette-4 way compact type (FDTC)
 Models FDTC15KXE6F, 22KXE6F, 28KXE6F

Model		FDTC15KXE6F		FDTC22KXE6F		FDTC28KXE6F	
Panel model (Option)		TC-PSA-25W-E		TC-PSA-25W-E		TC-PSA-25W-E	
Nominal cooling capacity*1		1.5		2.2		2.8	
Nominal heating capacity*2		1.7		2.5		3.2	
Power source		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz	
Power consumption	Cool	0.02 - 0.02 / 0.02		0.03 - 0.03 / 0.03		0.03 - 0.03 / 0.03	
	Heat	0.02 - 0.02 / 0.02		0.03 - 0.03 / 0.03		0.03 - 0.03 / 0.03	
Running current	Cool	0.19 - 0.17 / 0.19		0.28 - 0.26 / 0.28		0.28 - 0.26 / 0.28	
	Heat	0.19 - 0.17 / 0.19		0.28 - 0.26 / 0.28		0.28 - 0.26 / 0.28	
Sound pressure level	Cool	P-Hi : 34 Hi : 32 Me : 28 Lo : 25		P-Hi : 44 Hi : 35 Me : 33 Lo : 30		P-Hi : 44 Hi : 35 Me : 33 Lo : 30	
	Heat	P-Hi : 34 Hi : 32 Me : 28 Lo : 25		P-Hi : 44 Hi : 35 Me : 33 Lo : 32		P-Hi : 44 Hi : 35 Me : 33 Lo : 32	
Exterior dimensions Height x Width x Depth		Unit : 248 x 570 x 570 Panel : 35 x 700 x 700		Unit : 248 x 570 x 570 Panel : 35 x 700 x 700		Unit : 248 x 570 x 570 Panel : 35 x 700 x 700	
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent	
Net weight		Unit : 14 Panel : 3.5		Unit : 14 Panel : 3.5		Unit : 14 Panel : 3.5	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve		Electronic expansion valve		Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Turbo fan x 1		Turbo fan x 1		Turbo fan x 1	
Motor		33		33		33	
Starting method		Direct line start		Direct line start		Direct line start	
Air flow (Standard)	Cool	P-Hi : 8 Hi : 7 Me : 5.5 Lo : 4.5		P-Hi : 12 Hi : 9.5 Me : 8.5 Lo : 7		P-Hi : 12 Hi : 9.5 Me : 8.5 Lo : 7	
	Heat	P-Hi : 8 Hi : 7 Me : 5.5 Lo : 4.5		P-Hi : 12 Hi : 9.5 Me : 8.5 Lo : 8		P-Hi : 12 Hi : 9.5 Me : 8.5 Lo : 8	
Available static pressure		0		0		0	
Outdoor air intake		Not possible		Not possible		Not possible	
Air filter, Q'ty		Pocket plastic net x 1 (Washable)		Pocket plastic net x 1 (Washable)		Pocket plastic net x 1 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form		Polyurethane form		Polyurethane form	
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A		Remote control switch Option: RC-E5, RC-EX1A		Remote control switch Option: RC-E5, RC-EX1A	
Room temperature control		Thermostat by electronics		Thermostat by electronics		Thermostat by electronics	
Safety equipment		Overload protection for fan motor Frost protection thermostat		Overload protection for fan motor Frost protection thermostat		Overload protection for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line: φ6.35 (1/4") Gas line: φ9.52 (3/8")		Liquid line: φ6.35 (1/4") Gas line: φ9.52 (3/8")		Liquid line: φ6.35 (1/4") Gas line: φ9.52 (3/8")	
Connecting method		Flare piping		Flare piping		Flare piping	
Refrigerant		R410A		R410A		R410A	
Drain pump		Built-in drain pump		Built-in drain pump		Built-in drain pump	
Drain hose		Connectable with VP25		Connectable with VP25		Connectable with VP25	
Insulation for piping		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose		Mounting kit, Drain hose		Mounting kit, Drain hose	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

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

ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

Model		FDTC36KXE6F		FDTC45KXE6F		FDTC56KXE6F	
Panel model (Option)		TC-PSA-25W-E		TC-PSA-25W-E		TC-PSA-25W-E	
Nominal cooling capacity*1	kW	3.6		4.5		5.6	
Nominal heating capacity*2		4.0		5.0		6.3	
Power source		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz	
Power consumption	Cool	0.03 - 0.03 / 0.03		0.05 - 0.05 / 0.05		0.05 - 0.05 / 0.05	
	Heat	0.03 - 0.03 / 0.03		0.05 - 0.05 / 0.05		0.05 - 0.05 / 0.05	
Running current	Cool	0.28 - 0.26 / 0.28		0.46 - 0.43 / 0.46		0.46 - 0.43 / 0.46	
	Heat	0.28 - 0.26 / 0.28		0.46 - 0.43 / 0.46		0.46 - 0.43 / 0.46	
Sound pressure level	Cool	P-Hi : 46 Hi : 38 Me : 36 Lo : 31		P-Hi : 48 Hi : 40 Me : 37 Lo : 31		P-Hi : 49 Hi : 45 Me : 39 Lo : 31	
	Heat	P-Hi : 46 Hi : 38 Me : 36 Lo : 34		P-Hi : 48 Hi : 40 Me : 37 Lo : 34		P-Hi : 49 Hi : 45 Me : 39 Lo : 34	
Exterior dimensions Height x Width x Depth	mm	Unit : 248 x 570 x 570 Panel : 35 x 700 x 700		Unit : 248 x 570 x 570 Panel : 35 x 700 x 700		Unit : 248 x 570 x 570 Panel : 35 x 700 x 700	
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent	
Net weight	kg	Unit : 15 Panel : 3.5		Unit : 15 Panel : 3.5		Unit : 15 Panel : 3.5	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve		Electronic expansion valve		Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Turbo fan x 1		Turbo fan x 1		Turbo fan x 1	
Motor	W	33		33		33	
Starting method		Direct line start		Direct line start		Direct line start	
Air flow (Standard)	Cool	P-Hi : 13 Hi : 10 Me : 9 Lo : 7		P-Hi : 15 Hi : 11 Me : 9 Lo : 7		P-Hi : 16 Hi : 13 Me : 10 Lo : 7	
	Heat	P-Hi : 13 Hi : 10 Me : 9 Lo : 8		P-Hi : 15 Hi : 11 Me : 9 Lo : 8		P-Hi : 16 Hi : 13 Me : 10 Lo : 8	
Available static pressure	Pa	0		0		0	
Outdoor air intake		Not possible		Not possible		Not possible	
Air filter, Q'ty		Pocket plastic net x 1 (Washable)		Pocket plastic net x 1 (Washable)		Pocket plastic net x 1 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form		Polyurethane form		Polyurethane form	
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A		Remote control switch Option: RC-E5, RC-EX1A		Remote control switch Option: RC-E5, RC-EX1A	
Room temperature control		Thermostat by electronics		Thermostat by electronics		Thermostat by electronics	
Safety equipment		Overload protection for fan motor Frost protection thermostat		Overload protection for fan motor Frost protection thermostat		Overload protection for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	
Connecting method		Flare piping		Flare piping		Flare piping	
Refrigerant		R410A		R410A		R410A	
Drain pump		Built-in drain pump		Built-in drain pump		Built-in drain pump	
Drain hose		Connectable with VP25		Connectable with VP25		Connectable with VP25	
Insulation for piping		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose		Mounting kit, Drain hose		Mounting kit, Drain hose	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

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

ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

Model		FDTW28KXE6F	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F
Panel model (Option)		TW-PSA-26W-E	TW-PSA-26W-E	TW-PSA-26W-E	TW-PSA-26W-E
Nominal cooling capacity*1	kW	2.8	4.5	5.6	7.1
Nominal heating capacity*2		3.2	5.0	6.3	8.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.09 - 0.09 / 0.09	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.14 - 0.14 / 0.14
	Heat	0.09 - 0.09 / 0.09	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.14 - 0.14 / 0.14
Running current	Cool	0.45 - 0.45 / 0.45	0.55 - 0.55 / 0.55	0.55 - 0.55 / 0.55	0.75 - 0.75 / 0.75
	Heat	0.45 - 0.45 / 0.45	0.55 - 0.55 / 0.55	0.55 - 0.55 / 0.55	0.75 - 0.75 / 0.75
Sound pressure level		P-Hi : 42 Hi : 38 Me : 34 Lo : 31	P-Hi : 42 Hi : 38 Me : 34 Lo : 31	P-Hi : 42 Hi : 38 Me : 34 Lo : 31	P-Hi : 42 Hi : 38 Me : 34 Lo : 31
Exterior dimensions Height x Width x Depth		Unit : 325×820×620 Panel : 20×1120×680	Unit : 325×820×620 Panel : 20×1120×680	Unit : 325×820×620 Panel : 20×1120×680	Unit : 325×820×620 Panel : 20×1120×680
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight		Unit : 20 Panel : 8.5	Unit : 21 Panel : 8.5	Unit : 21 Panel : 8.5	Unit : 23 Panel : 8.5
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W 30	W 35	W 35	W 40
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		m ³ /min P-Hi : 14.5 Hi : 12 Me : 10 Lo : 9	m ³ /min P-Hi : 14.5 Hi : 12 Me : 10 Lo : 9	m ³ /min P-Hi : 14.5 Hi : 12 Me : 10 Lo : 9	m ³ /min P-Hi : 14.5 Hi : 12 Me : 10 Lo : 9
Available static pressure		Pa 0	Pa 0	Pa 0	Pa 0
Outside air intake		Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25	Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

(3) Ceiling cassette-2 way type (FDTW)
Models FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

Model		FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F
Panel model (Option)		TW-PSA-46W-E	TW-PSA-46W-E	TW-PSA-46W-E
Nominal cooling capacity*1	kW	9.0	11.2	14.0
Nominal heating capacity*2		10.0	12.5	16.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.19 - 0.19 / 0.19	0.19 - 0.19 / 0.19	0.19 - 0.19 / 0.19
	Heat	0.19 - 0.19 / 0.19	0.19 - 0.19 / 0.19	0.19 - 0.19 / 0.19
Running current	Cool	1.00 - 1.00 / 1.00	1.00 - 1.00 / 1.00	1.00 - 1.00 / 1.00
	Heat	1.00 - 1.00 / 1.00	1.00 - 1.00 / 1.00	1.00 - 1.00 / 1.00
Sound pressure level		P-Hi : 48 Hi : 45 Me : 41 Lo : 37	P-Hi : 48 Hi : 45 Me : 41 Lo : 37	P-Hi : 48 Hi : 45 Me : 41 Lo : 37
Exterior dimensions Height x Width x Depth		Unit : 325×1535×620 Panel : 20×1835×680	Unit : 325×1535×620 Panel : 20×1835×680	Unit : 325×1535×620 Panel : 20×1835×680
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight		Unit : 35 Panel : 13	Unit : 35 Panel : 13	Unit : 35 Panel : 13
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 2	Turbo fan × 2	Turbo fan × 2
Motor		35×2	35×2	35×2
Starting method		Direct line start	Direct line start	Direct line start
Air flow (Standard)		P-Hi : 31 Hi : 27 Me : 23 Lo : 20	P-Hi : 31 Hi : 27 Me : 23 Lo : 20	P-Hi : 31 Hi : 27 Me : 23 Lo : 20
Available static pressure		0	0	0
Outside air intake		Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting(Hi-Me-Lo) only.

Model		FDTQ22KXE6F			
Panel model (Option)		Direct blow panel		Duct panel	
		TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity*1	kW	2.2	2.2	2.2	2.2
Nominal heating capacity*2		2.5	2.5	2.5	2.5
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
	Heat	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
Running current	Cool	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
	Heat	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
Sound pressure level	dB(A)	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33
Exterior dimensions Height x Width x Depth	mm	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight	kg	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1
Motor	W	30	30	30	30
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5
External static pressure	Pa	0	0	30	30
Outdoor air intake		Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

(4) Ceiling cassette-1 way compact type (FDTQ)
Model FDTQ22KXE6F

PJCO01Z329A

Model		FDTQ28KXE6F			
Panel model (Option)		Direct blow panel		Duct panel	
		TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity*1	kW	2.8	2.8	2.8	2.8
Nominal heating capacity*2		3.2	3.2	3.2	3.2
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
	Heat	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
Running current	Cool	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
	Heat	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
Sound pressure level	dB(A)	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33
Exterior dimensions Height x Width x Depth	mm	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight	kg	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1
Motor	W	30	30	30	30
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m³/min	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5
External static pressure	Pa	0	0	30	30
Outdoor air intake		Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model FDTQ28KXE6F

Model		FDTQ36KXE6F			
Panel model (Option)		Direct blow panel		Duct panel	
		TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity*1	kW	3.6	3.6	3.6	3.6
Nominal heating capacity*2		4.0	4.0	4.0	4.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cool	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
	Heat	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
Running current	Cool	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
	Heat	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
Sound pressure level	dB(A)	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33	P-Hi : 45 Hi : 41 Me : 38 Lo : 33
Exterior dimensions Height x Width x Depth	mm	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650	Unit : 250 x 570 x 570 Panel : 35 x 625 x 650	Unit : 250 x 570 x 570 Panel : 35 x 780 x 650
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent
Net weight	kg	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3	Unit : 23 Panel : 2.5	Unit : 23 Panel : 3
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1
Motor	W	30	30	30	30
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5	P-Hi : 8 Hi : 7 Me : 6 Lo : 5
External static pressure	Pa	0	0	30	30
Outdoor air intake		Possible	Possible	Possible	Possible
Air filter, Q'ty		Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)	Pocket plastic net x 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)	Connectable with VP25 (O.D.32)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model		FDTS45KXE6F		FDTS71KXE6F	
Panel model (Option)		TS-PSA-3AW-E		TS-PSA-3AW-E	
Nominal cooling capacity*1	kW	4.5		7.1	
Nominal heating capacity*2		5.0		8.0	
Power source		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz	
Power consumption	kW	Cooling 0.04 / 0.04		0.09 / 0.09	
		Heating 0.04 / 0.04		0.09 / 0.09	
Running current	A	Cooling 0.27 - 0.25 / 0.27		0.60 - 0.55 / 0.60	
		Heating 0.27 - 0.25 / 0.27		0.60 - 0.55 / 0.60	
Sound pressure level		dB(A) P-Hi : 42 Hi : 40 Me : 38 Lo : 35		P-Hi : 49 Hi : 46 Me : 41 Lo : 36	
Exterior dimensions Height × Width × Depth		mm Unit : 220 × 1,150 × 565 Panel : 35 × 1,250 × 650		Unit : 220 × 1,150 × 565 Panel : 35 × 1,250 × 650	
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent	
Net weight		kg Unit : 27 Panel : 5		Unit : 28 Panel : 5	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve		Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4		Centrifugal fan × 4	
Motor		W 35		70	
Starting method		Direct line start		Direct line start	
Air flow (Standard)		m ³ /min P-Hi : 13 Hi : 12 Me : 11 Lo : 9.5		P-Hi : 17 Hi : 15 Me : 12 Lo : 10	
External static pressure		Pa 0		0	
Outside air intake		Possible		Possible	
Air filter, Q'ty		Pocket plastic net × 2 (Washable)		Pocket plastic net × 2 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form		Polyurethane form	
Operation control Operation switch		Remote control switch Option: RC-E5, RC-EX1A		Remote control switch Option: RC-E5, RC-EX1A	
Room temperature control		Thermostat by electronics		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor Frost protection thermostat		Internal thermostat for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")		Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	
Connecting method		Flare piping		Flare piping	
Refrigerant		R410A		R410A	
Drain pump		Built-in drain pump		Built-in drain pump	
Drain hose		Connectable with VP25 (I.D.25,O.D.32)		Connectable with VP25 (I.D.25,O.D.32)	
Insulation for piping		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose		Mounting kit, Drain hose	

Notes (1) The data are measured at the following conditions. Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting(Hi-Me-Lo) only.

Model			FDU45KXE6F	FDU56KXE6F	FDU71KXE6F	FDU90KXE6F
Nominal cooling capacity*1	kW		4.5	5.6	7.1	9.0
Nominal heating capacity*2			5.0	6.3	8.0	10.0
Power source			220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	kW	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.24 - 0.25 / 0.24	0.24 - 0.25 / 0.24
	Heating		0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.24 - 0.25 / 0.24	0.24 - 0.25 / 0.24
Running current	Cooling	A	0.63 - 0.58 / 0.63	0.63 - 0.58 / 0.63	1.80 - 1.70 / 1.80	1.80 - 1.70 / 1.80
	Heating		0.63 - 0.58 / 0.63	0.63 - 0.58 / 0.63	1.80 - 1.70 / 1.80	1.80 - 1.70 / 1.80
Sound pressure level	dB(A)		P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 38 Hi : 33 Me : 29 Lo : 25	P-Hi : 38 Hi : 33 Me : 29 Lo : 25
Exterior dimensions Height x Width x Depth	mm		280 x 750 x 635	280 x 750 x 635	280 x 950 x 635	280 x 950 x 635
Net weight	kg		29	29	34	34
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty			Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 2	Centrifugal fan x 2
Motor	W		100	100	130	130
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min		P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 24 Hi : 19 Me : 15 Lo : 10	P-Hi : 24 Hi : 19 Me : 15 Lo : 10
External static pressure	Pa		200 (at 13m ³ /min)	200 (at 13m ³ /min)	200 (at 24m ³ /min)	200 (at 24m ³ /min)
Outside air intake			Possible	Possible	Possible	Possible
Air filter, Q'ty			Procure locally	Procure locally	Procure locally	Procure locally
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose			Connectable with VP25	Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose	Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit
	DB	WB	DB	WB		
Operation	DB	WB	DB	WB	ISO-T1	Pa
Cooling*1	27°C	19°C	35°C	24°C		35
Heating*2	20°C		7°C	6°C		

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

ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

Model			FDU112KXE6F	FDU140KXE6F	FDU160KXE6F
Nominal cooling capacity*1	kW		11.2	14.0	16.0
Nominal heating capacity*2			12.5	16.0	18.0
Power source			220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	kW	0.31 - 0.32 / 0.31	0.35 - 0.36 / 0.35	0.42 - 0.43 / 0.42
	Heating		0.31 - 0.32 / 0.31	0.35 - 0.36 / 0.35	0.42 - 0.43 / 0.42
Running current	Cooling	A	2.00 - 2.00 / 2.00	2.30 - 2.20 / 2.30	2.70 - 2.50 / 2.70
	Heating		2.00 - 2.00 / 2.00	2.30 - 2.20 / 2.30	2.70 - 2.50 / 2.70
Sound pressure level	dB(A)		P-Hi : 44 Hi : 38 Me : 36 Lo : 30	P-Hi : 45 Hi : 40 Me : 34 Lo : 29	P-Hi : 47 Hi : 40 Me : 35 Lo : 30
Exterior dimensions Height x Width x Depth	mm		280 × 1,370 × 740	280 × 1,370 × 740	280 × 1,370 × 740
Net weight	kg		54	54	54
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 3	Centrifugal fan × 3	Centrifugal fan × 3
Motor	W		100 + 130	100 + 200	100 + 200
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min		P-Hi : 36 Hi : 28 Me : 25 Lo : 19	P-Hi : 39 Hi : 32 Me : 26 Lo : 20	P-Hi : 48 Hi : 35 Me : 28 Lo : 22
External static pressure	Pa		200 (at 36m ³ /min)	200 (at 39m ³ /min)	200 (at 48m ³ /min)
Outside air intake			Possible	Possible	Possible
Air filter, Q'ty			Procure locally	Procure locally	Procure locally
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A	Remote control switch Option: RC-E5, RC-EX1A
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose			Connectable with VP25	Connectable with VP25	Connectable with VP25
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit Pa
	DB	WB	DB	WB		
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1	60
Heating*2	20°C		7°C	6°C		

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting(Hi-Me-Lo) only.

Model		FDU224KXZE1		FDU280KXZE1	
Nominal cooling capacity*1	kW	22.4		28.0	
Nominal heating capacity*2		25.0		31.5	
Power source		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz	
Power consumption	Cooling	1.16 - 1.20 / 1.16		1.16 - 1.20 / 1.16	
	Heating	1.16 - 1.20 / 1.16		1.16 - 1.20 / 1.16	
Running current	Cooling	6.8 - 6.5 / 6.8		6.8 - 6.5 / 6.8	
	Heating	6.8 - 6.5 / 6.8		6.8 - 6.5 / 6.8	
Sound power level	dB(A)	75		75	
Sound pressure level	dB(A)	P-Hi : 52 Hi : 50 Me : 47 Lo : 45		P-Hi : 52 Hi : 50 Me : 47 Lo : 45	
Exterior dimensions					
Height x Width x Depth	mm	379 × 1,600 × 893		379 × 1,600 × 893	
Net weight	kg	89		89	
Refrigerant equipment		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing	
Heat exchanger					
Refrigerant control		Electronic expansion valve		Electronic expansion valve	
Air handling equipment		Centrifugal fan × 3		Centrifugal fan × 3	
Fan type & Q'ty					
Motor	W	130 + 350		130 + 350	
Starting method		Direct line start		Direct line start	
Air flow (Standard)	m ³ /min	P-Hi : 80 Hi : 72 Me : 64 Lo : 56		P-Hi : 80 Hi : 72 Me : 64 Lo : 56	
External static pressure	Pa	200 (at 80m ³ /min)		200 (at 80m ³ /min)	
Outside air intake		Possible		Possible	
Air filter, Q'ty		Procure locally		Procure locally	
Shock & vibration absorber		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form		Polyurethane form	
Operation control		Remote control switch (Option)		Remote control switch (Option)	
Operation switch		Wired : RC-E5, RC-EX1A, RCH-E3 Wireless : RCN-KIT3-E		Wired : RC-E5, RC-EX1A, RCH-E3 Wireless : RCN-KIT3-E	
Room temperature control		Thermostat by electronics		Thermostat by electronics	
Safety equipment		Overload protection for fan motor Frost protection thermostat		Overload protection for fan motor Frost protection thermostat	
Installation data		Liquid line: φ9.52 (3/8") Gas line: φ19.05 (3/4")		Liquid line: φ9.52 (3/8") Gas line: φ22.22 (7/8")	
Refrigerant piping size					
Connecting method		Brazing		Brazing	
Refrigerant		R410A		R410A	
Drain pump		-		-	
Drain hose		Connectable with VP25 (standard)		Connectable with VP25 (standard)	
Insulation for piping		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit		Mounting kit	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit
	DB	WB	DB	WB		Pa
Operation					ISO-T1	72
Cooling*1	27°C	19°C	35°C	24°C		
Heating*2	20°C		7°C	6°C		

- (2) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"
- (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 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-EX1A and RC-E5 only)

Model		FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F	FDUM45KXE6F	FDUM56KXE6F
Nominal cooling capacity*1	kW	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity*2		2.5	3.2	4.0	5.0	6.3
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10
	Heating	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10	0.10 - 0.10 / 0.10
Running current	Cooling	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46
	Heating	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46	0.46 - 0.42 / 0.46
Sound pressure level	dB(A)	P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 37 Hi : 32 Me : 29 Lo : 26	P-Hi : 37 Hi : 32 Me : 29 Lo : 26
Exterior dimensions Height x Width x Depth	mm	280 x 750 x 635	280 x 750 x 635	280 x 750 x 635	280 x 750 x 635	280 x 750 x 635
Net weight	kg	29	29	29	29	29
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1	Centrifugal fan x 1
Motor	W	100	100	100	100	100
Starting method		Direct line start	Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 13 Hi : 10 Me : 9 Lo : 8	P-Hi : 13 Hi : 10 Me : 9 Lo : 8
External static pressure	Pa	100 (at 13m ³ /min)	100 (at 13m ³ /min)	100 (at 13m ³ /min)	100 (at 13m ³ /min)	100 (at 13m ³ /min)
Outside air intake		Possible	Possible	Possible	Possible	Possible
Air filter, Q'ty		Procure locally	Procure locally	Procure locally	Procure locally	Procure locally
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Drain hose	Drain hose	Drain hose	Drain hose	Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit
	DB	WB	DB	WB		Pa
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1	35
Heating*2	20°C		7°C	6°C		

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) Initial static pressure values of option air filter "UM-FL1EF" are 5Pa.

(4) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

(7) Duct connected-Low/Middle static pressure type (FDUM)
Models FDUM22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

Model		FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F
Nominal cooling capacity*1	kW	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity*2		8.0	10.0	12.5	16.0	18.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	0.20 - 0.20 / 0.20	0.20 - 0.20 / 0.20	0.29 - 0.29 / 0.29	0.33 - 0.33 / 0.33	0.45 - 0.45 / 0.45
	Heating	0.20 - 0.20 / 0.20	0.20 - 0.20 / 0.20	0.29 - 0.29 / 0.29	0.33 - 0.33 / 0.33	0.45 - 0.45 / 0.45
Running current	Cooling	0.91 - 0.83 / 0.91	0.91 - 0.83 / 0.91	1.32 - 1.21 / 1.32	1.50 - 1.38 / 1.50	2.05 - 1.88 / 2.05
	Heating	0.91 - 0.83 / 0.91	0.91 - 0.83 / 0.91	1.32 - 1.21 / 1.32	1.50 - 1.38 / 1.50	2.05 - 1.88 / 2.05
Sound pressure level	dB(A)	P-Hi : 38 Hi : 33 Me : 29 Lo : 25	P-Hi : 38 Hi : 33 Me : 29 Lo : 25	P-Hi : 44 Hi : 38 Me : 36 Lo : 30	P-Hi : 45 Hi : 40 Me : 34 Lo : 29	P-Hi : 47 Hi : 40 Me : 35 Lo : 30
Exterior dimensions Height x Width x Depth	mm	280 × 950 × 635	280 × 950 × 635	280 × 1,370 × 740	280 × 1,370 × 740	280 × 1,370 × 740
Net weight	kg	34	34	54	54	54
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 3	Centrifugal fan × 3	Centrifugal fan × 3
Motor	W	130	130	100 + 130	100 + 200	100 + 200
Starting method		Direct line start	Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 24 Hi : 19 Me : 15 Lo : 10	P-Hi : 24 Hi : 19 Me : 15 Lo : 10	P-Hi : 36 Hi : 28 Me : 25 Lo : 19	P-Hi : 39 Hi : 32 Me : 26 Lo : 20	P-Hi : 48 Hi : 35 Me : 28 Lo : 22
External static pressure	Pa	100 (at 24m ³ /min)	100 (at 24m ³ /min)	100 (at 36m ³ /min)	100 (at 39m ³ /min)	100 (at 48m ³ /min)
Outside air intake		Possible	Possible	Possible	Possible	Possible
Air filter, Q'ty		Procure locally	Procure locally	Procure locally	Procure locally	Procure locally
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line : φ9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ9.52 (3/8") Gas line : φ 15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)	Connectable with VP20 (Standard) or VP25 (used with attached socket)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Drain hose	Drain hose	Drain hose	Drain hose	Drain hose

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

Adapted to RoHS directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit
	DB	WB	DB	WB		Pa
Operation	27°C	19°C	35°C	24°C	ISO-T1	35 (FDUM71, 90KXE6F)
Cooling*1	27°C	19°C	35°C	24°C		60 (FDUM112-160KXE6F)
Heating*2	20°C		7°C	6°C		

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) Initial static pressure values of option air filter "UM-FL2EF,3EF" are 5Pa.

(4) When wireless remote control is used, fan is 3 speed setting(Hi-Me-Lo) only.

Model		FDUT15KXE6F-E	FDUT22KXE6F-E	FDUT28KXE6F-E	FDUT36KXE6F-E
		Rear air return	Rear air return	Rear air return	Rear air return
Nominal cooling capacity*1	kW	1.5	2.2	2.8	3.6
Nominal heating capacity*2		1.7	2.5	3.2	4.0
Power source		220-240V 50Hz / 220 60Hz	220-240V 50Hz / 220 60Hz	220-240V 50Hz / 220 60Hz	220-240V 50Hz / 220 60Hz
Power consumption	Cooling	kW	0.06 - 0.06 / 0.06	0.07 - 0.07 / 0.07	0.07 - 0.07 / 0.07
	Heating		0.06 - 0.06 / 0.06	0.07 - 0.07 / 0.08	0.07 - 0.07 / 0.08
Running current	Cooling	A	0.27 - 0.27 / 0.27	0.28 - 0.25 / 0.30	0.32 - 0.29 / 0.34
	Heating		0.27 - 0.27 / 0.27	0.29 - 0.25 / 0.31	0.33 - 0.28 / 0.34
Sound pressure level ①	dB(A)	Hi : 28 Me : 26 Lo : 22	Hi : 28 Me : 26 Lo : 22	Hi : 28 Me : 26 Lo : 22	Hi : 33 Me : 30 Lo : 26
Sound pressure level ②	dB(A)	Hi : 32 Me : 29 Lo : 25	Hi : 32 Me : 29 Lo : 25	Hi : 32 Me : 29 Lo : 25	Hi : 37 Me : 34 Lo : 28
Exterior dimensions Height x Width x Depth		mm	200 x 750 x 500	200 x 750 x 500	200 x 750 x 500
Net weight		kg	22	21	22
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty			Centrifugal fan x 2	Centrifugal fan x 2	Centrifugal fan x 2
Motor		W	14	14	14
Starting method			Direct line start	Direct line start	Direct line start
Air flow		m ³ /min	Hi : 6 Me : 5 Lo : 4	Hi : 7.5 Me : 6 Lo : 5	Hi : 7.5 Me : 6 Lo : 5
External static pressure		Pa	Standard: 10, Max: 35	Standard: 10, Max: 35	Standard: 10, Max: 35
Outside air intake			-	-	-
Suction guard (Air filter), Q'ty			Procure locally	Procure locally	Procure locally
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control			Remote control switch	Remote control switch	Remote control switch
Operation switch			Option: RC-E5, RC-EX1A	Option: RC-E5, RC-EX1A	Option: RC-E5, RC-EX1A
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data			Liquid line: φ 6.35 (1/4")	Liquid line: φ 6.35 (1/4")	Liquid line: φ 6.35 (1/4")
Refrigerant piping size			Gas line: φ 9.52 (3/8")	Gas line: φ 9.52 (3/8")	Gas line: φ 12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose			Connectable with VP25 (I.D.25,O.D.32)	Connectable with VP25 (I.D.25,O.D.32)	Connectable with VP25 (I.D.25,O.D.32)
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Joint for drain piping	Mounting kit, Joint for drain piping	Mounting kit, Joint for drain piping

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit Pa
	DB	WB	DB	WB		
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1	10
Heating*2	20°C		7°C	6°C		

(2) Sound pressure level shows the value when the supply duct of 2m and the return duct of 1m are connected the unit.

(3) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

(4) Sound pressure level ① : Mike position is 1.5m below the unit, ② : Mike position is 1m in front and 1m below od the air supply duct.

(5) Initial static pressure value of option suction guard (Air filter) "UT-FL1EF" is 5Pa.

(8) Duct connected (thin)-Low static pressure type (FDUT)
 Models FDUT15KXE6F-E, 22KXE6F-E, 28KXE6F-E, 36KXE6F-E

Model		FDUT45KXE6F-E	FDUT56KXE6F-E	FDUT71KXE6F-E
		Rear air return	Rear air return	Rear air return
Nominal cooling capacity*1	kW	4.0	5.6	7.1
Nominal heating capacity*2		4.5	6.0	8.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	0.08 - 0.08 / 0.09	0.08 - 0.08 / 0.09	0.08 - 0.08 / 0.08
	Heating	0.08 - 0.08 / 0.09	0.08 - 0.08 / 0.09	0.07 - 0.07 / 0.07
Running current	Cooling	0.36 - 0.33 / 0.40	0.38 - 0.35 / 0.42	0.42 - 0.42 / 0.42
	Heating	0.34 - 0.32 / 0.39	0.35 - 0.33 / 0.40	0.46 - 0.46 / 0.46
Sound pressure level ①	dB(A)	Hi : 34 Me : 32 Lo : 28	Hi : 35 Me : 33 Lo : 30	Hi : 35 Me : 31 Lo : 28
Sound pressure level ②		Hi : 36 Me : 33 Lo : 27	Hi : 38 Me : 33 Lo : 29	Hi : 41 Me : 37 Lo : 32
Exterior dimensions Height x Width x Depth		200 × 950 × 500	200 × 950 × 500	220 × 1150 × 565
Net weight		25	25	31
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Centrifugal fan × 3	Centrifugal fan × 4
Motor		38	38	100
Starting method		Direct line start	Direct line start	Direct line start
Air flow (Standard)		Hi : 11.5 Me : 9 Lo : 7	Hi : 12.5 Me : 9 Lo : 7.2	Hi : 16 Me : 13 Lo : 9.5
External static pressure		Standard: 10, Max: 50	Standard: 10, Max: 50	Standard: 10, Max: 50
Outside air intake		-	-	-
Suction guard (Air filter), Q'ty		Procure locally	Procure locally	Procure locally
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form
Operation control		Remote control switch	Remote control switch	Remote control switch
Operation switch		Option: RC-E5, RC-EX1A	Option: RC-E5, RC-EX1A	Option: RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.9 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A
Drain pump		Built-in drain pump	Built-in drain pump	Built-in drain pump
Drain hose		Connectable with VP25 (I.D.25,O.D.32)	Connectable with VP25 (I.D.25,O.D.32)	Connectable with VP25 (I.D.25,O.D.32)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Joint for drain piping	Mounting kit, Joint for drain piping	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit Pa
	DB	WB	DB	WB		
Operation	27°C	19°C	35°C	24°C	ISO-T1	10
Cooling*1	27°C	19°C	35°C	24°C		
Heating*2	20°C		7°C	6°C		

(2) Sound pressure level shows the value when the supply duct of 2m and the return duct of 1m are connected the unit.

(3) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

(4) Sound pressure level ① : Mike position is 1.5m below the unit, ② : Mike position is 1m in front and 1m below od the air supply duct.

(5) Initial static pressure value of option suction guard (Air filter) "UT-FL2EF", "UT-FL3EF" is 5Pa.

(9) Duct connected (Compact and Flexible) type (FDUH)
 Models FDUH22KXE6F, 28KXE6F, 36KXE6F

Model			FDUH22KXE6F	FDUH28KXE6F	FDUH36KXE6F
Nominal cooling capacity	kW		2.2	2.8	3.6
Nominal heating capacity			2.5	3.2	4.0
Power source			220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	kW	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
	Heating		0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07	0.05 - 0.07 / 0.07
Running current	Cooling	A	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
	Heating		0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35	0.25 - 0.32 / 0.35
Sound pressure level	dB(A)		P-Hi : 39 Hi : 33 Me : 30 Lo : 27	P-Hi : 39 Hi : 33 Me : 30 Lo : 27	P-Hi : 39 Hi : 33 Me : 30 Lo : 27
Exterior dimensions Height x Width x Depth	mm		257 × 570 × 530	257 × 570 × 530	257 × 570 × 530
Net weight	kg		22	22	22
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1
Motor	W		30	30	30
Starting method			Direct line start	Direct line start	Direct line start
Air flow	m ³ /min		P-Hi : 8.5 Hi : 7 Me : 6.5 Lo : 6	P-Hi : 8.5 Hi : 7 Me : 6.5 Lo : 6	P-Hi : 8.5 Hi : 7 Me : 6.5 Lo : 6
External static pressure	Pa		30	30	30
Outdoor air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Procure locally	Procure locally	Procure locally
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards	External static pressure of indoor unit Pa
	DB	WB	DB	WB		
Cooling	27°C	19°C	35°C	24°C	ISO-T1	30
Heating	20°C		7°C	6°C		

- (2) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"
 (3) As for "Exterior dimensions" of <Bottom suction setting>, refer to "PJC001Z292".
 (4) Initial static pressure values of option air filter "UH-FL1E" are 5Pa.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.

PJC001Z330

Model		FDK22KXE6F	FDK28KXE6F	FDK36KXE6F
Nominal cooling capacity*1	kW	2.2	2.8	3.6
Nominal heating capacity*2		2.5	3.2	4.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	0.05	0.05	0.05
	Heating	0.04	0.04	0.04
Running current	Cooling	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23
	Heating	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23
Sound pressure level	Cooling	P-Hi : 38 Hi : 35 Me : 33 Lo : 31	P-Hi : 38 Hi : 35 Me : 33 Lo : 31	P-Hi : 48 Hi : 41 Me : 35 Lo : 31
	Heating	P-Hi : 38 Hi : 35 Me : 33 Lo : 31	P-Hi : 38 Hi : 35 Me : 33 Lo : 31	P-Hi : 42 Hi : 39 Me : 35 Lo : 31
Exterior dimensions Height x Width x Depth	mm	298 x 840 x 259	298 x 840 x 259	298 x 840 x 259
Exterior appearance (Munsell color)		Cool white (9.3G8.7/0.1) near equivalent	Cool white (9.3G8.7/0.1) near equivalent	Cool white (9.3G8.7/0.1) near equivalent
Net weight	kg	12	12	12
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan×1	Tangential fan × 1	Tangential fan × 1
Motor	W	33	33	33
Starting method		Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 11 Hi : 8 Me : 7 Lo : 6	P-Hi : 11 Hi : 8 Me : 7 Lo : 6	P-Hi : 15 Hi : 10 Me : 9 Lo : 7
External static pressure	Pa	0	0	0
Outdoor air intake		Not possible	Not possible	Not possible
Air filter, Q'ty		Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form
Operation control		Remote control switch	Remote control switch	Remote control switch
Operation switch		Option : RC-E5, RC-EX1A	Option : RC-E5,RC-EX1A	Option : RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data		Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")
Refrigerant piping size				
Connecting method		Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A
Drain hose		Connectable with VP16	Connectable with VP16	Connectable with VP16
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit	Mounting kit	Mounting kit

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

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

ISO-T1"UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model		FDK45KXE6F	FDK56KXE6F	FDK71KXE6F
Nominal cooling capacity*1	kW	4.5	5.6	7.1
Nominal heating capacity*2		5.0	6.3	8.0
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	0.05	0.05	0.09
	Heating	0.05	0.05	0.09
Running current	Cooling	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.41 - 0.48 / 0.41
	Heating	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.41 - 0.48 / 0.41
Sound pressure level	Cooling	P-Hi : 48 Hi : 42 Me : 37 Lo : 33	P-Hi : 48 Hi : 46 Me : 42 Lo : 37	P-Hi : 48 Hi : 47 Me : 43 Lo : 39
	Heating	P-Hi : 43 Hi : 42 Me : 37 Lo : 33	P-Hi : 47 Hi : 46 Me : 42 Lo : 37	P-Hi : 48 Hi : 47 Me : 43 Lo : 39
Exterior dimensions Height x Width x Depth	mm	298 x 840 x 259	298 x 840 x 259	318 x 1,098 x 248
Exterior appearance (Munsell color)		Cool white (9.3G8.7/0.1) near equivalent	Cool white (9.3G8.7/0.1) near equivalent	Cool white (9.3G8.7/0.1) near equivalent
Net weight	kg	12.5	13	15.5
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Tangential fan x 1	Tangential fan x 1
Motor	W	33	33	45
Starting method		Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	P-Hi : 15 Hi : 11 Me : 9 Lo : 7	P-Hi : 16 Hi : 14 Me : 12 Lo : 10	P-Hi : 24 Hi : 21 Me : 18 Lo : 15
External static pressure	Pa	0	0	0
Outdoor air intake		Not possible	Not possible	Not possible
Air filter, Q'ty		Polypropylene net x 2 (Washable)	Polypropylene net x 2 (Washable)	Polypropylene netx2 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form
Operation control		Remote control switch	Remote control switch	Remote control switch
Operation switch		Option : RC-E5,RC-EX1A	Option : RC-E5,RC-EX1A	Option : RC-E5,RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data		Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")
Refrigerant piping size				
Connecting method		Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A
Drain hose		Connectable with VP16	Connectable with VP16	Connectable with VP16
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit	Mounting kit	Mounting kit

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation	27°C	19°C	35°C	24°C	ISO-T1
Cooling*1	20°C		7°C	6°C	
Heating*2	20°C		7°C	6°C	

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

ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model		FDE36KXZE1	FDE45KXZE1	FDE56KXZE1	FDE71KXZE1	
Nominal cooling capacity*1	kW	3.6	4.5	5.6	7.1	
Nominal heating capacity*2		4.0	5.0	6.3	8.0	
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	
Power consumption	Cooling	kW	0.05	0.05	0.05	0.07
	Heating		0.05	0.05	0.05	0.07
Running current	Cooling	A	0.45	0.45	0.45	0.65
	Heating		0.45	0.45	0.45	0.65
Sound pressure level	dB(A)	P-Hi : 46 Hi : 38 Me : 31 Lo : 26	P-Hi : 46 Hi : 38 Me : 36 Lo : 31	P-Hi : 46 Hi : 38 Me : 36 Lo : 31	P-Hi : 47 Hi : 39 Me : 37 Lo : 32	
Exterior dimensions Height x Width x Depth	mm	210 x 1,070 x 690	210x1,070x690	210 x 1,070 x 690	210 x 1,320 x 690	
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	Plaster white (6.8Y8.9/0.2) near equivalent	
Net weight	kg	28	28	28	33	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Centrifugal fan x 2	Centrifugal fan x 2	Centrifugal fan x 2	Centrifugal fan x 4	
Motor	W	30	30	30	50	
Starting method		Direct line start	Direct line start	Direct line start	Direct line start	
Air flow (Standard)	m ³ /min	P-Hi : 13 Hi : 10 Me : 7 Lo : 5.5	P-Hi : 13 Hi : 10 Me : 9 Lo : 7	P-Hi : 13 Hi : 10 Me : 9 Lo : 7	P-Hi : 20 Hi : 15 Me : 13 Lo : 10	
External static pressure	Pa	0	0	0	0	
Outdoor air intake		Not possible	Not possible	Not possible	Not possible	
Air filter, Q'ty		Pocket plastic net x 2 (Washable)	Pocket plastic net x 2 (Washable)	Pocket plastic net x 2 (Washable)	Pocket plastic net x 2 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form	
Operation control Operation switch		Remote control switch Option : RC-E5,RC-EX1A	Remote control switch Option : RC-E5,RC-EX1A	Remote control switch Option : RC-E5,RC-EX1A	Remote control switch Option : RC-E5,RC-EX1A	
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")	
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping	
Refrigerant		R410A	R410A	R410A	R410A	
Drain hose		Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20	
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
 ISO-T1"UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model		FDE112KXZE1		FDE140KXZE1	
Nominal cooling capacity*1	kW	11.2		14.0	
Nominal heating capacity*2		12.5		16.0	
Power source		220-240V 50Hz / 220V 60Hz		220-240V 50Hz / 220V 60Hz	
Power consumption	Cooling	0.10		0.13	
	Heating	0.10		0.13	
Running current	Cooling	0.90		1.20	
	Heating	0.90		1.20	
Sound pressure level	dB(A)	P-Hi : 45 Hi : 42 Me : 38 Lo : 34		P-Hi : 48 Hi : 43 Me : 40 Lo : 35	
Exterior dimensions Height x Width x Depth	mm	250 x 1,620 x 690		250 x 1,620 x 690	
Exterior appearance (Munsell color)		Plaster white (6.8Y8.9/0.2) near equivalent		Plaster white (6.8Y8.9/0.2) near equivalent	
Net weight	kg	43		43	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve		Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Centrifugal fan x 4		Centrifugal fan x 4	
Motor	W	65		80	
Starting method		Direct line start		Direct line start	
Air flow (Standard)	m ³ /min	P-Hi : 28 Hi : 25 Me : 21 Lo : 16.5		P-Hi : 32 Hi : 26 Me : 23 Lo : 17	
External static pressure	Pa	0		0	
Outdoor air intake		Not possible		Not possible	
Air filter, Q'ty		Pocket plastic net x 2 (Washable)		Pocket plastic net x 2 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form		Polyurethane form	
Operation control		Remote control switch		Remote control switch	
Operation switch		Option : RC-E5, RC-EX1A		Option : RC-E5, RC-EX1A	
Room temperature control		Thermostat by electronics		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor Frost protection thermostat		Internal thermostat for fan motor Frost protection thermostat	
Installation data		Liquid line : φ9.52 (3/8") Gas line : φ15.88 (5/8")		Liquid line : φ9.52 (3/8") Gas line : φ15.88 (5/8")	
Connecting method		Flare piping		Flare piping	
Refrigerant		R410A		R410A	
Drain hose		Connectable with VP20		Connectable with VP20	
Insulation for piping		Necessary (both Liquid & Gas line)		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose		Mounting kit, Drain hose	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1"UNITARY AIR-CONDITIONERS"

(3) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo)only.

Model		FDFW28KXE6F	FDFW45KXE6F	FDFW56KXE6F
Nominal cooling capacity*1	kW	2.8	4.5	5.6
Nominal heating capacity*2		3.2	5.0	6.3
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz
Power consumption	Cooling	kW	0.02 - 0.02 / 0.02	0.03 - 0.03 / 0.03
	Heating		0.02 - 0.02 / 0.02	0.03 - 0.03 / 0.03
Running current	Cooling	A	0.18 - 0.17 / 0.18	0.27 - 0.25 / 0.27
	Heating		0.18 - 0.17 / 0.18	0.27 - 0.25 / 0.27
Sound pressure level	dB(A)	Hi : 36 Me : 34 Lo : 30	Hi : 38 Me : 36 Lo : 33	Hi : 44 Me : 37 Lo : 33
Exterior dimensions Height x Width x Depth	mm	600 × 860 × 238	600 × 860 × 238	600 × 860 × 238
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Fine snow (8.0Y9.3/0.1) near equivalent	Fine snow (8.0Y9.3/0.1) near equivalent
Net weight	kg	19	20	20
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor	W	40	40	40
Starting method		Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	Hi : 9 Me : 8 Lo : 7	Hi : 9 Me : 8 Lo : 7	Hi : 11 Me : 9 Lo : 8
External static pressure	Pa	0	0	0
Outdoor air intake		Not possible	Not possible	Not possible
Air filter, Q'ty		Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")
Connecting method		Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A
Drain hose		Connectable with VP16 (I.D.16.0)	Connectable with VP16 (I.D.16.0)	Connectable with VP16 (I.D.16.0)
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit	Mounting kit	Mounting kit

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
 ISO-T1 "UNITARY AIR-CONDITIONERS"

Model		FDFL71KXE6F	
Nominal cooling capacity*1		7.1	
Nominal heating capacity*2	kW	8.0	
Power source		220-240V 50Hz	
Power consumption	Cooling	0.09 - 0.10	
	Heating	0.09 - 0.10	
Running current	Cooling	0.41 - 0.42	
	Heating	0.41 - 0.42	
Sound pressure level	dB(A)	Hi : 43 Me : 41 Lo : 40	
Exterior dimensions Height x Width x Depth	mm	630 x 1,481 x 225	
Exterior appearance (Munsell color)		Ceramic white (N8.0) near equivalent	
Net weight	kg	40	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Centrifugal fan x 2	
Motor	W	40	
Starting method		Direct line start	
Air flow (Standard)	m ³ /min	Hi : 18 Me : 15 Lo : 12	
External static pressure	Pa	0	
Outdoor air intake		Not possible	
Air filter, Q'ty		Polypropylene net x 1 (Washable)	
Shock & vibration absorber		Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form	
Operation control Operation switch		Remote control switch Option : RC-E5, RC-EX1A	
Room temperature control		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")	
Connecting method		Flare piping	
Refrigerant		R410A	
Drain hose		Connectable with VP20	
Insulation for piping		Necessary (both Liquid & Gas line)	
Accessories		Mounting kit, Drain hose	

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1"UNITARY AIR-CONDITIONERS"

PGD000Z097

Model		FDUF28KXE6F	FDUF45KXE6F	FDUF56KXE6F	FDUF71KXE6F
Nominal cooling capacity*1	kW	2.8	4.5	5.6	7.1
Nominal heating capacity*2		3.2	5.0	6.3	8.0
Power source		220-240V 50Hz	220-240V 50Hz	220-240V 50Hz	220-240V 50Hz
Power consumption	Cooling	kW	0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
	Heating		0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
Running current	Cooling	A	0.41 - 0.42	0.41 - 0.42	0.41 - 0.42
	Heating		0.41 - 0.42	0.41 - 0.42	0.41 - 0.42
Sound pressure level	dB(A)	Hi : 41 Me : 38 Lo : 36	Hi : 43 Me : 41 Lo : 40	Hi : 43 Me : 41 Lo : 40	Hi : 43 Me : 41 Lo : 40
Exterior dimensions Height x Width x Depth	mm	630 × 1,077 × 225	630 × 1,077 × 225	630 × 1,077 × 225	630 × 1,362 × 225
Net weight	kg	25	25	25	32
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor	W	30	40	40	40
Starting method		Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)	m ³ /min	Hi : 12 Me : 11 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 18 Me : 15 Lo : 12
External static pressure	Pa	0	0	0	0
Outdoor air intake		Not possible	Not possible	Not possible	Not possible
Air filter, Q'ty		Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch		Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A	Remote control switch Option : RC-E5, RC-EX1A
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size		Liquid line : φ 6.35 (1/4") Gas line : φ 9.52 (3/8")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 6.35 (1/4") Gas line : φ 12.7 (1/2")	Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")
Connecting method		Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant		R410A	R410A	R410A	R410A
Drain hose		Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories		Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
 ISO-T1 "UNITARY AIR-CONDITIONERS"

Model		FDU650FKXZE1	FDU1100FKXZE1	FDU1800FKXZE1	FDU2400FKXZE1	
Nominal cooling capacity	kW	9.0	14.0	22.4	28.0	
Nominal heating capacity		6.5	10.5	16.0	21.5	
Power source		220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	220-240V 50Hz / 220V 60Hz	
Power consumption	Cooling	kW	0.24 - 0.25 / 0.24	0.35 - 0.36 / 0.35	1.16 - 1.20 / 1.16	1.16 - 1.20 / 1.16
	Heating		0.24 - 0.25 / 0.24	0.35 - 0.36 / 0.35	1.16 - 1.20 / 1.16	1.16 - 1.20 / 1.16
Running current	Cooling	A	1.80 - 1.70 / 1.80	2.30 - 2.20 / 2.30	6.80 - 6.50 / 6.80	6.80 - 6.50 / 6.80
	Heating		1.80 - 1.70 / 1.80	2.30 - 2.20 / 2.30	6.80 - 6.50 / 6.80	6.80 - 6.50 / 6.80
Sound power level	dB(A)	55	62	68	70	
Sound pressure level	dB(A)	Hi : 31	Hi : 37	Hi : 42	Hi : 45	
Exterior dimensions Height x Width x Depth	mm	280 × 950 × 635	280 × 1,370 × 740	379 × 1,600 × 893	379 × 1,600 × 893	
Net weight	kg	34	54	89	89	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	Electronic expansion valve	
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Centrifugal fan × 3	Centrifugal fan × 3	Centrifugal fan × 3	
Motor	W	130	100 + 200	130 + 350	130 + 350	
Starting method		Direct line start	Direct line start	Direct line start	Direct line start	
Air flow (Standard)	m ³ /min	Hi : 11	Hi : 18	Hi : 30	Hi : 40	
External static pressure	Pa	200 (at 11m ³ /min)	200 (at 18m ³ /min)	200 (at 30m ³ /min)	200 (at 40m ³ /min)	
Outdoor air intake		Possible	Possible	Possible	Possible	
Air filter, Q'ty		Procure locally	Procure locally	Procure locally	Procure locally	
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	
Insulation (Noise & heat)		Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form	
Operation control Operation switch		Remote control switch (Option) Wired: RC-EX1A, RC-E5, RCH-E3 Wireless : RCN-KIT3-E	Remote control switch (Option) Wired: RC-EX1A, RC-E5, RCH-E3 Wireless : RCN-KIT3-E	Remote control switch (Option) Wired: RC-EX1A, RC-E5, RCH-E3 Wireless: RCN-KIT3-E	Remote control switch (Option) Wired: RC-EX1A, RC-E5, RCH-E3 Wireless: RCN-KIT3-E	
Room temperature control		Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	
Safety equipment		Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	
Installation data Refrigerant piping size		Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ 9.52 (3/8") Gas line : φ 15.88 (5/8")	Liquid line : φ 9.52 (3/8") Gas line : φ 19.05 (3/4")	Liquid line : φ 9.52 (3/8") Gas line : φ 22.22 (7/8")	
Connecting method		Flare piping	Flare piping	Brazing	Brazing	
Refrigerant		R410A	R410A	R410A	R410A	
Drain pump		Built-in drain pump	Built-in drain pump	—	—	
Drain hose		Connectable with VP25 (Standard)	Connectable with VP25 (Standard)	Connectable with VP25 (Standard)	Connectable with VP25 (Standard)	
Insulation for piping		Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	
Accessories		Drain hose	Drain hose	Drain hose	Drain hose	
Notes (1) The data are measured at 33°CDB 28°CWB (68%RH) during cooling and 0°CDB -2.9°CWB (50%RH) during heating (no frost). (2) Temperature range of outdoor air must be 20 - 40°CDB (32°CWB or less) during cooling and -10°C - 24°CDB during heating. (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 factory E.S.P. setting is set within the range of 10 - 120Pa. When SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200Pa. (For RC-EX1A and RC-E5 only)					Adapted to RoHS directive	

(15) Outdoor air processing unit (FDU-F)
 Models FDU650FKXZE1, 1100FKXZE1, 1800FKXZE1, 2400FKXZE1

FDU-F Outdoor air processing unit and connection to KXZE1 and allowable combinations

Outdoor unit series			KXZE1(10-24HP,280-680)	
Connection to FDU-F			YES*1	
Limitation on connection capacity	In case of FDU-F use only	Capacity ratio*2	50—100%	
		Number of units	2 units or less	
	Combination with indoor unit	FDU-F Outdoor air processing unit	Capacity ratio*2	30% or lower
			Number of units	No limitation
	Indoor unit total capacity (including FDU-F)		50—100%	

*1 Possible (When outdoor temperature is -10°C or higher)

*2 FDU-F capacity/outdoor unit capacity ratio

Remarks : When calculating the capacity ratio with the indoor units, FDU-F units will be calculated by the following normal values.

FDU650FKXE1=90, FDU1100FKXE1=140, FDU1800FKXE1=224,
FDU2400FKXE1=280

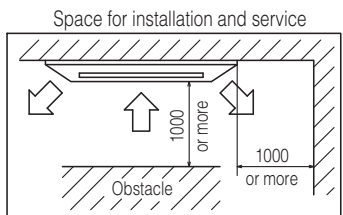
3. EXTERIOR DIMENSIONS

(1) Indoor unit

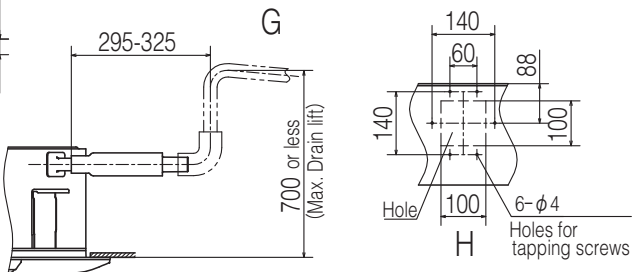
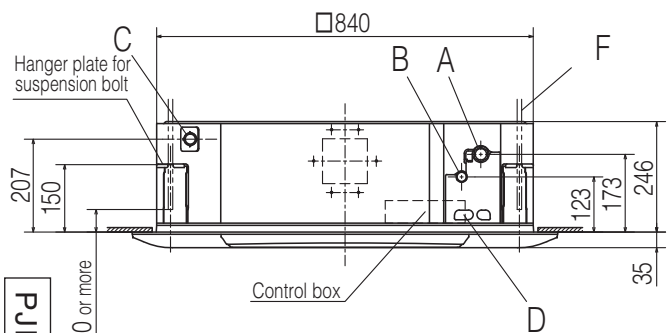
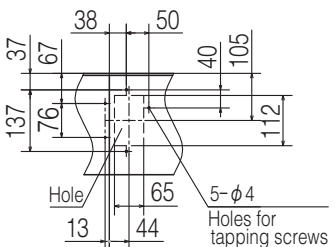
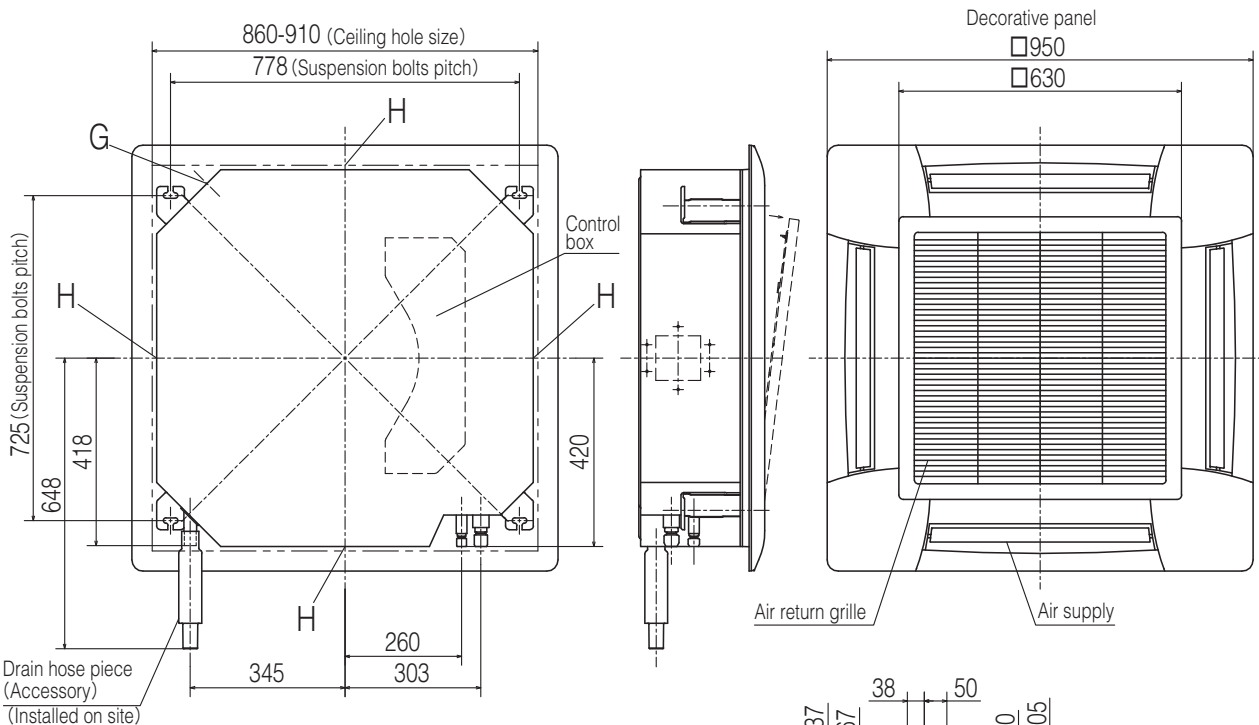
(a) Ceiling cassette-4 way type (FDT)

Models FDT28KXE6F, 36DXE6F, 45KXE6F, 56KXE6F, 71KXE6F

Symbol	Content			
	Model	28	36,45,56	71
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)	φ15.88 (5/8") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)		φ9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)		
D	Hole for wiring			
F	Suspension bolts	(M10 or M8)		
G	Outside air opening for ducting	(Knock out)		
H	Air outlet opening for ducting	(Knock out)		



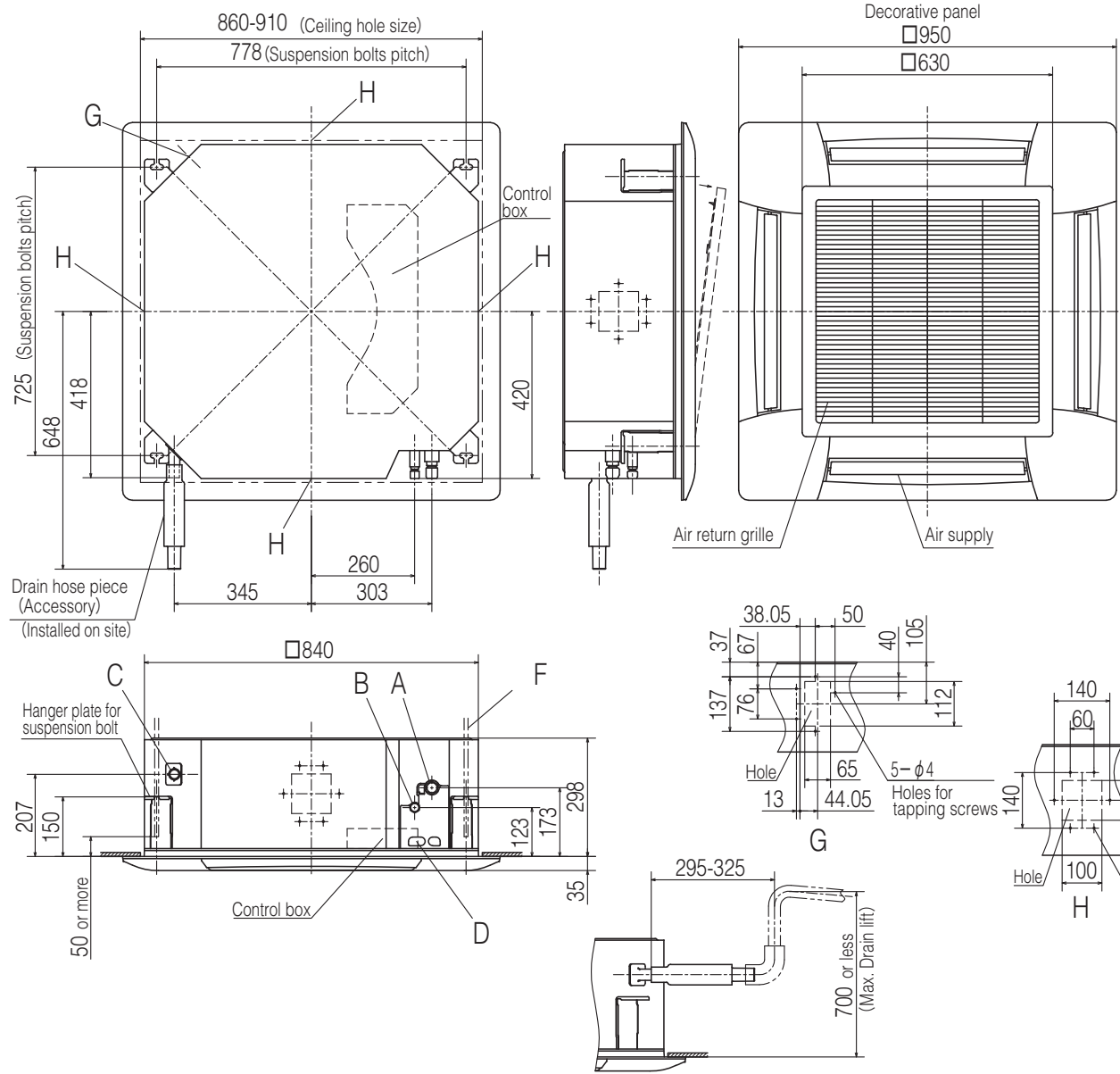
Make a space of 4000 or more between the units when installing more than one.



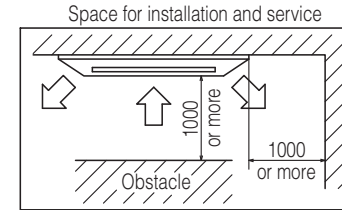
Note (1) The model name label is attached inside the air return grille.

Unit : mm

PJF000Z287



Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	
F	Suspension bolts	(M10 or M8)
G	Outside air opening for ducting	(Knock out)
H	Air outlet opening for ducting	(Knock out)



Make a space of 5000 or more between the units when installing more than one.

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

Unit : mm

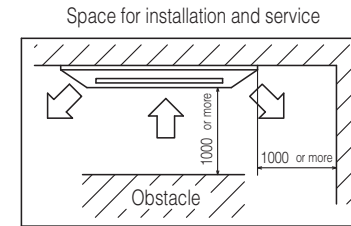
PJF000Z288



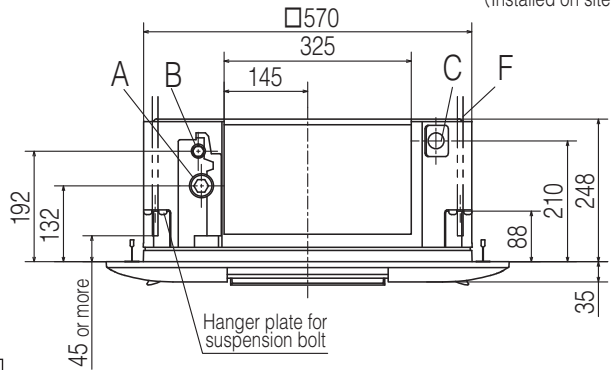
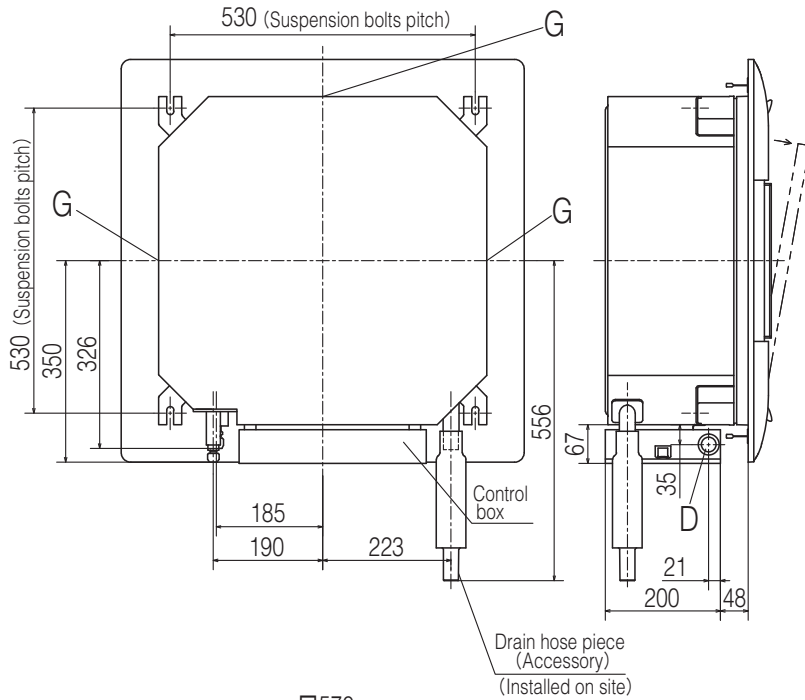
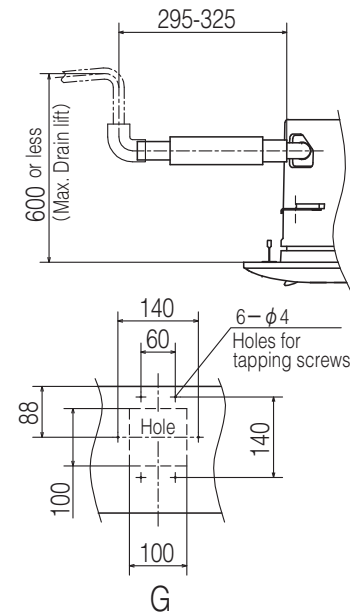
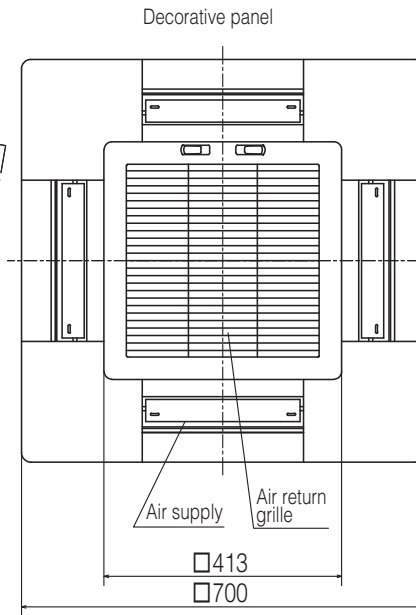
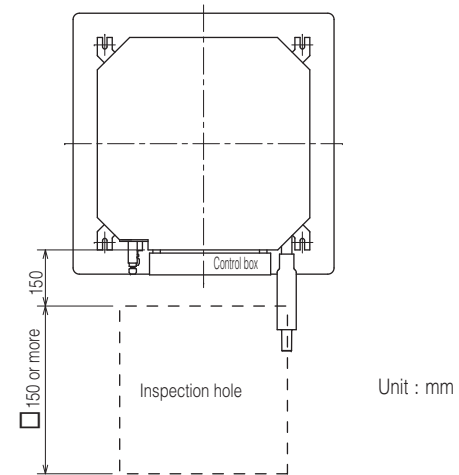
Models FDT90KXE6F, 112KXE6F, 140KXE6F, 160KXE6F

(b) Ceiling cassette-4 way compact type (FDTC)
Models FDTC15KXE6F, 22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

Symbol	Content		
	Model	15,22,28	36,45,56
A	Gas piping	φ 9.52 (3/8") (Flare)	φ 12.7 (1/2") (Flare)
B	Liquid piping	φ 6.35 (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D	Hole for wiring	φ 25	
F	Suspension bolts	(M10 or M8)	
G	Air outlet opening for ducting	(Knock out)	



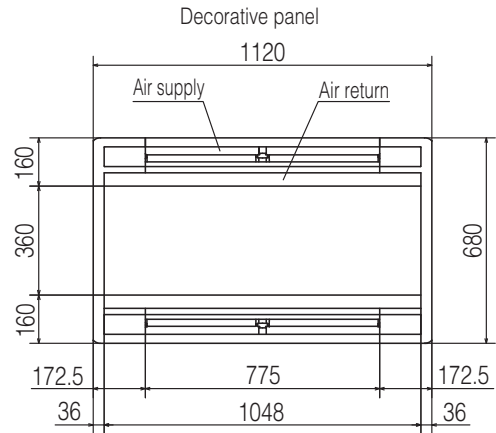
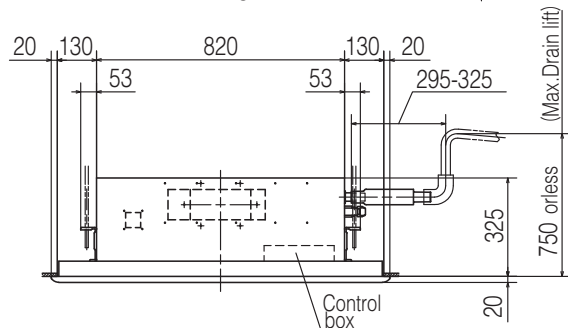
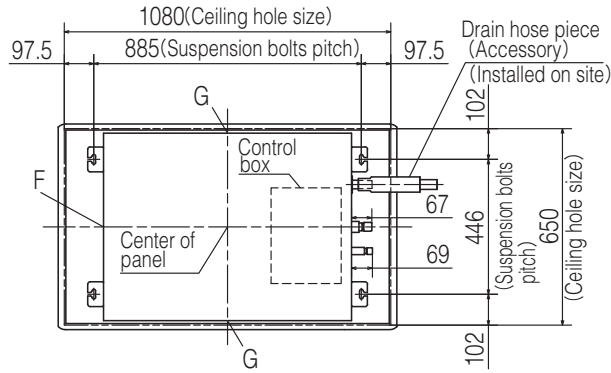
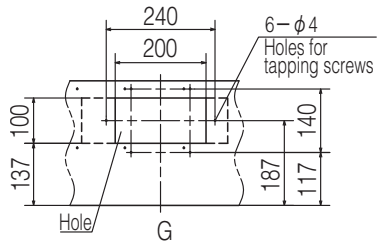
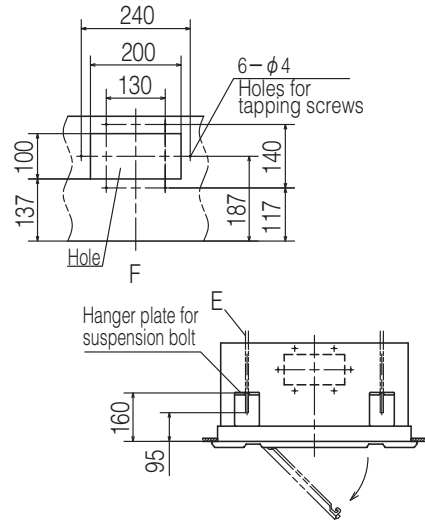
Make a space of 400 or more between the units when installing more than one.



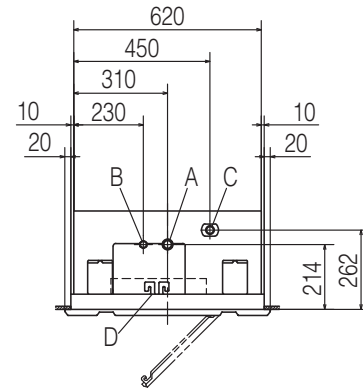
- Notes (1) The model name label is attached on the control box lid.
 (2) This unit is designed for 2x2 grid ceiling.
 If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection port on the control box side.

PJA003Z399

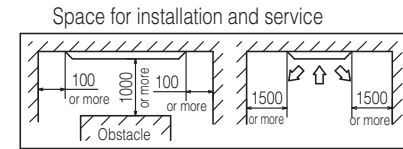
PJ8001Z713 



Symbol	Content			
	Model	28	45,56	71
A	Gas piping	φ9.52(3/8") (Flare)	φ12.7(1/2") (Flare)	φ15.88(5/8") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)		
C	Drain piping	VP25 (O.D.32)		
D	Hole for wiring			
E	Suspension bolts	(M10)		
F	Outside air opening for ducting	(Knock out)		
G	Air outlet opening for ducting	(Knock out)		




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

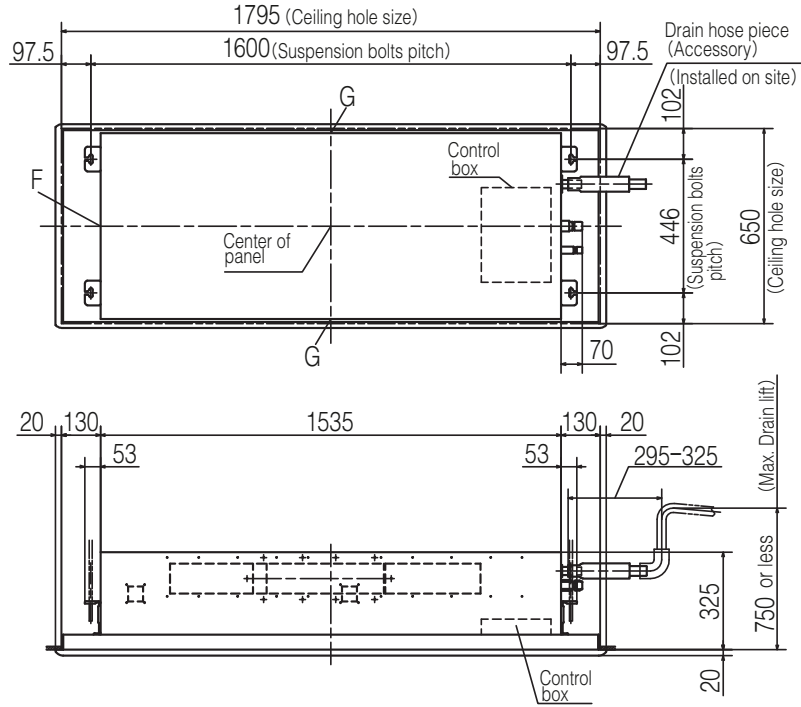
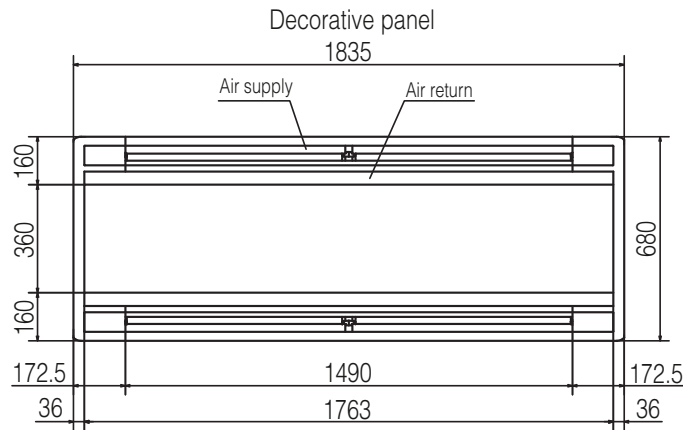
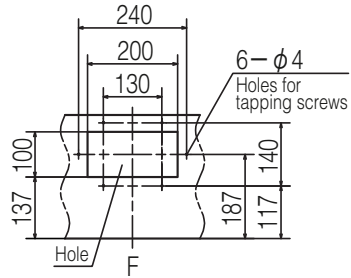
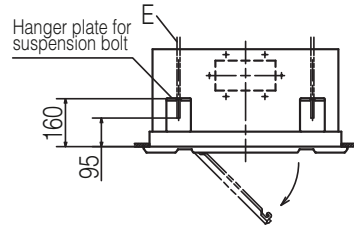
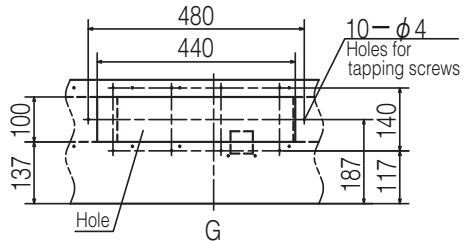


Make a space of 4000 or more between the units when installing more than one.

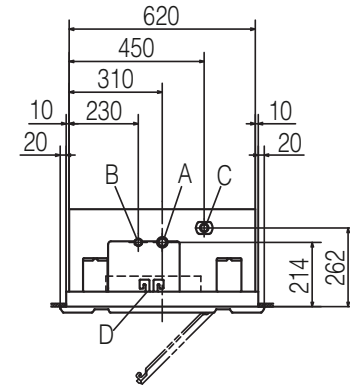
Unit : mm

(c) Ceiling cassette-2 way type (FDTW)
Models FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

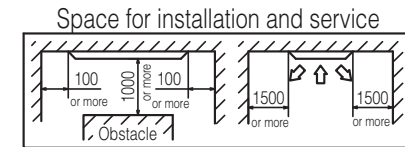
PJB001Z714 



Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)



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



Make a space of 5000 or more between the units when installing more than one.

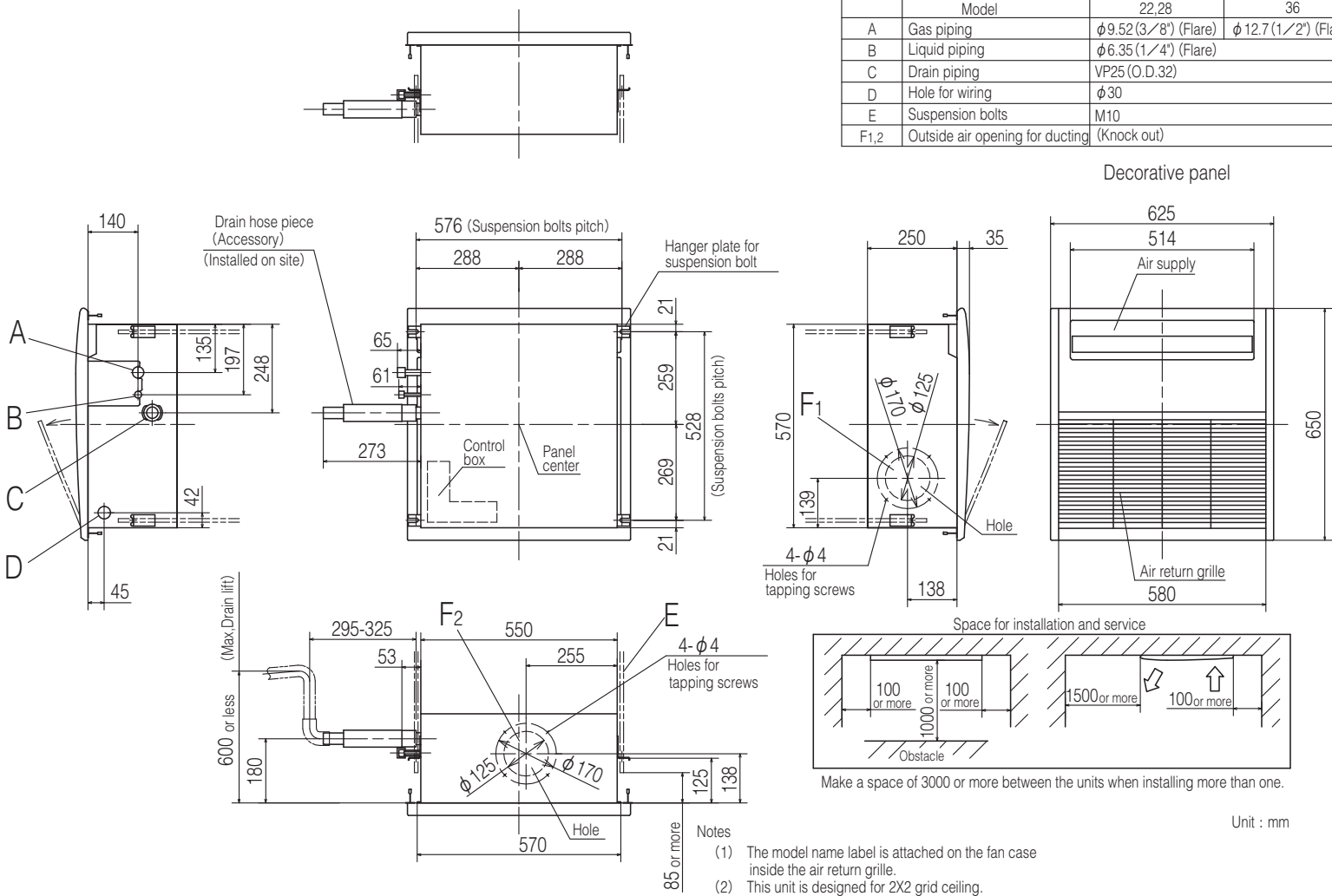
Unit : mm

Models FDTW90KXE6F, 112KXE6F, 140KXE6F

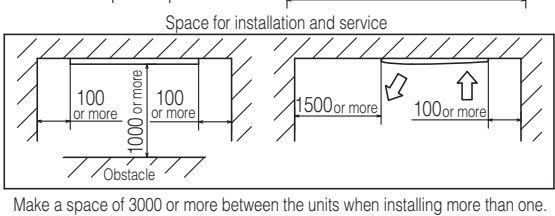
(d) Ceiling cassette-1 way compact type (FDTQ)
 (i) Direct blow type
 Models FDTQ22KXE6F, 28KXE6F, 36KXE6F


Symbol	Content		
	Model	22,28	36
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D	Hole for wiring	φ30	
E	Suspension bolts	M10	
F1,2	Outside air opening for ducting	(Knock out)	

Decorative panel

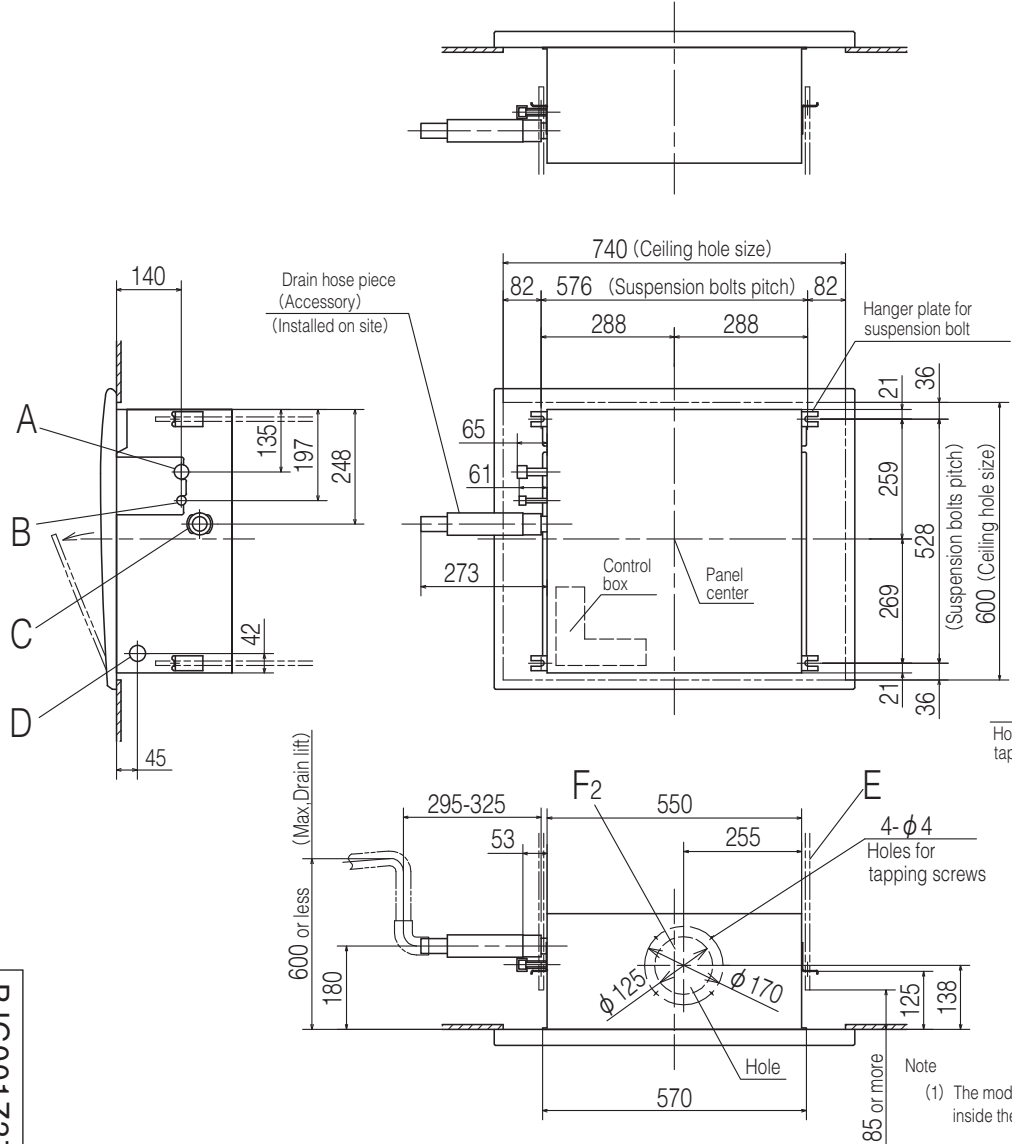


Direct blow panel (TQ-PSA-15W-E)

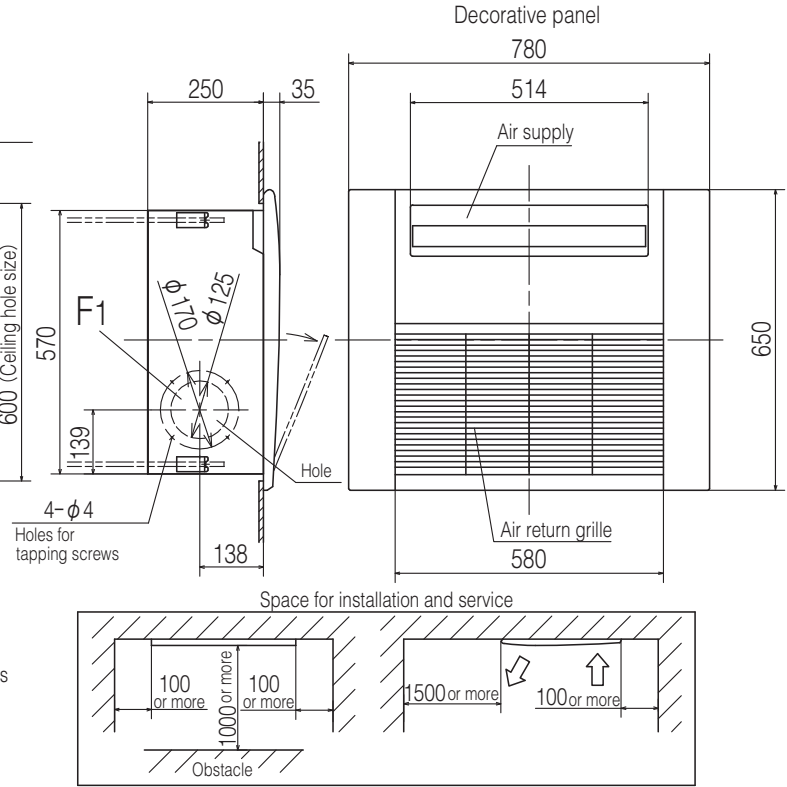


PJCC001Z276 

PJCC001Z277 



Symbol	Content	
	Model	
	22.28	36
A	Gas piping	$\phi 9.52 (3/8")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	$\phi 30$
E	Suspension bolts	M10
F _{1,2}	Outside air opening for ducting	(Knock out)



Make a space of 3000 or more between the units when installing more than one.

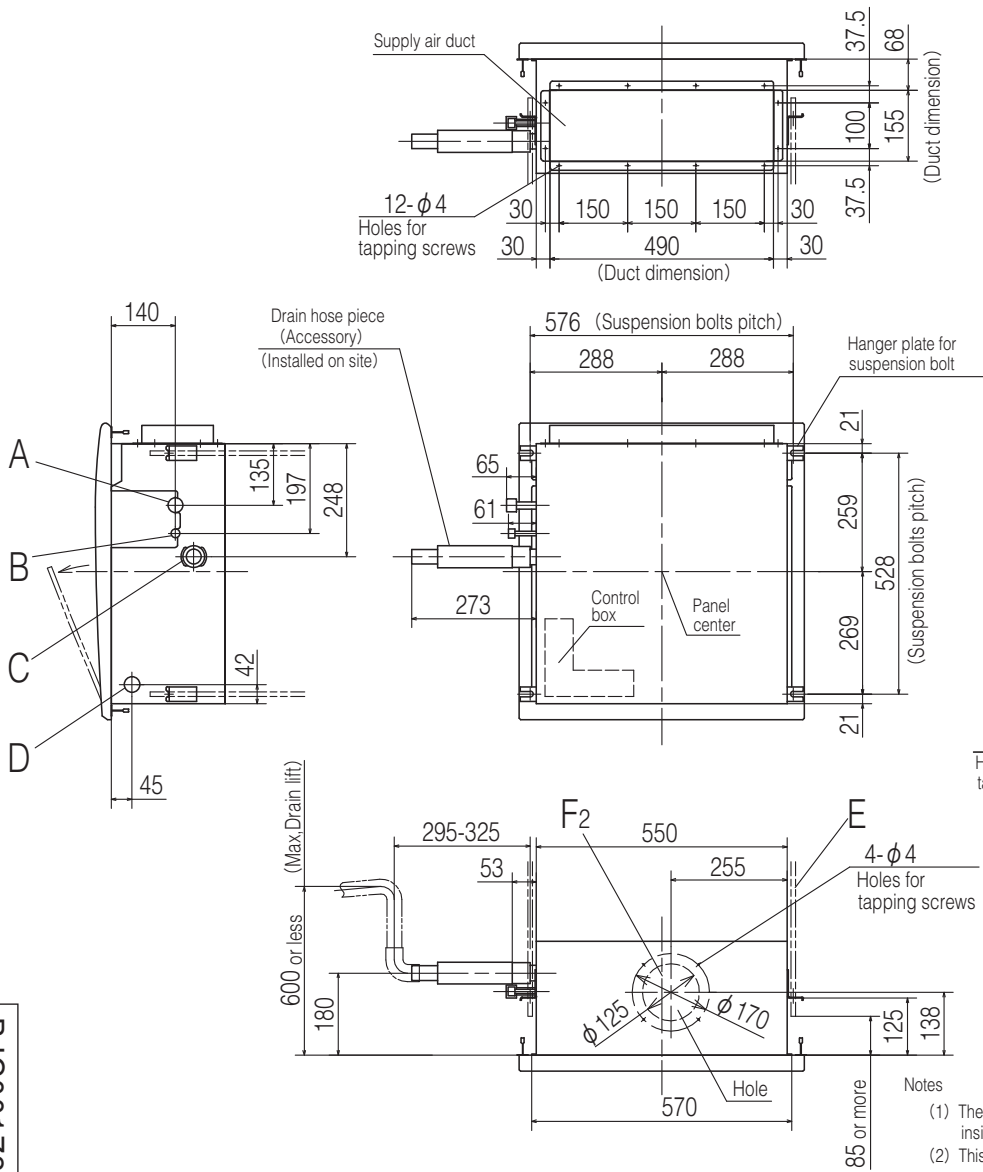
Unit : mm

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

Models FDTQ22KXE6F, 28KXE6F, 36KXE6F

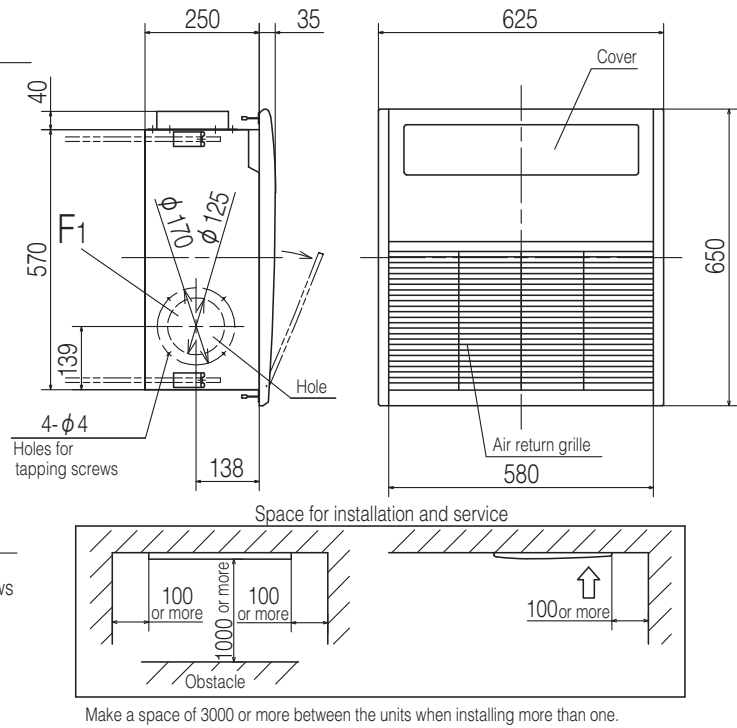
Direct blow panel (TQ-PSB-15W-E)

PJCC001Z278 



Symbol	Content		
	Model	22,28	36
A	Gas piping	$\phi 9.52$ (3/8") (Flare)	$\phi 12.7$ (1/2") (Flare)
B	Liquid piping	$\phi 6.35$ (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D	Hole for wiring	$\phi 30$	
E	Suspension bolts	M10	
F1,2	Outside air opening for ducting	(Knock out)	

Decorative panel



Unit : mm

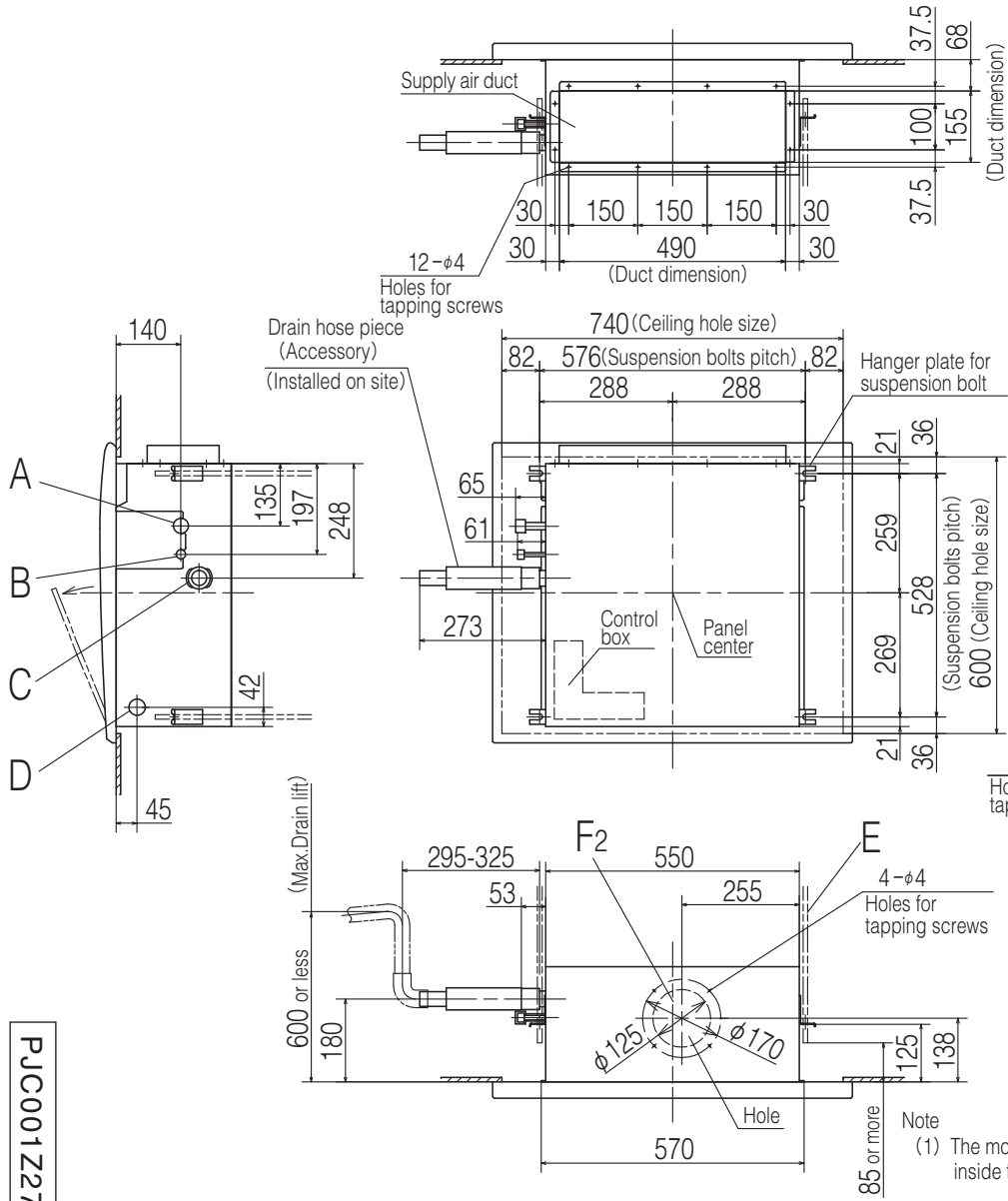
- (1) The model name label is attached on the fan case inside the air return grille.
- (2) This unit is designed for 2X2 grid ceiling.

(ii) Duct type

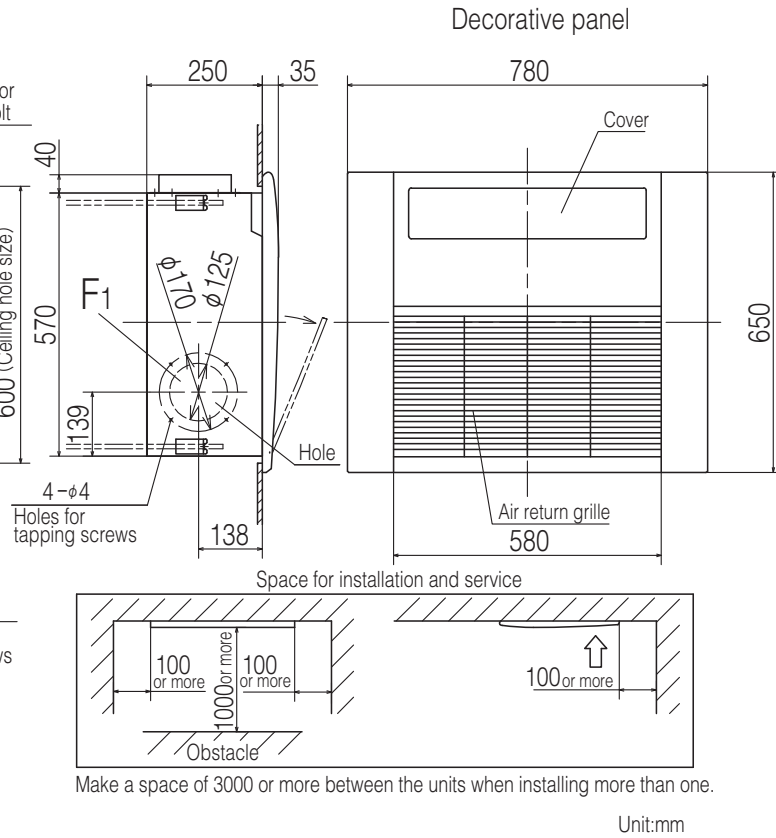
Models FDTQ22KXE6F, 28KXE6F, 36KXE6F

Duct panel (QR-PNA-14W-ER)

PJCC001Z279 



Symbol	Content	
	Model	22,28 36
A	Gas piping	φ9.52 (3/8") (Flare) φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	φ30
E	Suspension bolts	M10
F _{1,2}	Outside air opening for ducting	(Knock out)



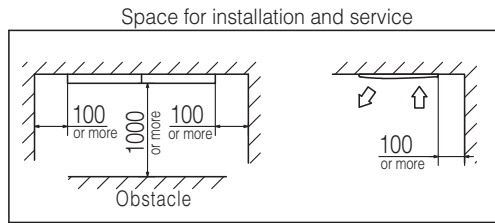
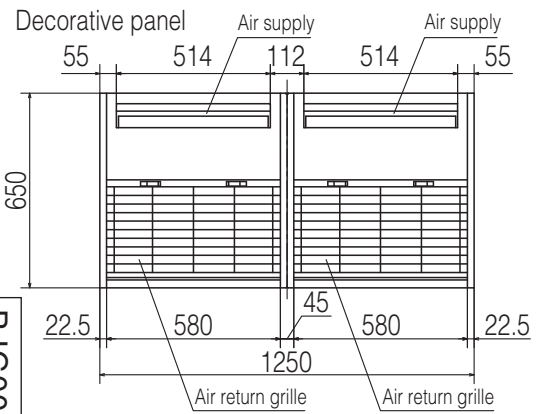
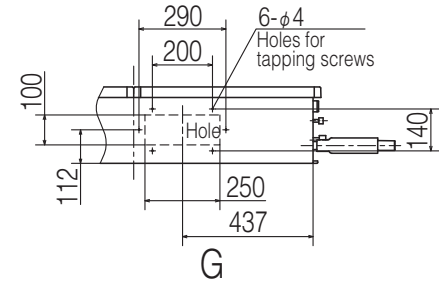
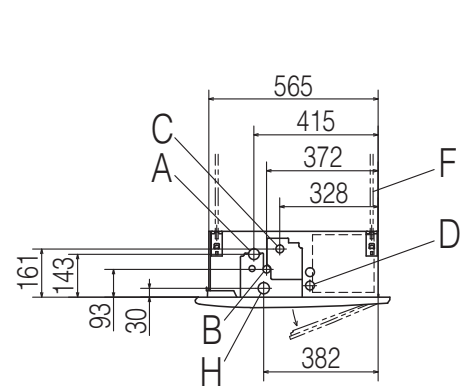
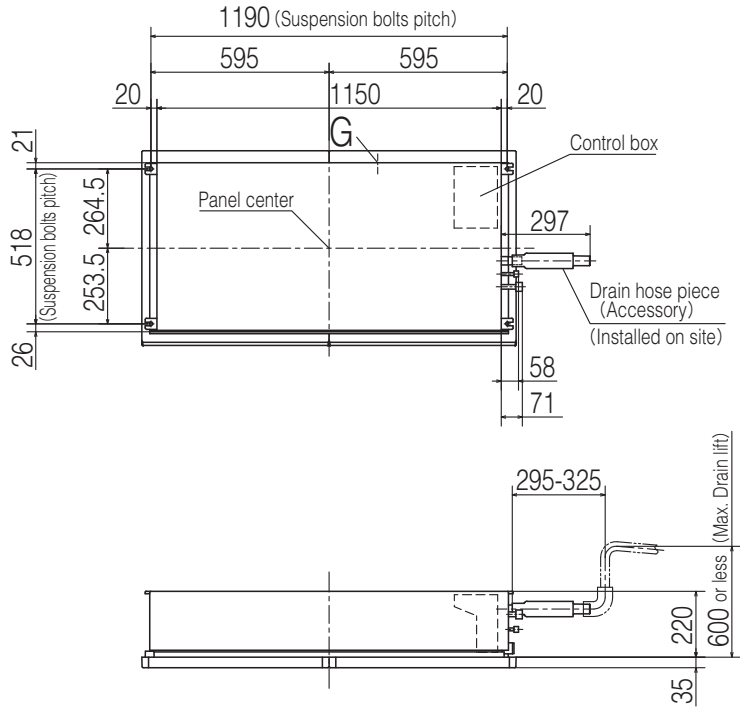
Make a space of 3000 or more between the units when installing more than one.

Models FDTQ22KXE6F, 28KXE6F, 36KXE6F

Duct panel (QR-PNB-14W-ER)

(e) Ceiling cassette-1 way type (FDTS)
Models FDTS45KXE6F, 71KXE6F

Symbol	Content	
	Model 45	71
A	Gas piping	$\phi 12.7 (1/2")$ (Flare) $\phi 15.88 (5/8")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare) $\phi 9.52 (3/8")$ (Flare)
C	Drain piping	VP25 (I.D.25, O.D.32) Note (2)
D	Hole for wiring	
F	Suspension bolts	(M10)
G	Outside air opening for ducting	(Knock out)
H	Drain piping (Gravity drainage)	VP25 (I.D.25, O.D.32)



Make a space of 4000 or more between the units when installing more than one.

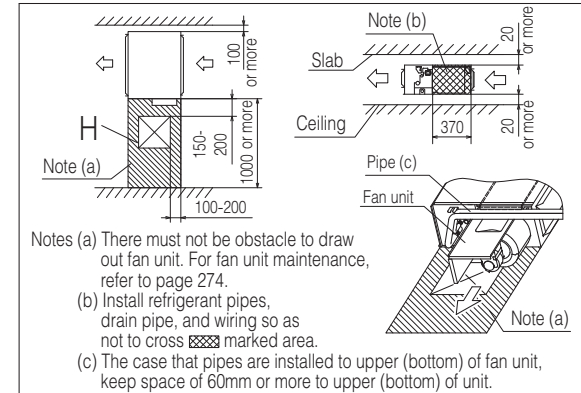
- Notes (1) The model name label is attached inside the air return grille.
 (2) Prepare the connecting socket (VP25) on site.
 (3) This unit is designed for 2x4 grid ceiling.
- Unit:mm

(f) Duct connected-High static pressure type (FDU)
Models FDU45KXE6F, 56KXE6F

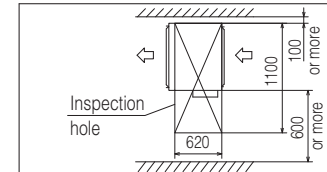
Symbol	Content	
A	Gas piping	$\phi 12.7 (1/2")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection hole	(450X450)

Space for installation and service

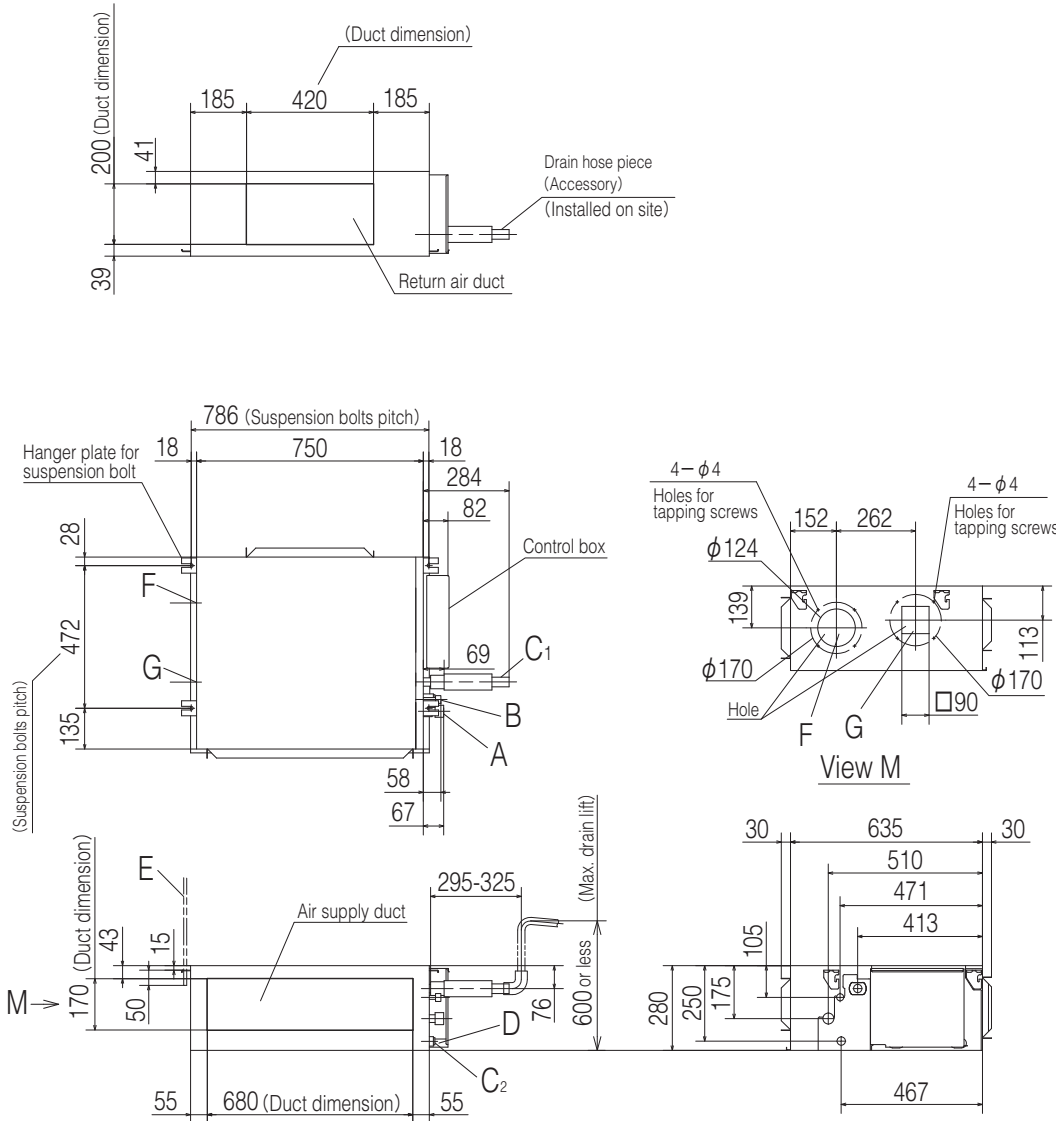
Select either of two cases to keep space for installation and services.
 (Case 1) From side of unit



(Case 2) From bottom of unit

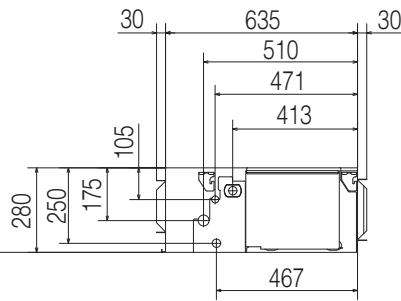
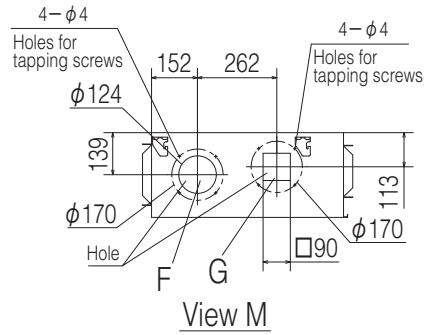
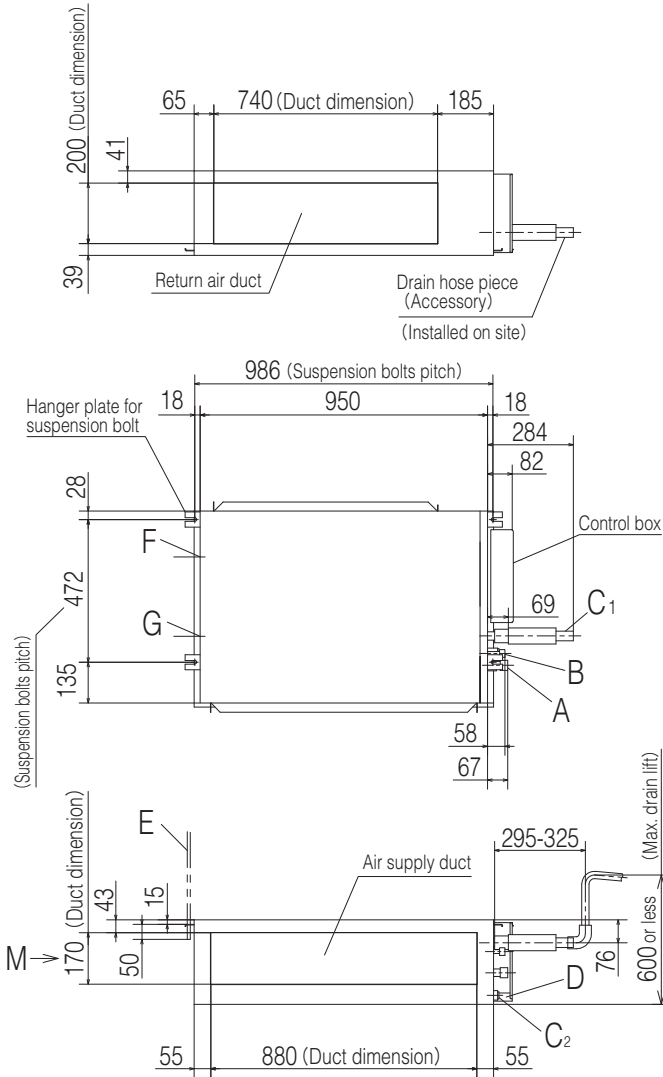


Unit:mm



PJG000Z056

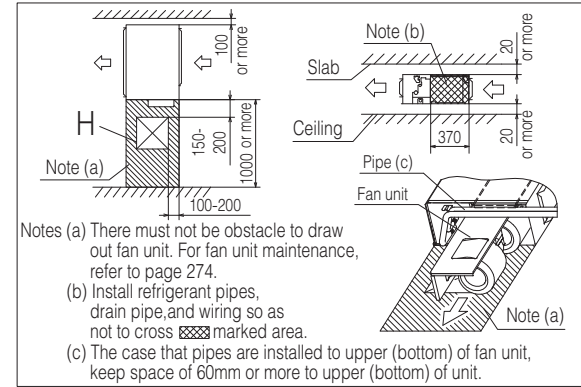
PJG000Z057 



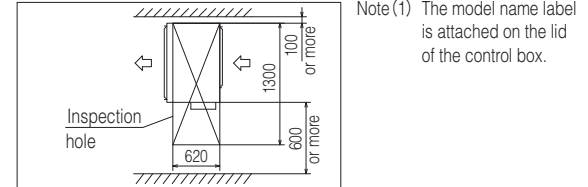
Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection hole	(450X450)

Space for installation and service

Select either of two cases to keep space for installation and services.
(Case 1) From side of unit

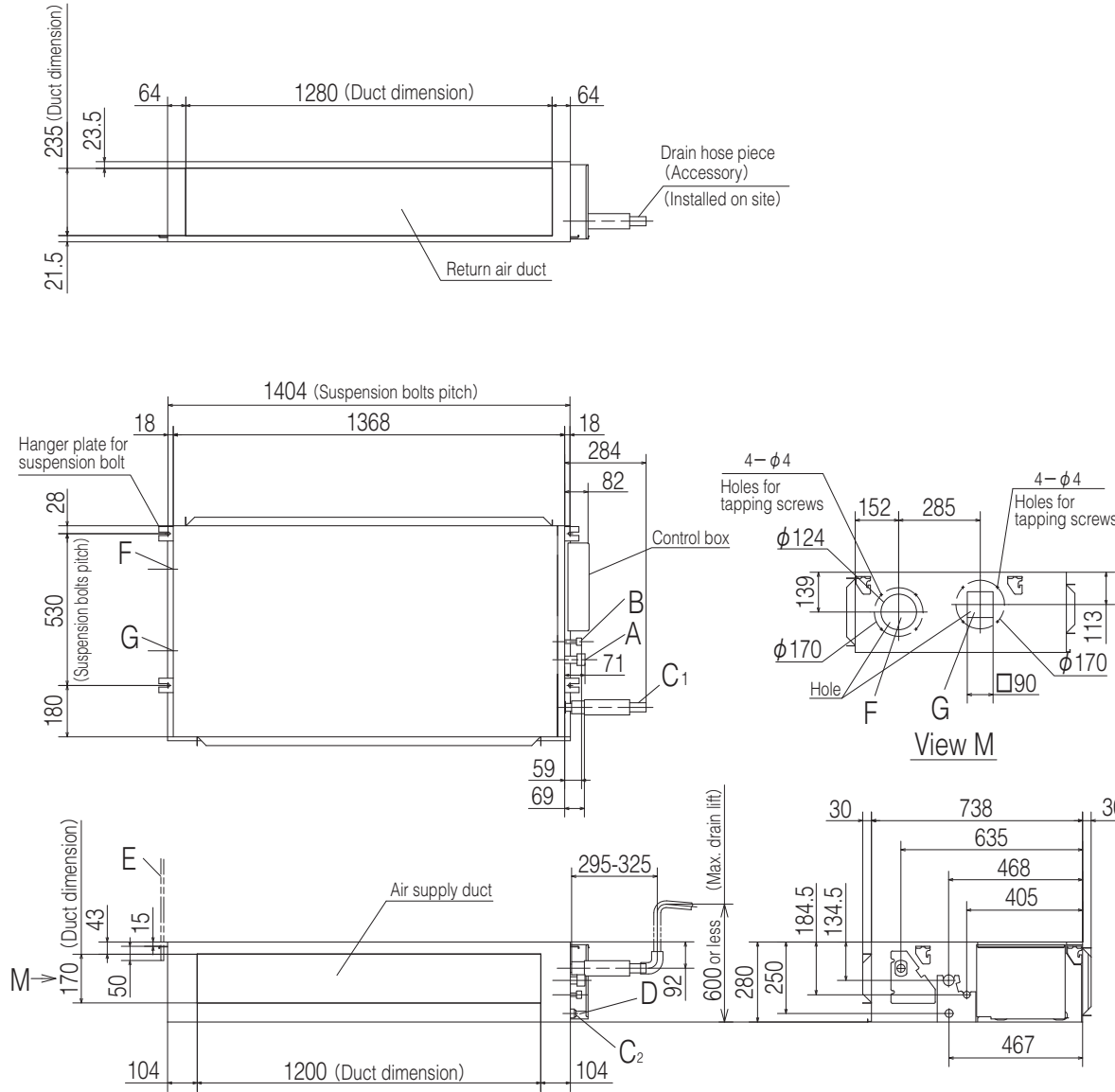


(Case 2) From bottom of unit



Unit:mm

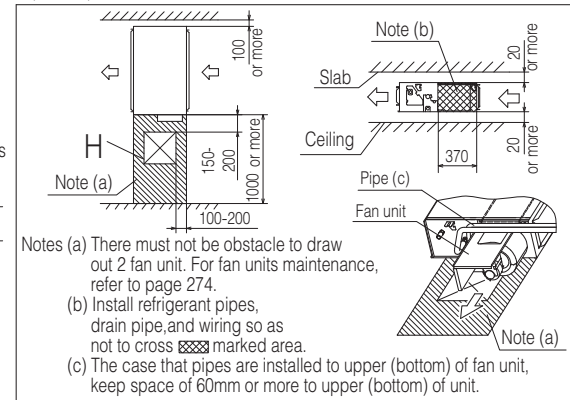
PJG000Z058 



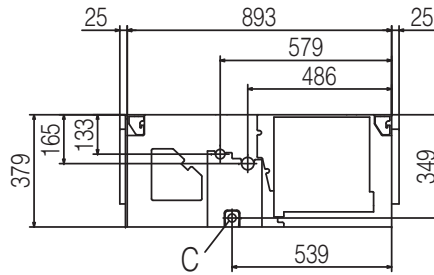
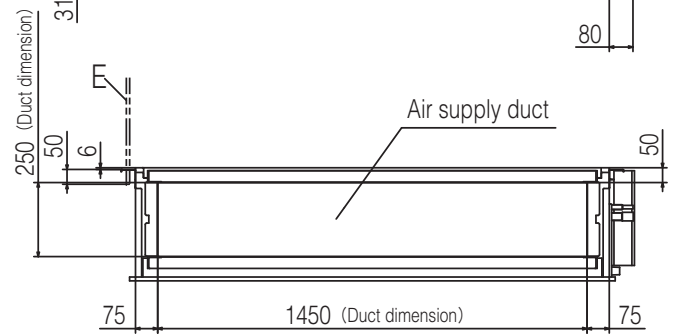
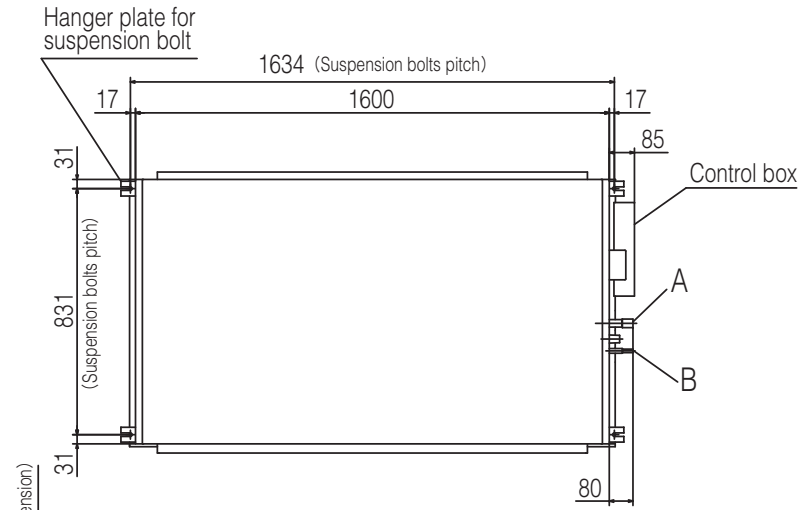
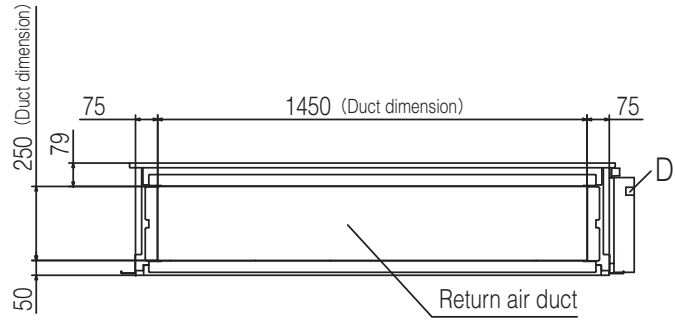
Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection hole	(450X450)

Space for installation and service

Select either of two cases to keep space for installation and services.
(Case 1) From side of unit



Unit:mm

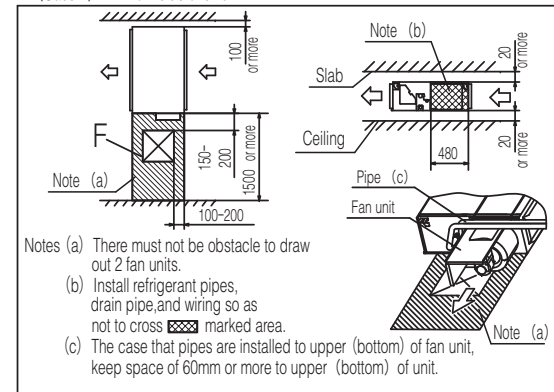


Symbol	Content		
	MODEL	224	280
A	Gas piping	$\phi 19.05(3/4)$ (Brazing)	$\phi 22.22(7/8)$ (Brazing)
B	Liquid piping	$\phi 9.52(3/8)$ (Brazing)	
C	Drain piping (Gravity drainage)	VP25 (O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	

Space for installation and service

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

(Case 1) From side of unit

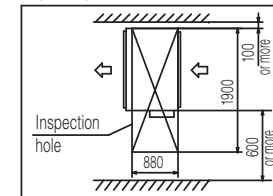


Notes (a) There must not be obstacle to draw out 2 fan units.

(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

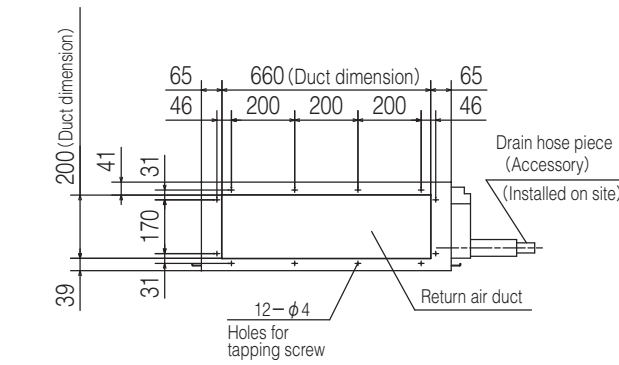


Notes (1) The model name label is attached on the lid of the control box.

Unit:mm

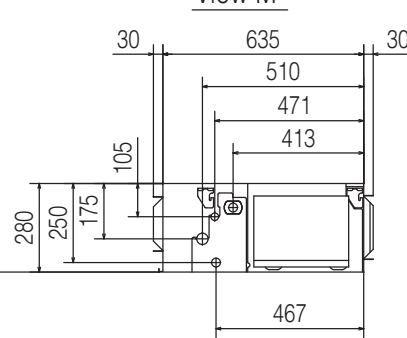
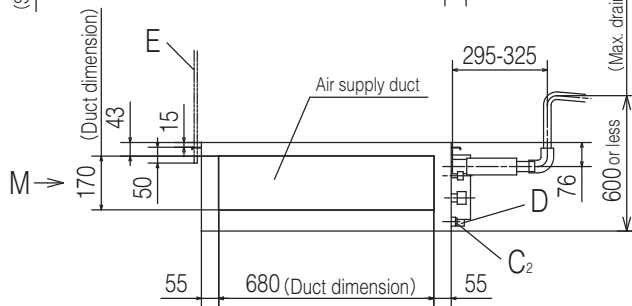
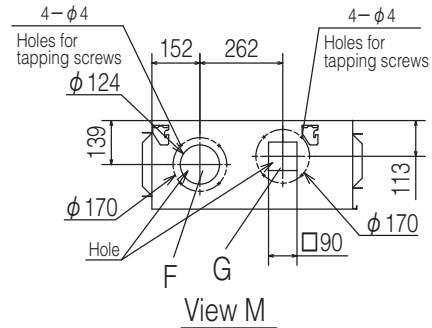
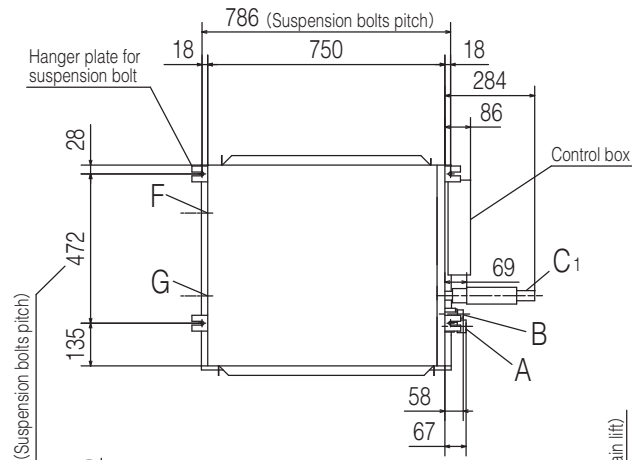
(g) Duct connected-Low/Middle static pressure type (FDUM)

Models FDUM22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F



Symbol	Content	
	Model	22,28 36,45,56
A	Gas piping	φ 9.52 (3/8") (Flare) 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	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection hole	(450X450)

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

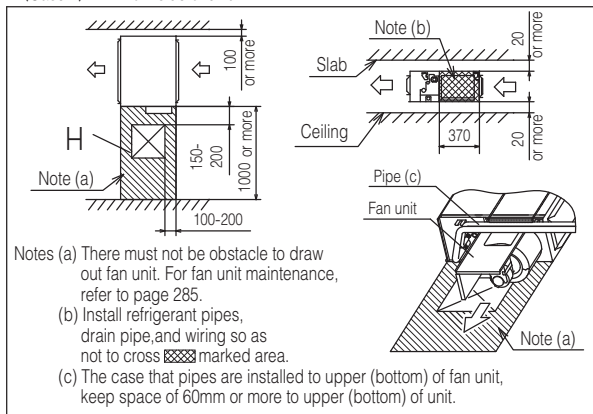


Unit:mm

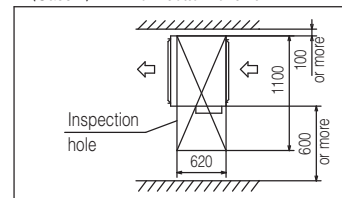
Space for installation and service

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

(Case 1) From side of unit

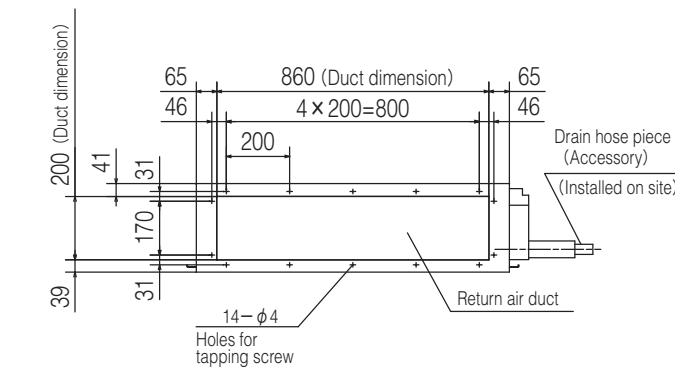


(Case 2) From bottom of unit



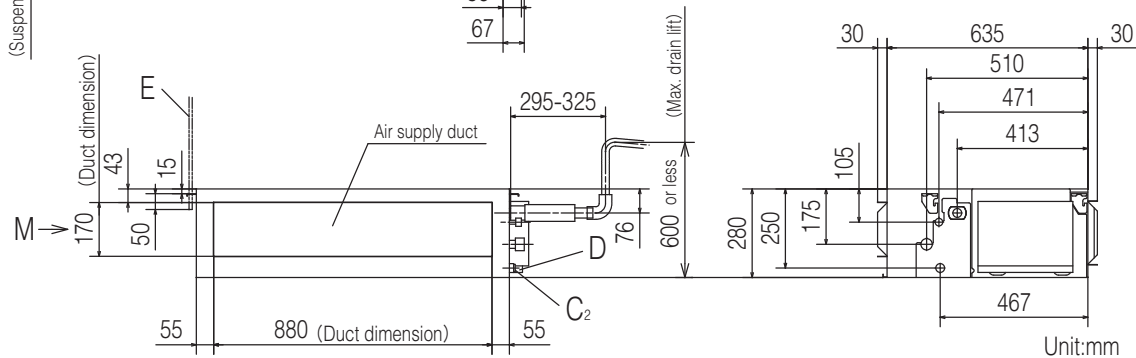
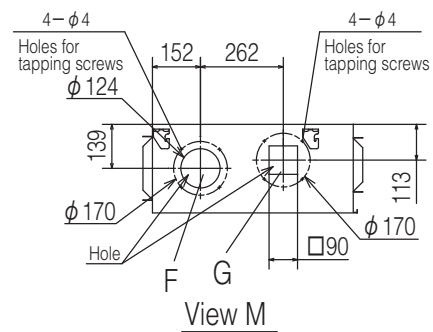
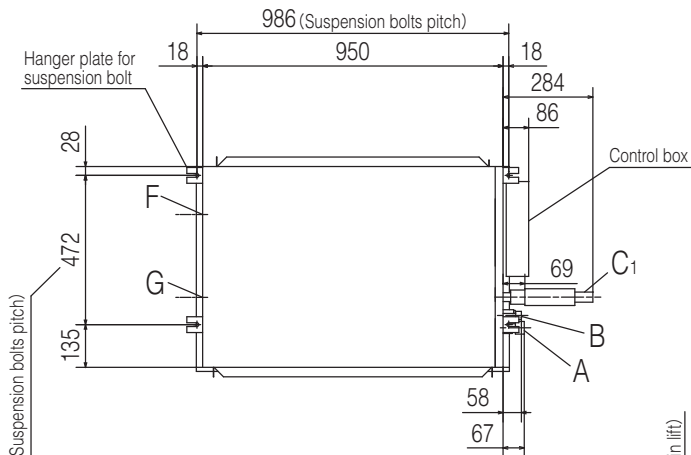
PJG000Z016

Models FDUM71KXE6F, 90KXE6F



Symbol	Content	
A	Gas piping	φ 15.88(5/8")(Flare)
B	Liquid piping	φ 9.52(3/8")(Flare)
C1	Drain piping	VP25 (O.D.32)
C2	(Gravity drainage) Drain piping	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 hole	(450X450)

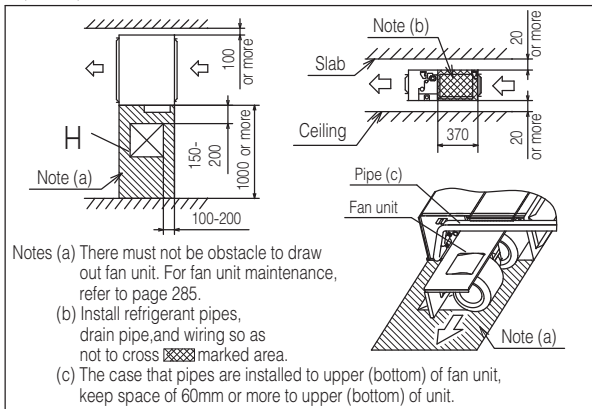
Note (1) The model name label is attached on the lid of the control box.



Space for installation and service

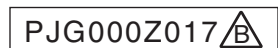
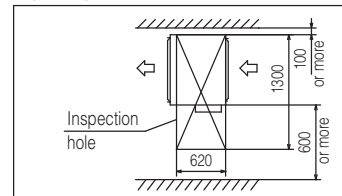
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit

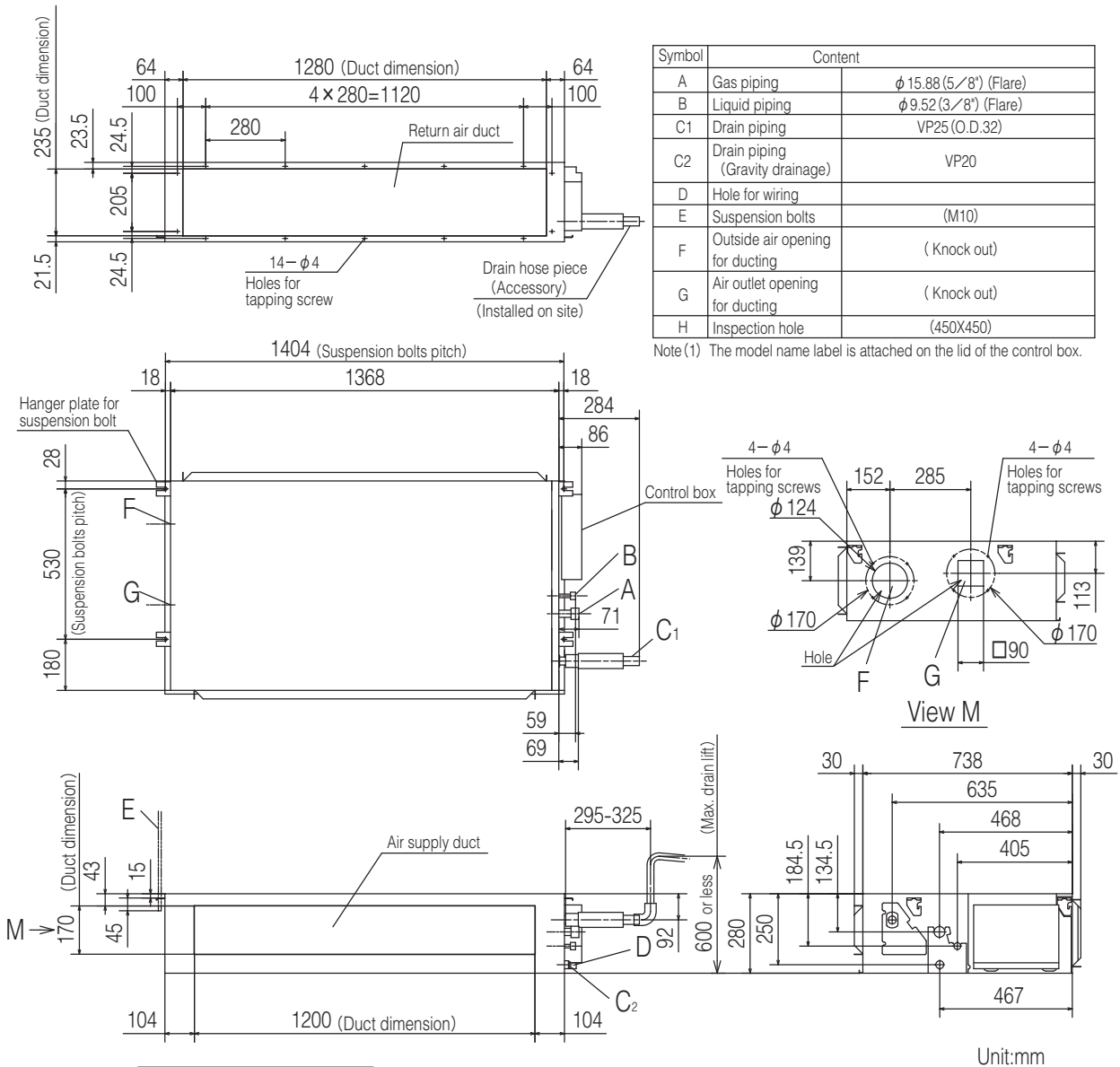


- Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to page 285.
- (b) Install refrigerant pipes, drain pipe, and wiring so as not to cross marked area.
- (c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

(Case 2) From bottom of unit



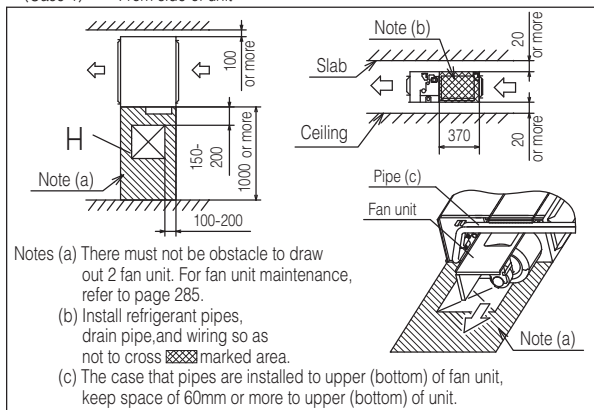
Models FDUM112KXE6F, 140KXE6F, 160KXE6F



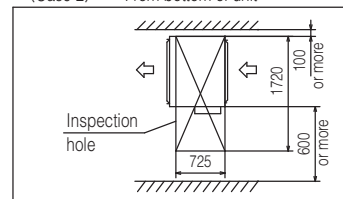
Space for installation and service

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

(Case 1) From side of unit



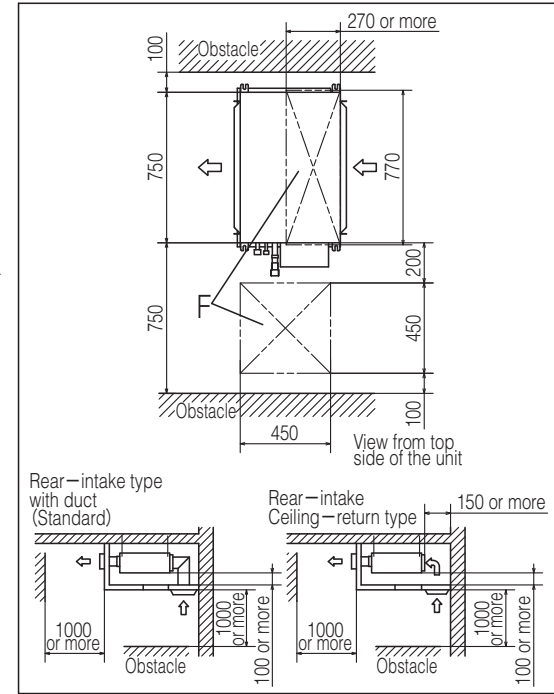
(Case 2) From bottom of unit



(h) Duct connected (thin)-Low static pressure type (FDUT)
Models FDUT15KXE6F-E, 22KXE6F-E, 28KXE6F-E, 36KXE6F-E

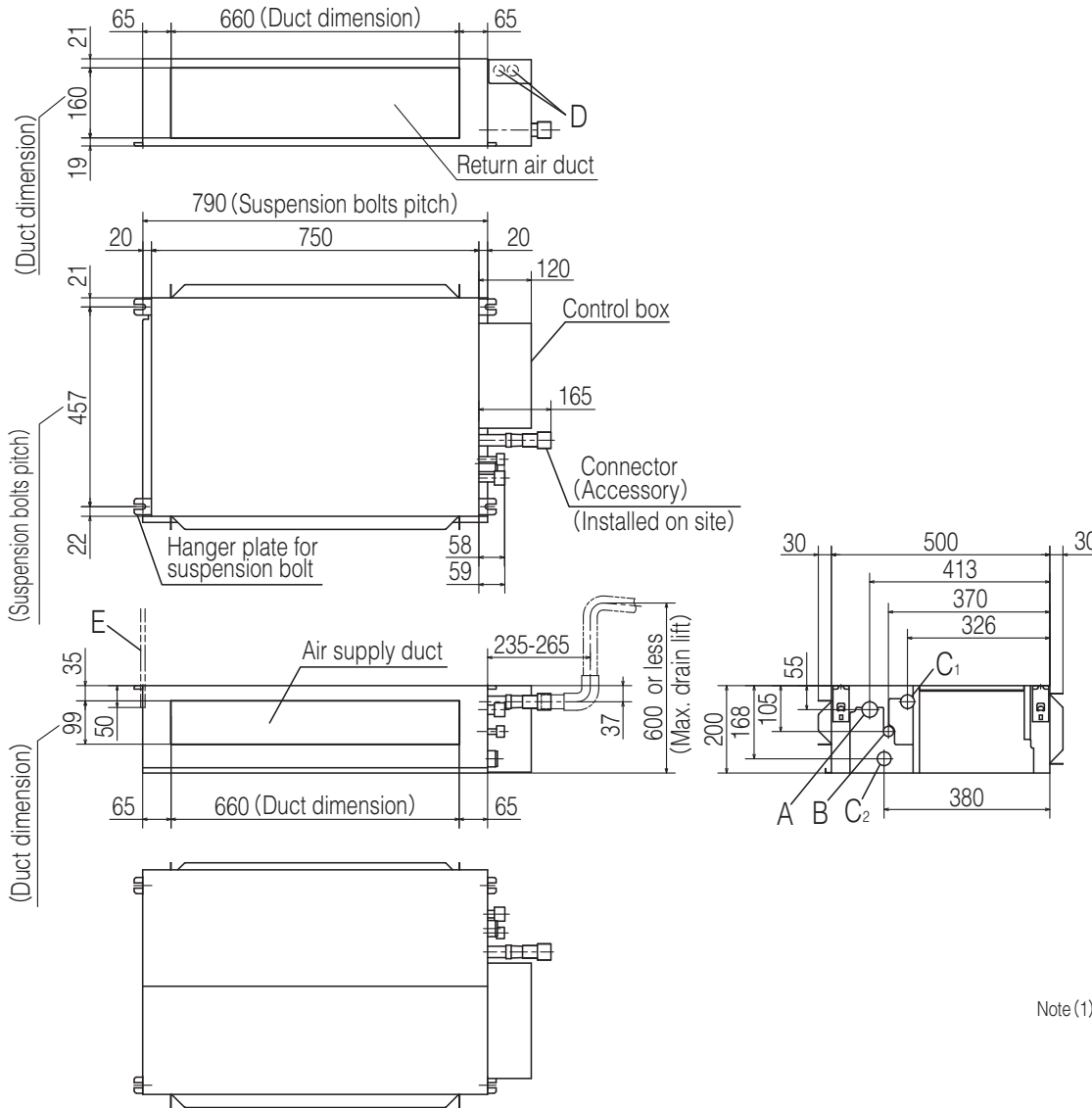
Symbol	Content		
	Model	15, 22, 28	36
A	Gas piping	$\phi 9.52$ (3/8") (Flare)	$\phi 12.7$ (1/2") (Flare)
B	Liquid piping	$\phi 6.35$ (1/4") (Flare)	
C1	Drain piping	VP25 (I.D.25 , O.D.32) (Used with attached connector)	
C2	Drain piping (Gravity drainage)	VP25 (I.D.25 , O.D.32) (Used with attached connector)	
D	Hole for wiring	$\phi 25 \times 2$	
E	Suspension bolts	(M10)	
F	Inspection hole	(450x450), (270x770)	

Space for installation and service



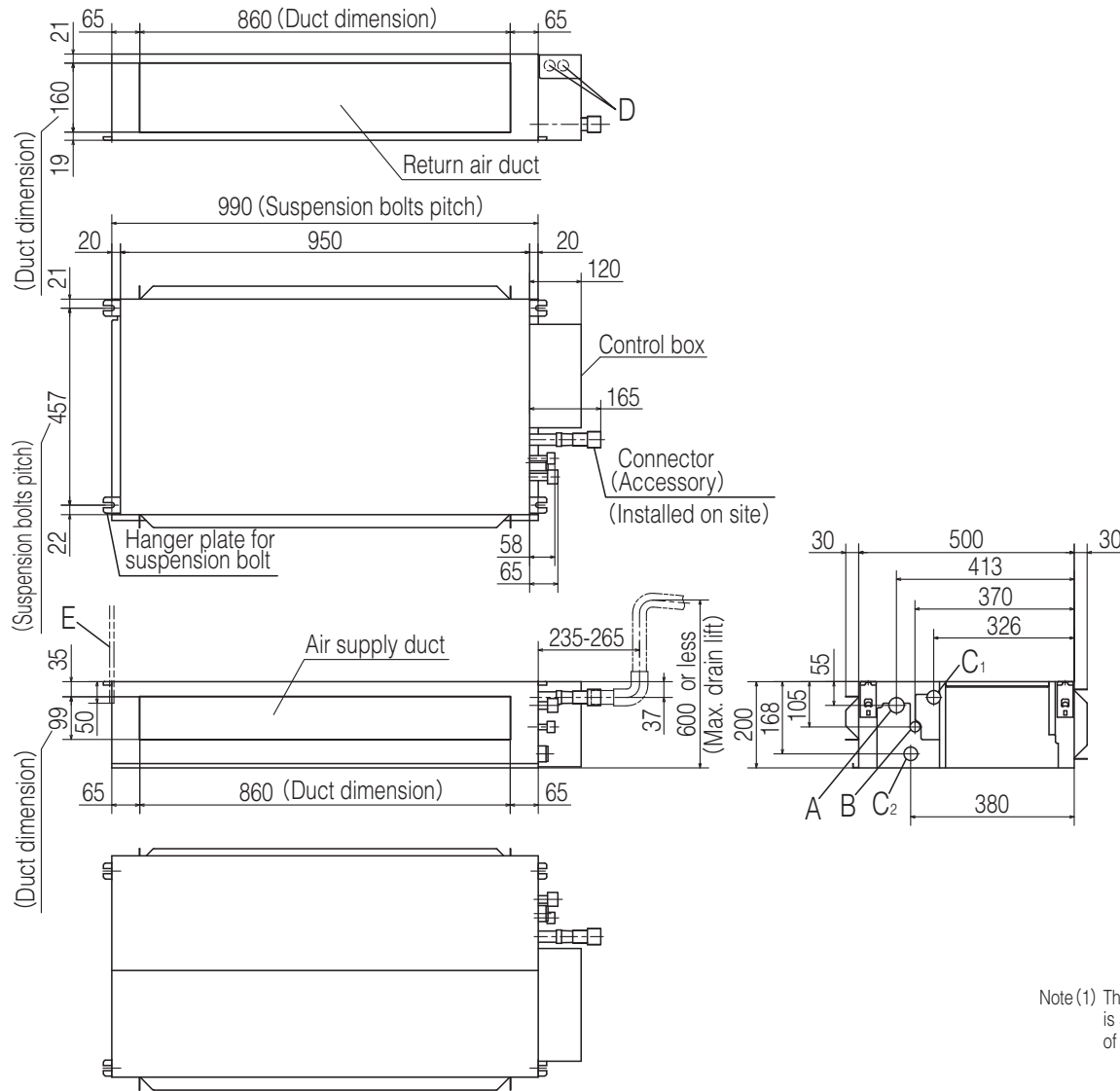
Unit:mm

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



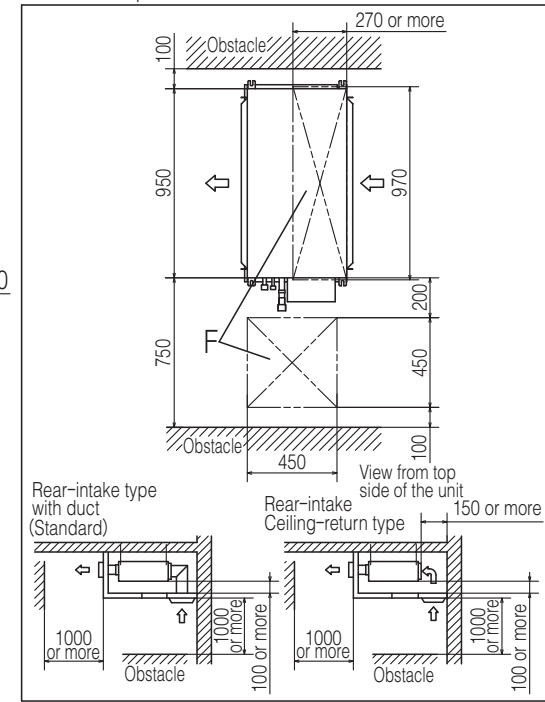
PJH000Z010

PJH000Z011



Symbol	Model	Content
		45,56
A	Gas piping	φ 12.7 (1/2") (Flare)
B	Liquid piping	φ 6.35 (1/4") (Flare)
C1	Drain piping	VP25 (I.D.25 , O.D.32) (Used with attached connector)
C2	Drain piping (Gravity drainage)	VP25 (I.D.25 , O.D.32) (Used with attached connector)
D	Hole for wiring	φ 25 × 2
E	Suspension bolts	(M10)
F	Inspection hole	(450X450), (270x970)

Space for installation and service

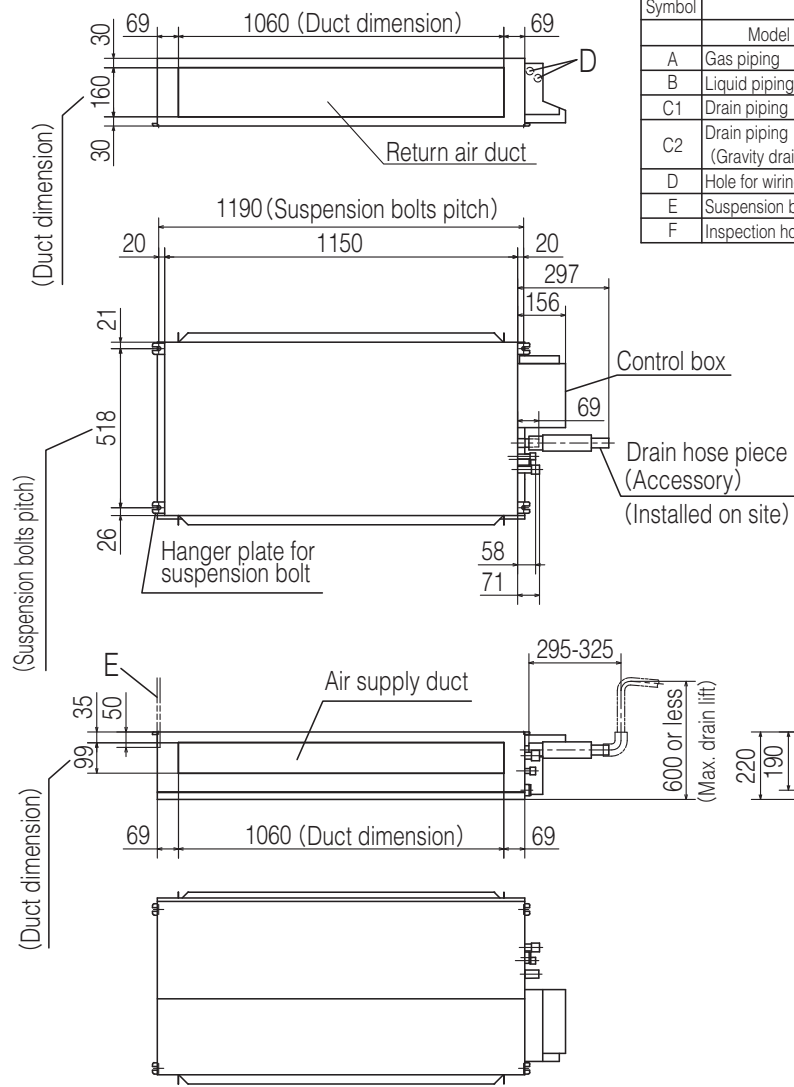


Unit:mm

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

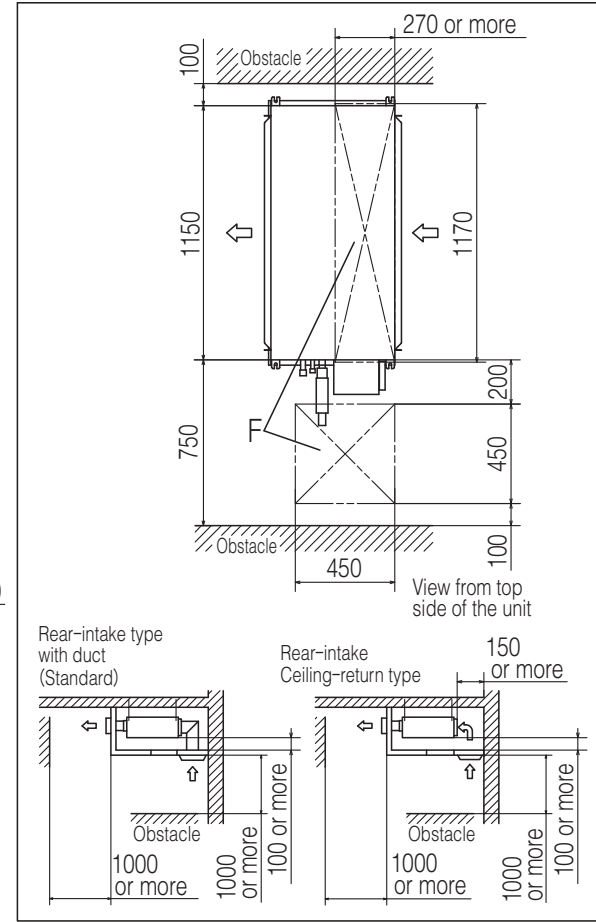
Models FDUT45KXE6F-E, 56KXE6F-E

PJH000Z012 



Symbol	Content	
	Model	71
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C1	Drain piping	VP25 (I.D.25, O.D.32) Note (2)
C2	Drain piping (Gravity drainage)	VP25 (I.D.25, O.D.32)
D	Hole for wiring	φ 25 x 2
E	Suspension bolts	(M10)
F	Inspection hole	(450X450), (270X1170)

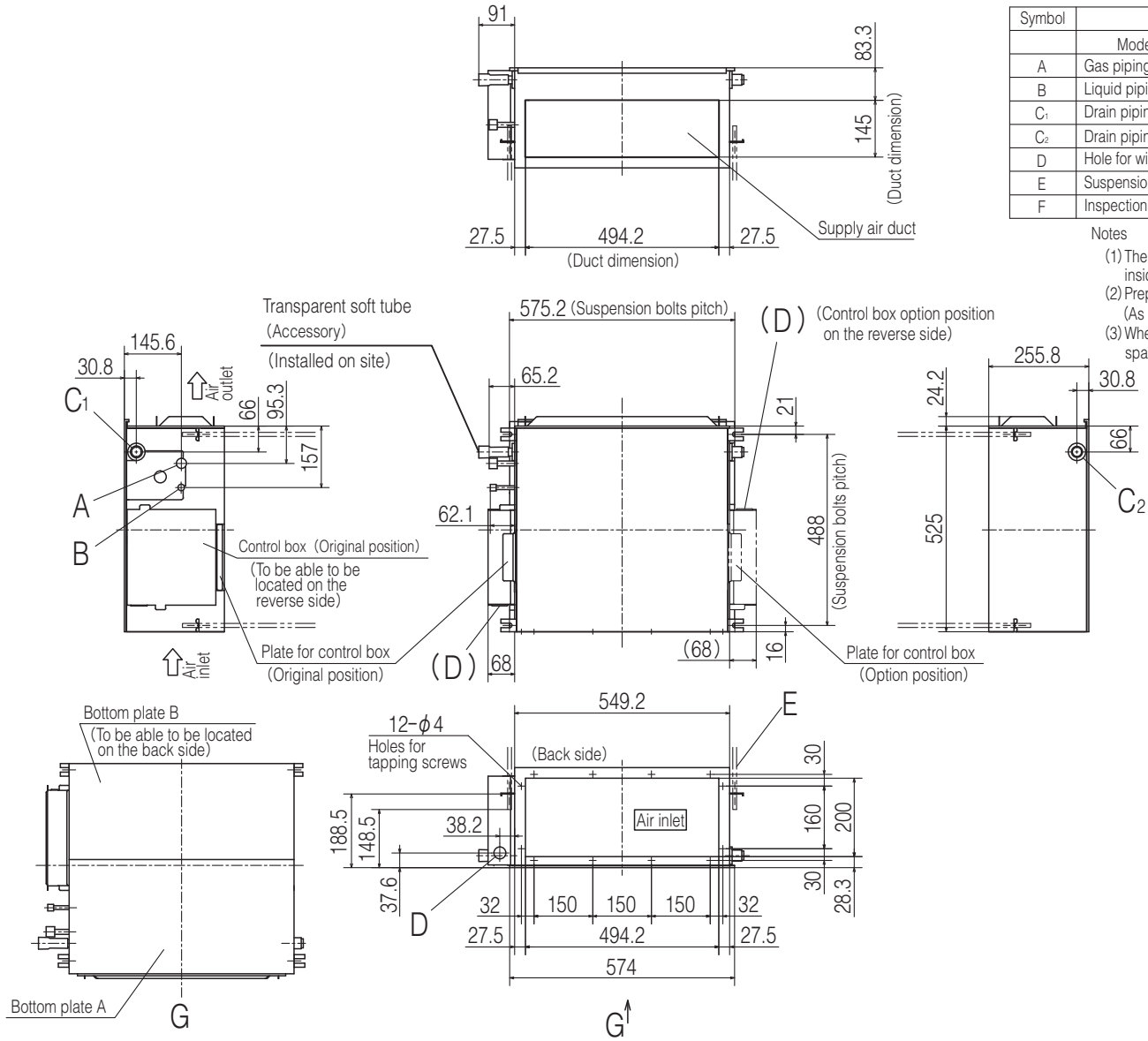
Space for installation and service



Notes (1) The model name label is attached on the lid of the control box.
 (2) Prepare the connecting socket (VP25) on site.

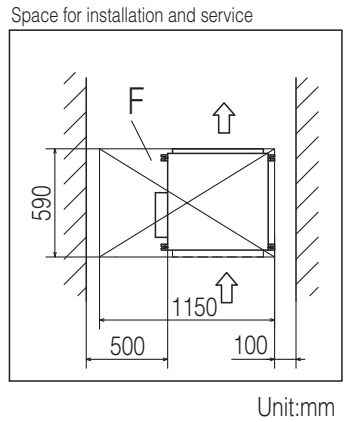
Unit:mm

Model FDU71KXE6F-E



Symbol	Content		
	Model	22,28	36
A	Gas piping	φ 9.52 (3/8") (Flare)	φ 12.7 (1/2") (Flare)
B	Liquid piping	φ 6.35 (1/4") (Flare)	
C ₁	Drain piping	VP20 (I.D.20,O.D.26) Note (2)	
C ₂	Drain piping	To be used instead of "C ₁ "	
D	Hole for wiring	φ 30	
E	Suspension bolts	(M10)	
F	Inspection hole	(590X1150) Note (3)	

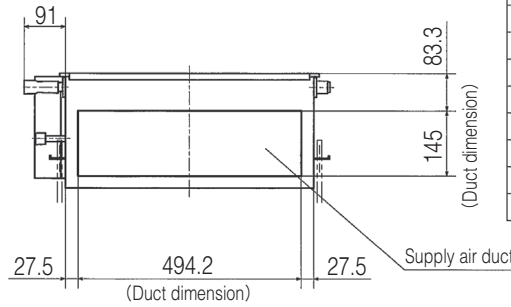
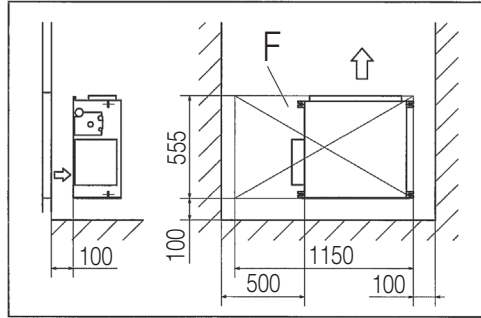
- Notes
- (1) The model name label is attached on the fan cose inside the air return grille.
 - (2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C₁ or C₂)
 - (3) When control box is located on the reverse side, Installation space should be modified new location.



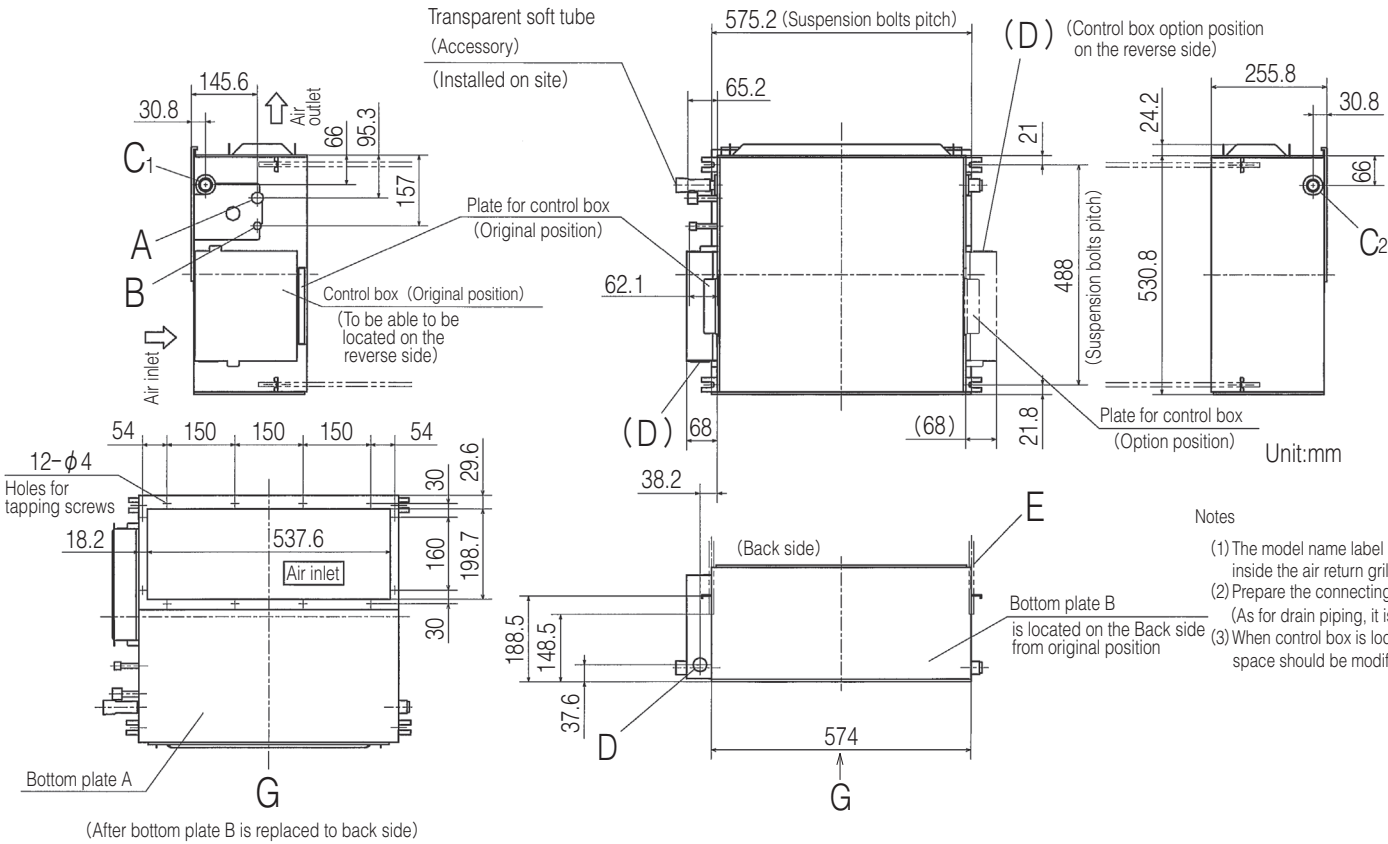
PJC001Z283

(i) Duct connected (Compact and Flexible) type (FDUH)
 Models FDUH22KXE6F, 28KXE6F, 36KXE6F
 (i) Rear air return type

Space for installation and service



Symbol	Content		
	Model	22,28	36
A	Gas piping	φ9.52(3/8") (Flare)	φ12.7(1/2") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)	
C ₁	Drain piping	VP20 (I.D.20,O.D.26) Note (2)	
C ₂	Drain piping	To be used instead of "C ₁ "	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F	Inspection hole	(555X1150) Note (3)	



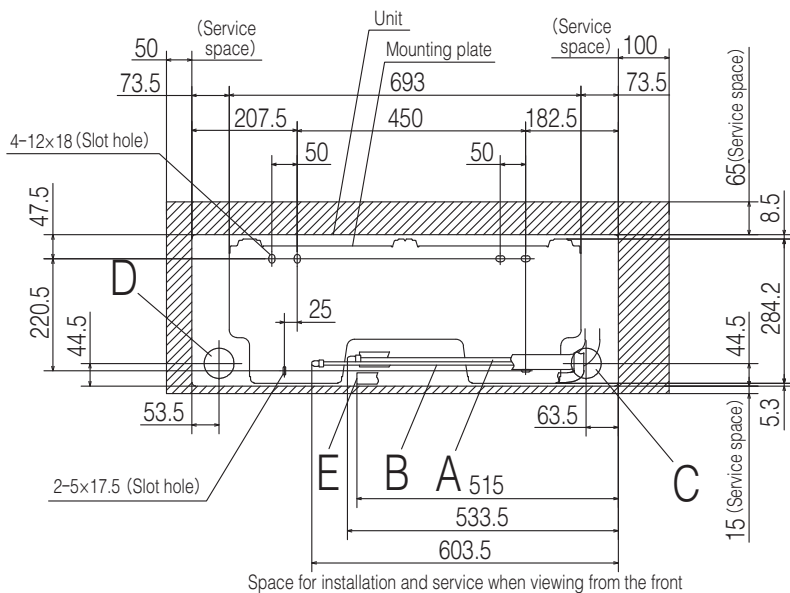
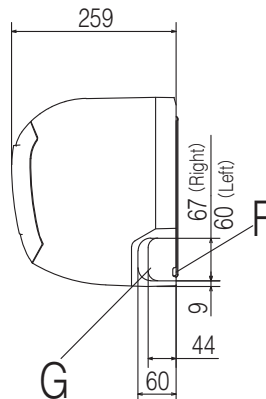
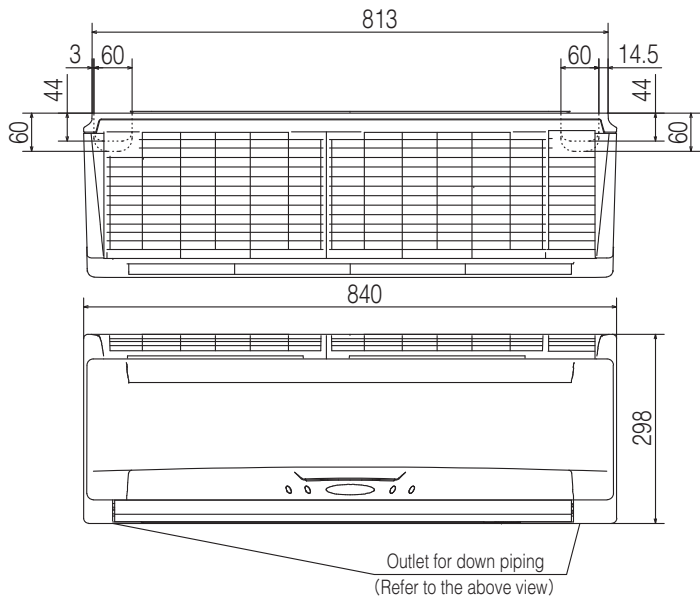
- Notes
- (1) The model name label is attached on the fan couse inside the air return grille.
 - (2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C₁ or C₂)
 - (3) When control box is located on the reverse side, Installation space should be modified new location.

(ii) Bottom suction type

PJC001Z292

(J) Wall mounted type (FDK)
 Models FDK22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

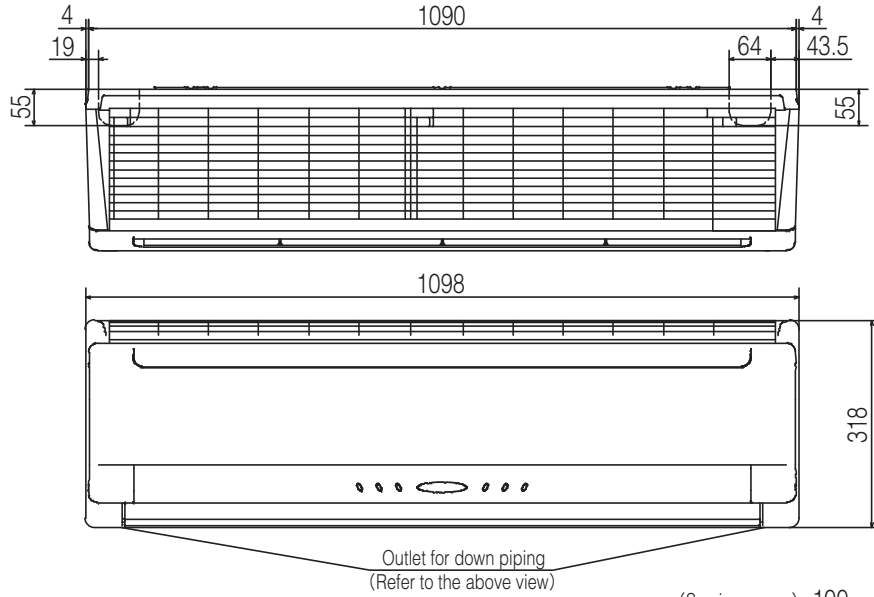
Symbol	Content		
	Model	22,28	36,45,56
A	Gas piping	$\phi 9.52 (3/8")$ (Flare)	$\phi 12.7 (1/2")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare)	
C	Hole on wall for right rear piping	$(\phi 65)$	
D	Hole on wall for left rear piping	$(\phi 65)$	
E	Drain piping	VP16 (I.D.16)	
F	Outlet for wiring		
G	Outlet for piping (on both side)		



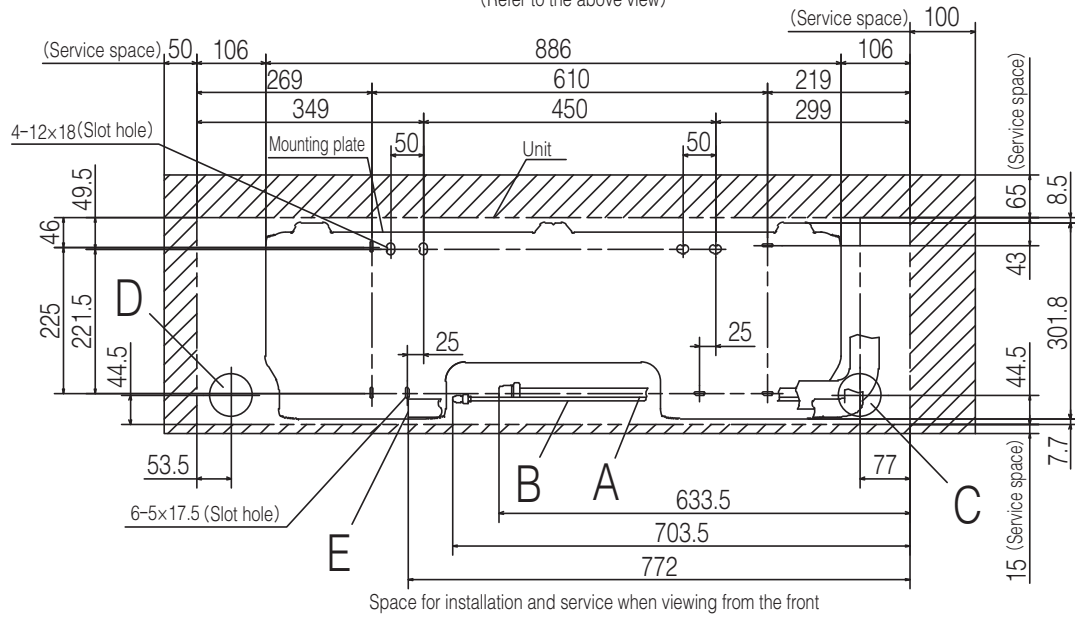
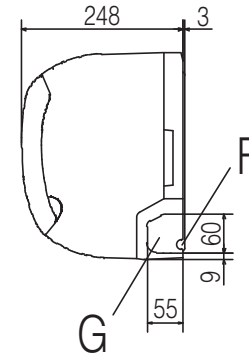
Unit:mm

Note (1) The model name label is attached on the underside of the panel.

PHA000Z981



Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C	Hole on wall for right rear piping	(φ 65)
D	Hole on wall for left rear piping	(φ 65)
E	Drain piping	VP16 (I.D.16)
F	Outlet for wiring	
G	Outlet for piping (on both side)	



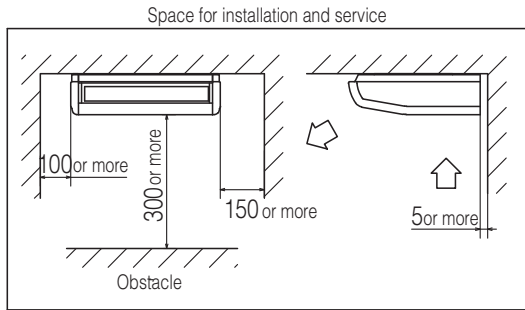
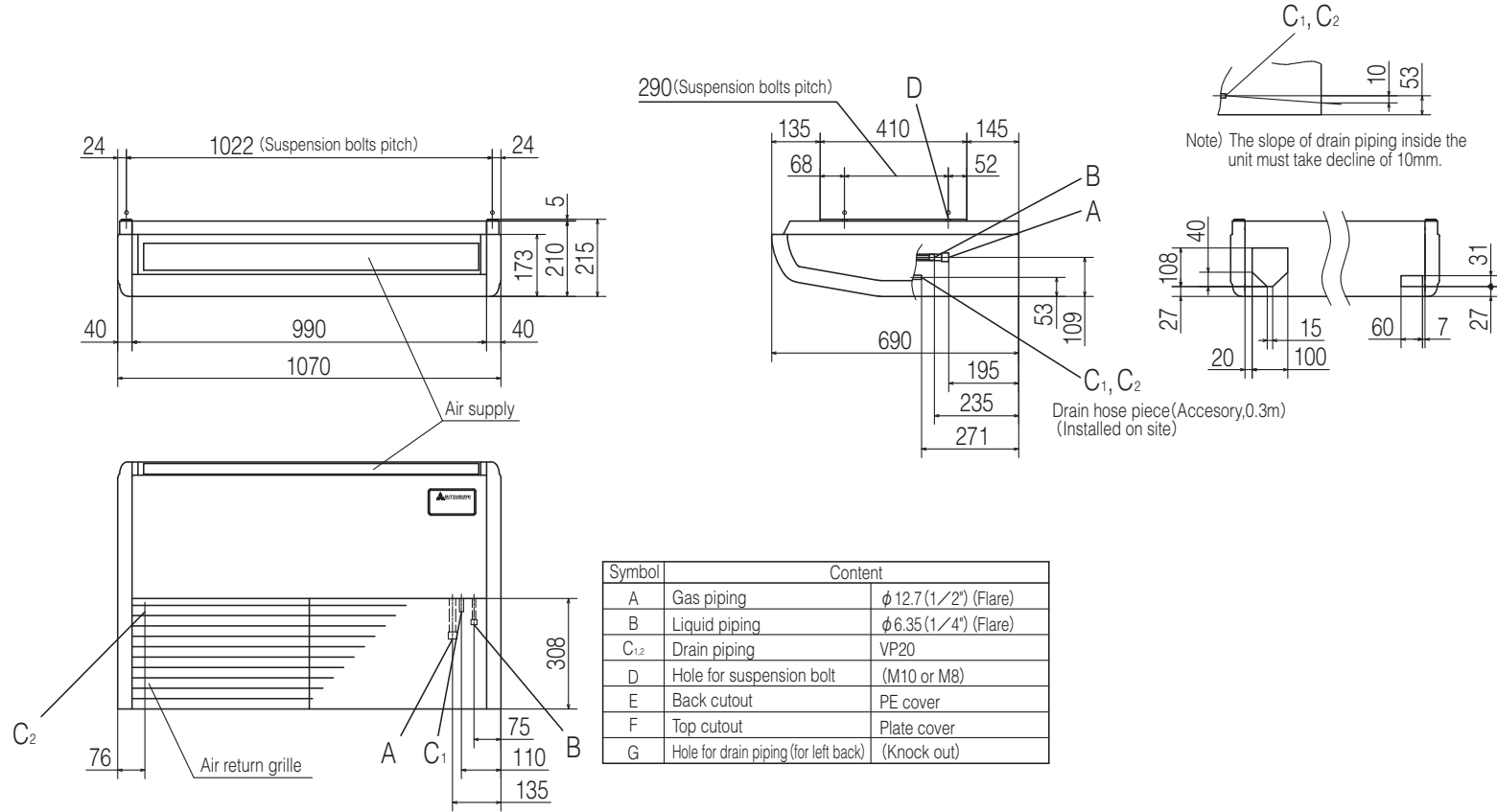
Unit:mm

Note (1) The model name label is attached on the underside of the panel.

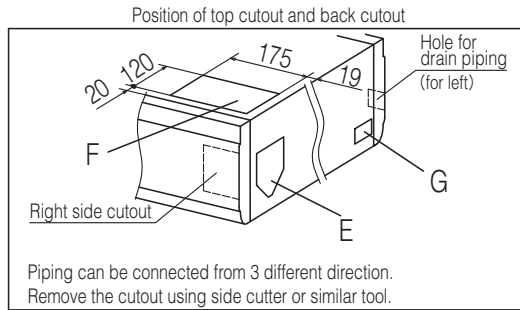
PHA000Z982

Model FDK71KXE6F

(k) Ceiling suspended type (FDE)
Models FDE36KXE6F, 45KXE6F, 56KXE6F



Make a space of 4000 or more between the units when installing more than one.

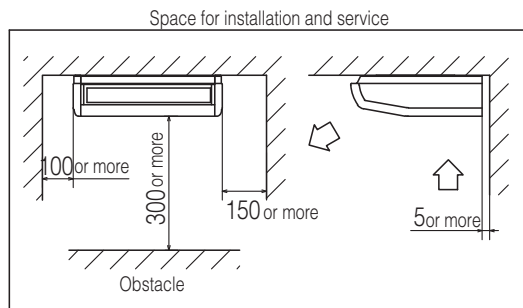
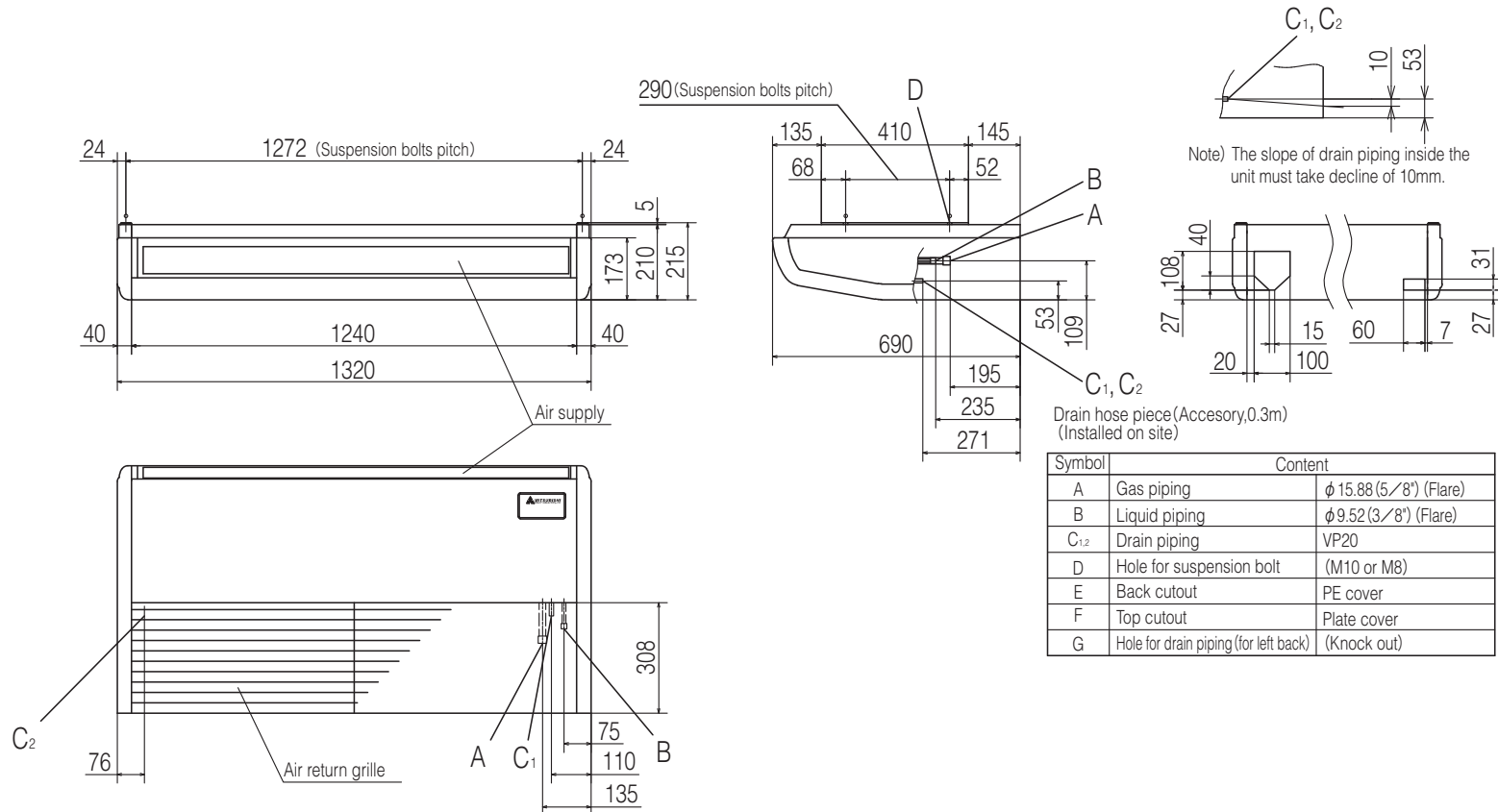


Piping can be connected from 3 different direction. Remove the cutout using side cutter or similar tool.

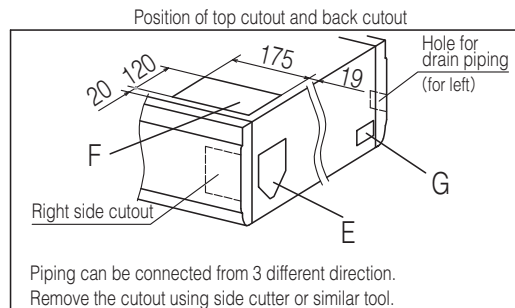
Note (1) The model name label is attached on the fan casing inside the air return grille.

Unit:mm

PF A004Z036



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

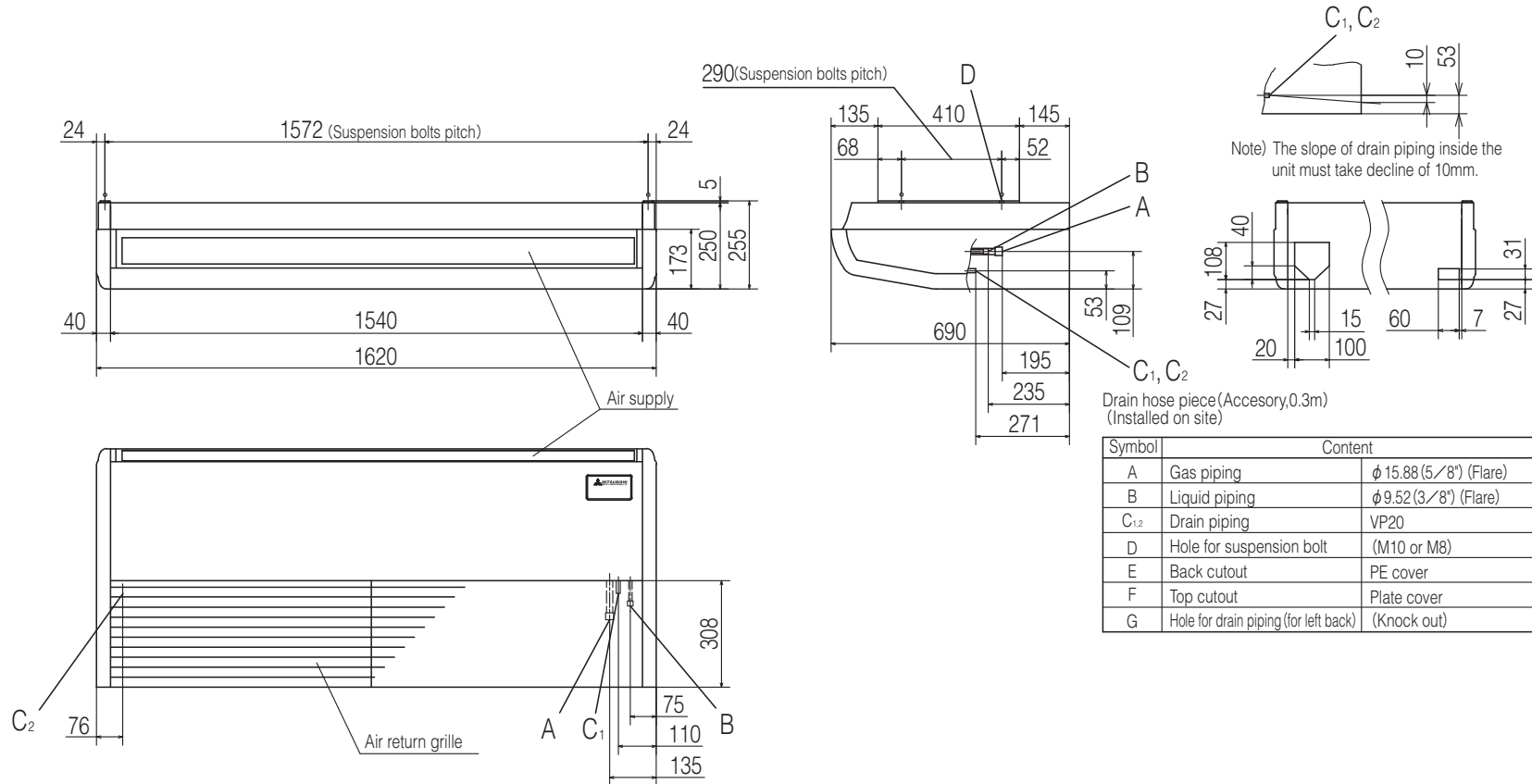


Note (1) The model name label is attached on the fan casing inside the air return grille.

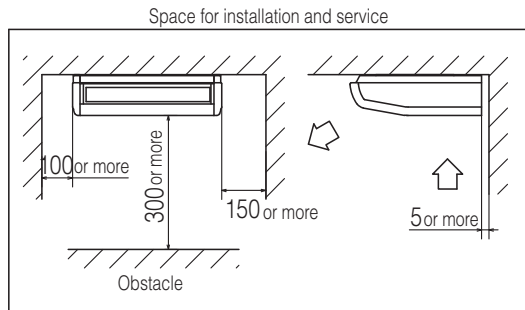
Unit:mm

Model FDE71KXZE1

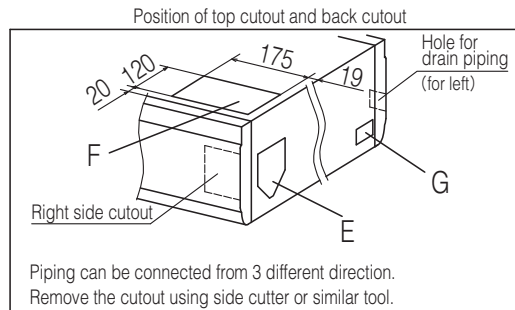
PFA004Z037



Symbol	Content
A	Gas piping φ 15.88 (5/8") (Flare)
B	Liquid piping φ 9.52 (3/8") (Flare)
C _{1,2}	Drain piping VP20
D	Hole for suspension bolt (M10 or M8)
E	Back cutout PE cover
F	Top cutout Plate cover
G	Hole for drain piping (for left back) (Knock out)



Make a space of 5000 or more between the units when installing more than one.



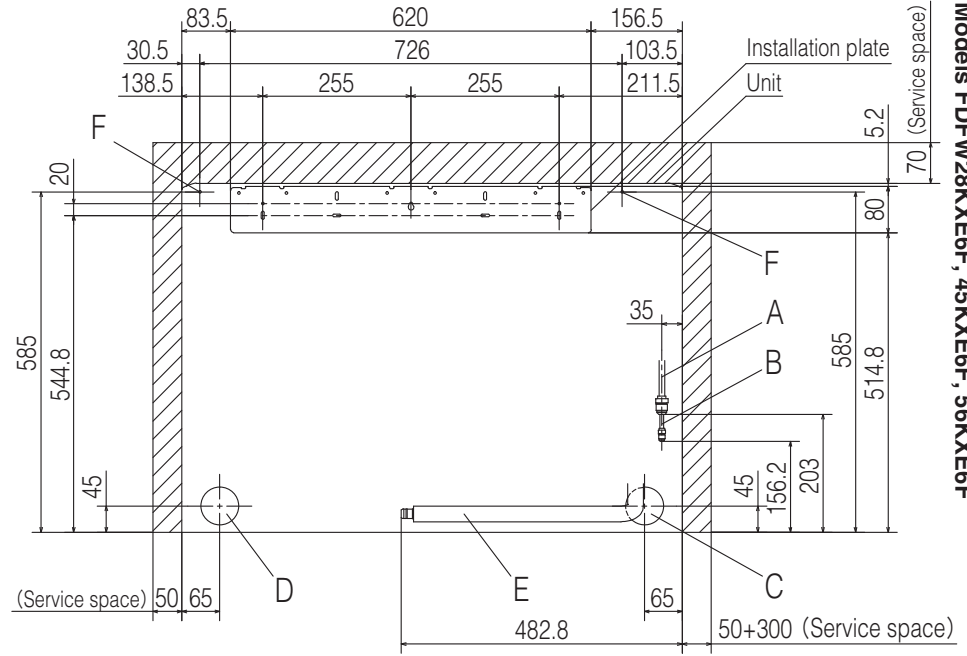
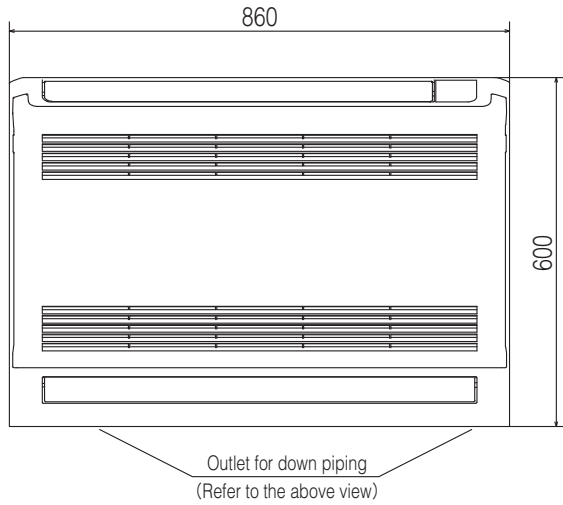
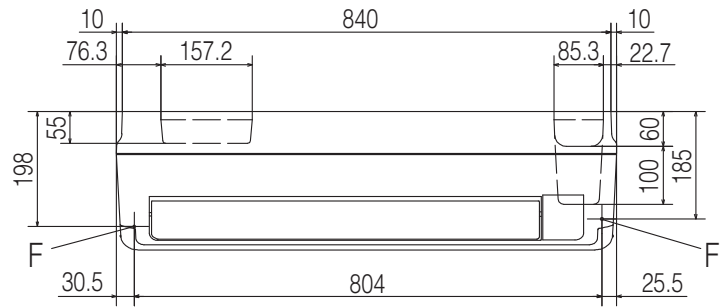
Note (1) The model name label is attached on the fan casing inside the air return grille.

Unit:mm

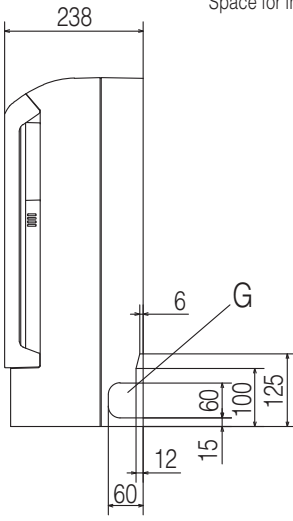
PF A004Z038

Models FDE112KXZE1, 140KXZE1

Symbol	Content		
	Model	28	45,56
A	Gas piping	$\phi 9.52 (3/8")$ (Flare)	$\phi 12.7 (1/2")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare)	
C	Hole on wall for right rear piping	$(\phi 65)$	
D	Hole on wall for left rear piping	$(\phi 65)$	
E	Drain hose	VP16	
F	Screw point fasten the indoor unit	$\phi 5$	
G	Outlet for piping (on both side)		



Space for installation and service when viewing from the front



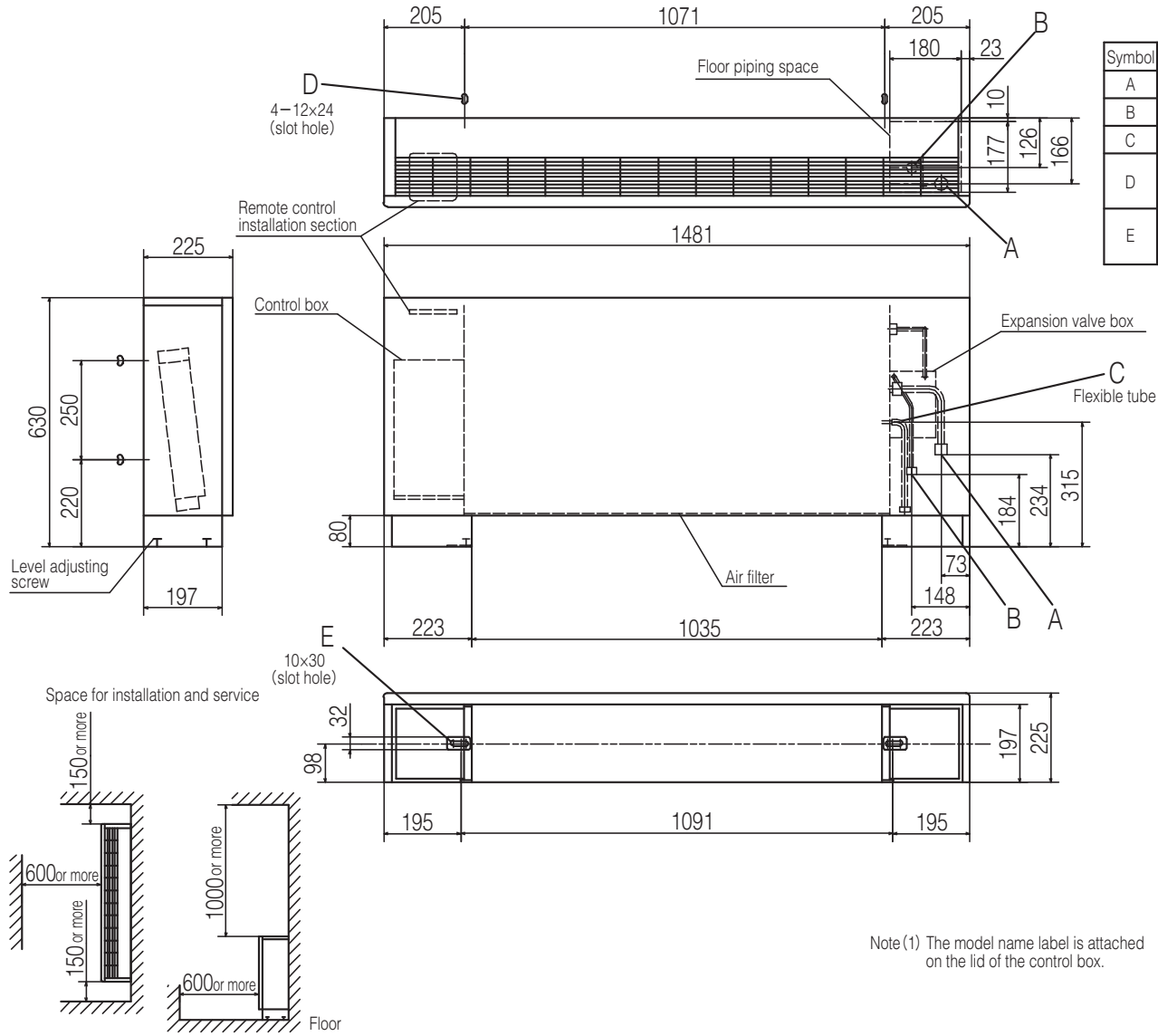
- Notes
- (1) The model name label is attached on the rightside of the unit.
 - (2) In case of wall installation, leave the unit 150mm or less from the floor.

Unit:mm

PGF000Z003/△

(I) Floor standing-2 way type (FDFW)
 Models FDFW28KXE6F, 45KXE6F, 56KXE6F

(m) Floor standing (with casing) type (FDL)
 Model FDFL71KXE6F



Symbol	Content	
A	Gas piping (Accessory)	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

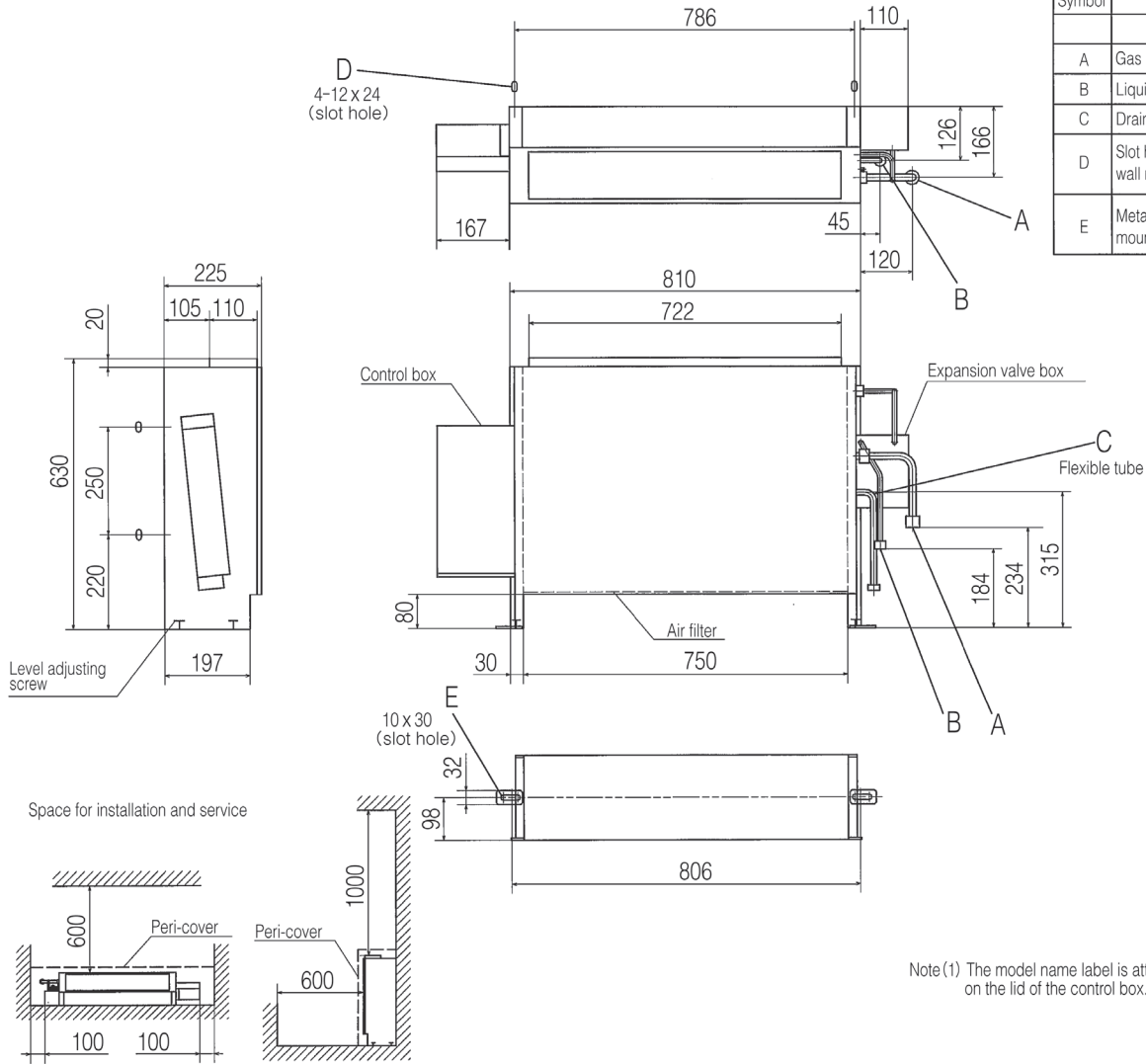
Unit:mm

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

PGD0000Z052

(n) Floor standing (with casing) type (FDfU)
 Models FDFU28KXE6F, 45KXE6F, 56KXE6F

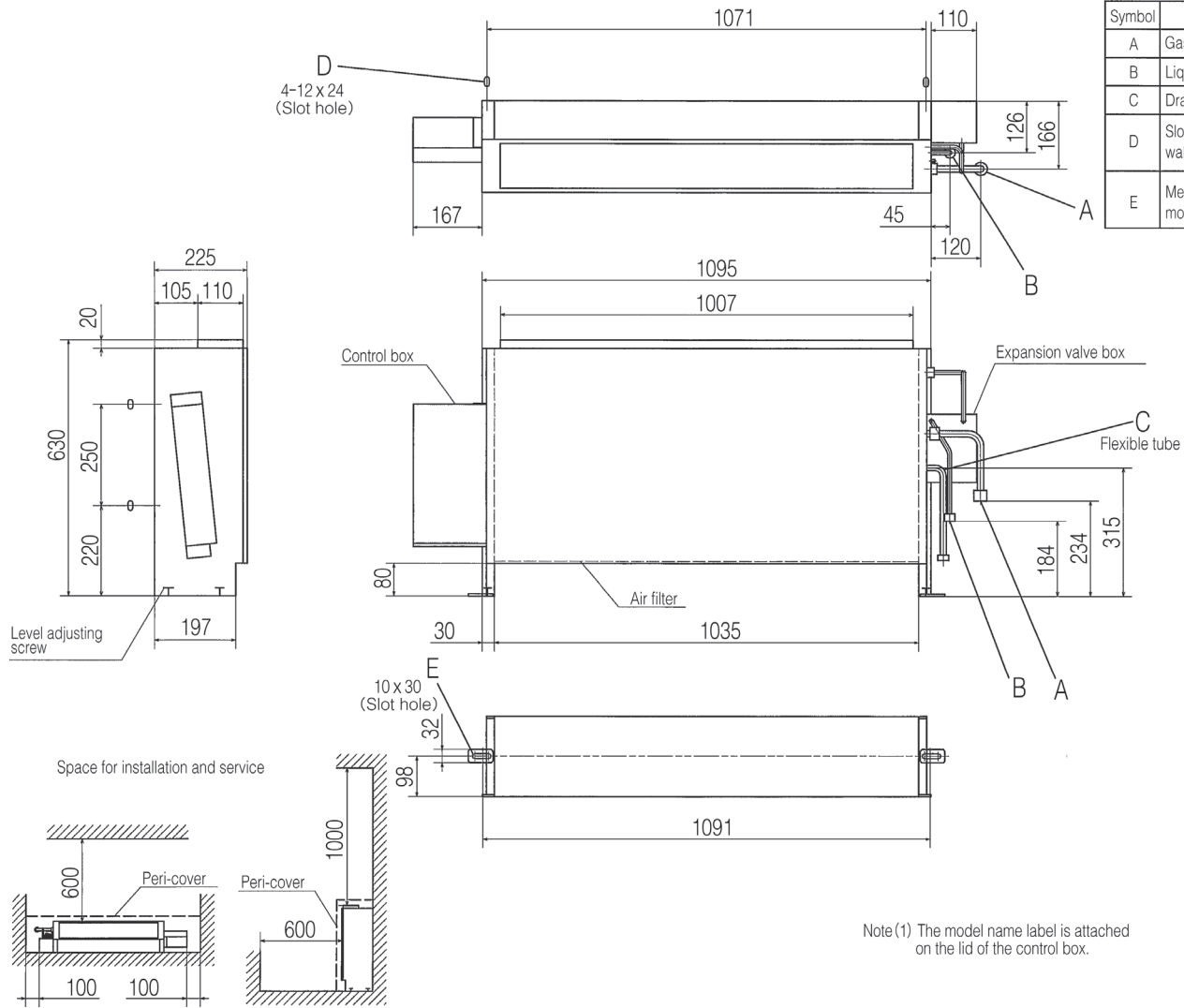
Symbol	Content		
	Model	28	45,56
A	Gas piping (Accessory)	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping (Accessory)	PT20A female screw, 360mm	
D	Slot hole for wall mounting	(M10)	
E	Metal plate for floor mounting (Accessory)	(M8)	



Unit:mm

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

PGD000Z056/B



Symbol	Content	
A	Gas piping (Accessory)	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

Unit:mm

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

PGD0000Z057/A

Model FDFU71KXE6F

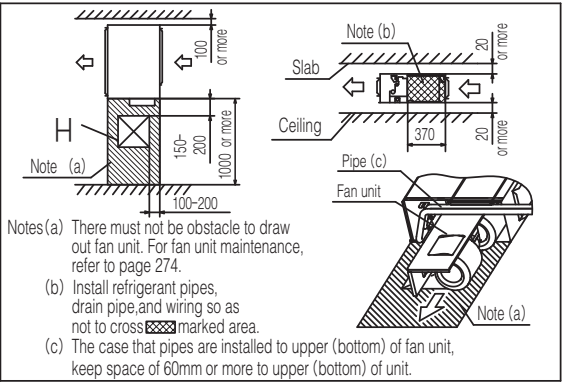
(o) Outdoor air processing unit (FDU-F)
Model FDU650FKXZE1

Symbol	Content	
A	Gas piping	ϕ 15.88(5/8") (Flare)
B	Liquid piping	ϕ 9.52(3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping (Gravity drainage)	VP20 (O.D.26) (Standard) or VP25(O.D.32) (Used with attached socket)
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 hole	(450X450)

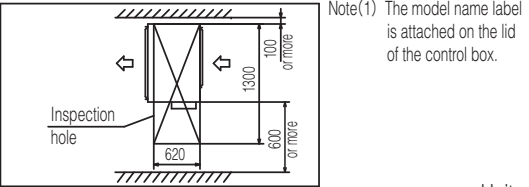
Space for installation and service

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

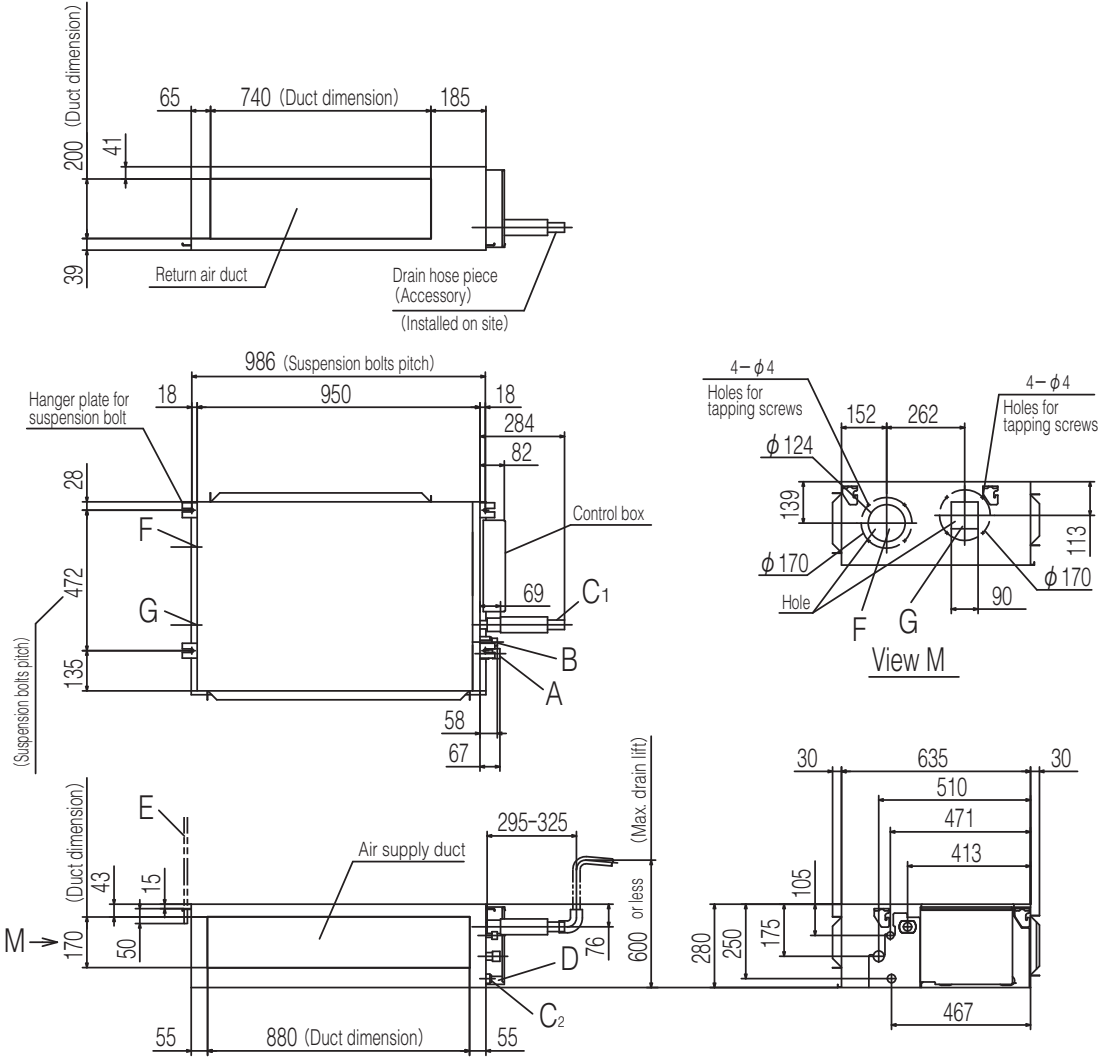
(Case 1) From side of unit



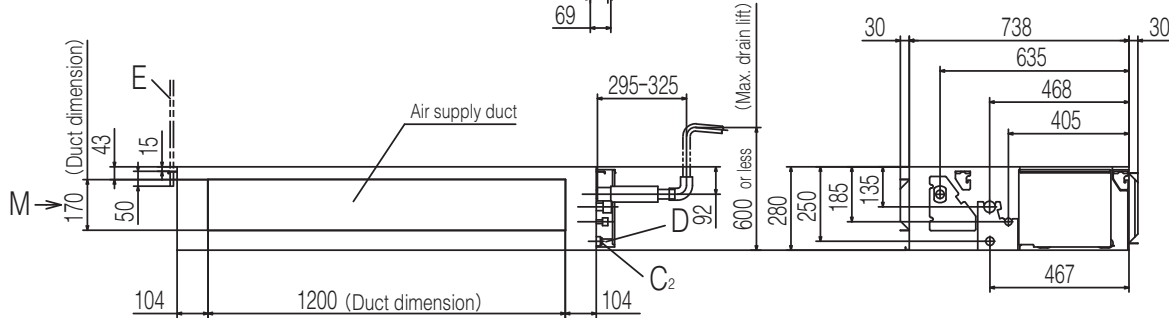
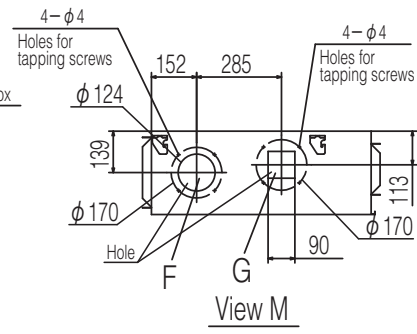
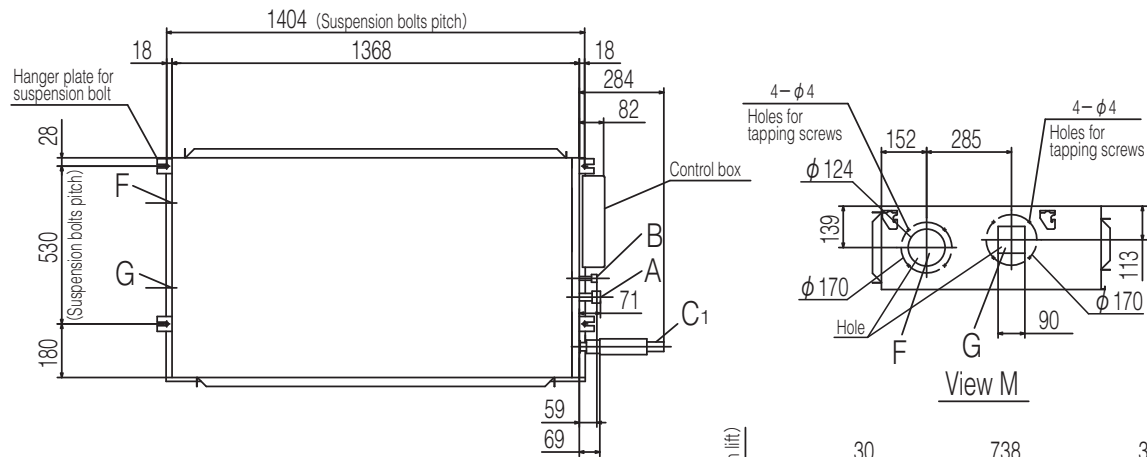
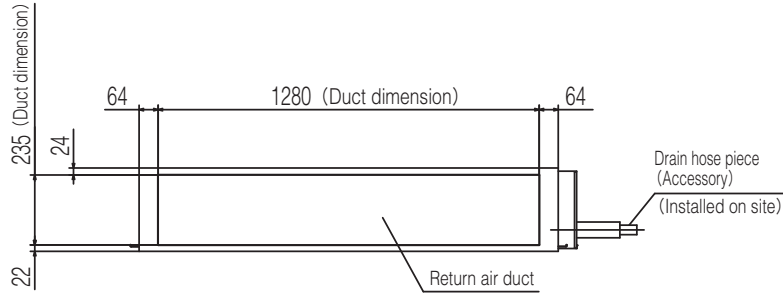
(Case 2) From bottom of unit



Unit:mm



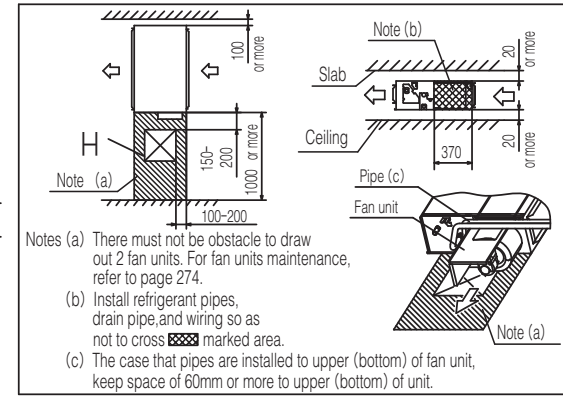
PJG000Z295



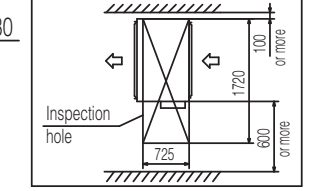
Symbol	Content	
A	Gas piping	φ 15.88 (5/8") (Flare)
B	Liquid piping	φ 9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20 (O.D.26) (Standard) or VP25 (O.D.32) (Used with attached socket)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection hole	(450X450)

Space for installation and service

Select either of two cases to keep space for installation and services.
 (Case 1) From side of unit



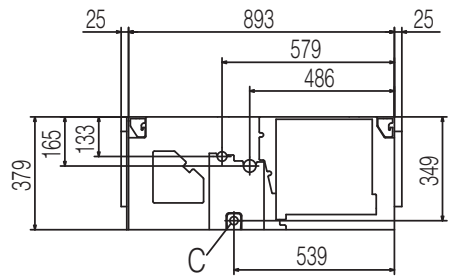
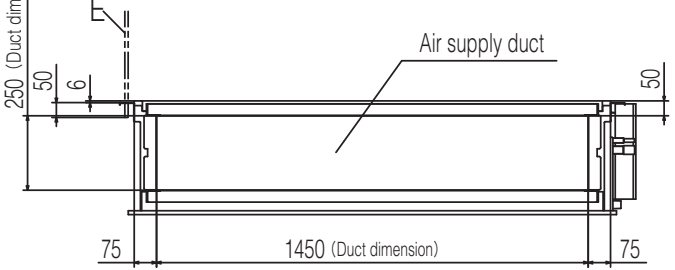
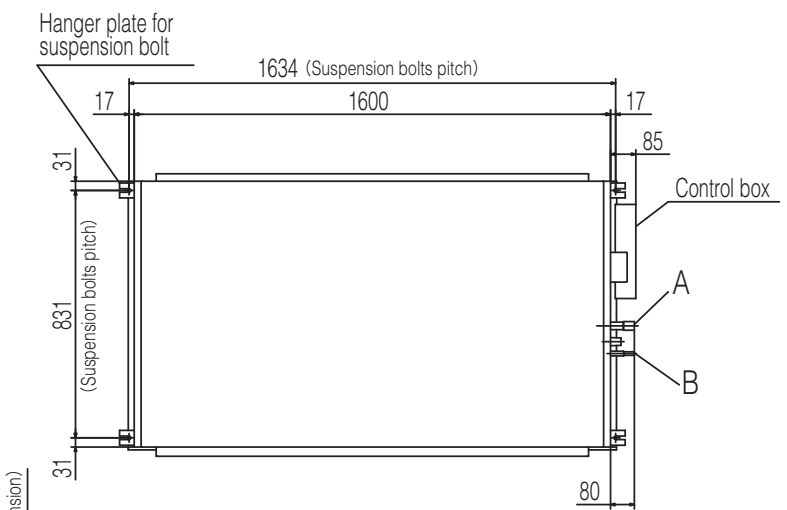
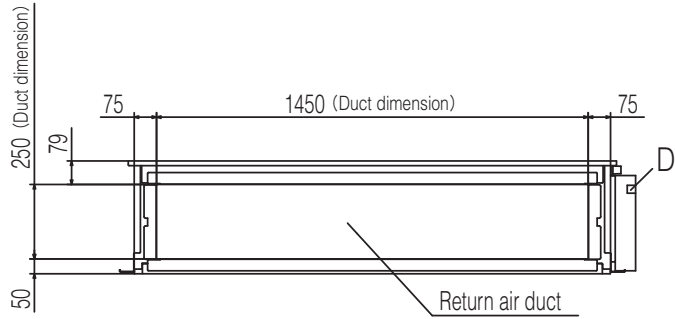
(Case 2) From bottom of unit



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

Unit:mm

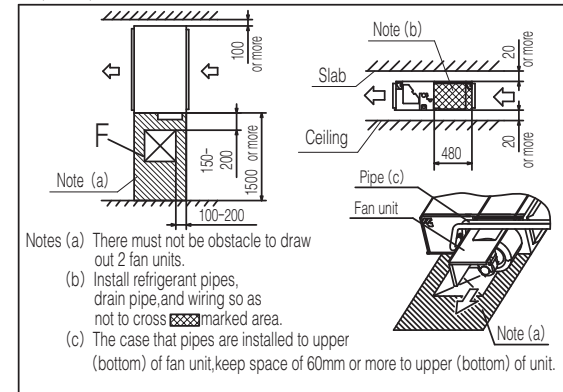
PJG000Z296



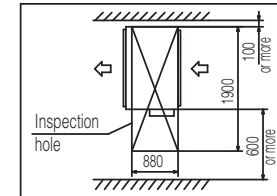
Symbol	Content		
	MODEL	1800	2400
A	Gas piping	$\phi 19.05$ (3/4") (Brazing)	$\phi 22.22$ (7/8") (Brazing)
B	Liquid piping	$\phi 9.52$ (3/8") (Brazing)	
C	Drain piping (Gravity drainage)	VP25 (O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	

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



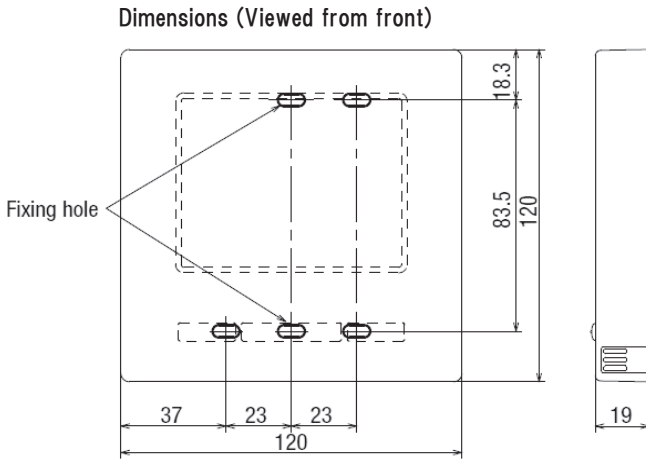
Notes (1) The model name label is attached on the lid of the control box.

Unit:mm

PJG000Z297

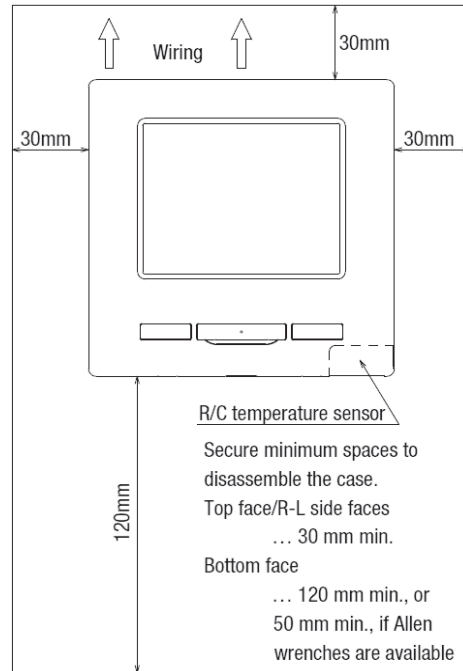
(2) **Wired remote control (option parts)**
Model RC-EX1A

Unit:mm



Exterior appearance (Munsell color)	Pearl White (N8.5) near equivalent
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Installation space



Cautions for selecting installation place

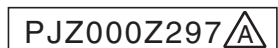
- (1) Installation surface must be flat and sufficiently strong. R/C case must not be deformed.
- (2) Where the R/C can detect room temperatures accurately
 This is a must when detecting room temperatures with the temperature sensor of R/C.
 - Install the R/C where it can detect the average temperature in the room.
 - Install the R/C sufficiently separated from a heat source.
 - Install the R/C where it will not be influenced by the turbulence of air when the door is opened or closed.
 Select a place where the R/C is not exposed to direct sunlight or blown by winds from the air-conditioner or temperatures on the wall surface will not deviate largely from indoor air temperatures.

R/C cable: 0.3mm² × 2-core

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.

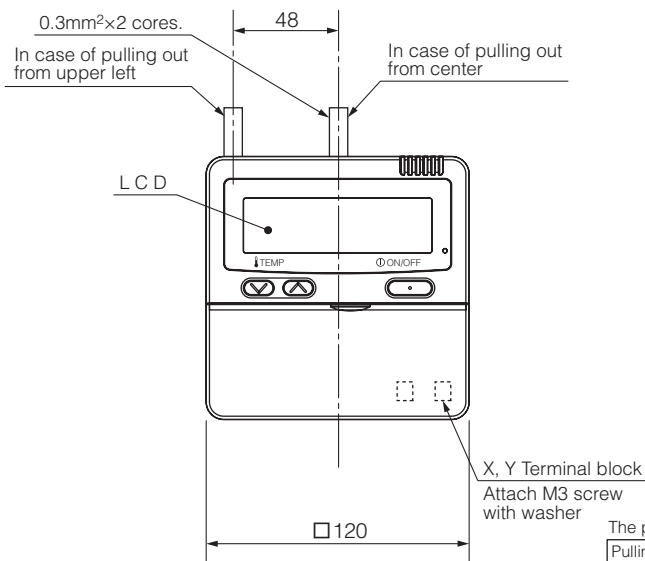
< 200 m	0.5 mm ² x 2-core
< 300 m	0.75 mm ² x 2-core
< 400 m	1.25 mm ² x 2-core
< 600 m	2.0 mm ² x 2-core

Adapted to **RoHS** directive



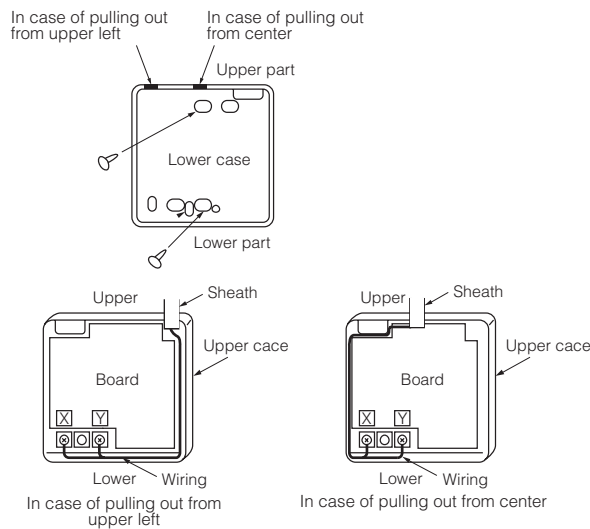
Model RC-E5

Exposed mounting

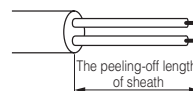


Exterior appearance (Munsell color)	Pearl White (N8.5) near equivalent
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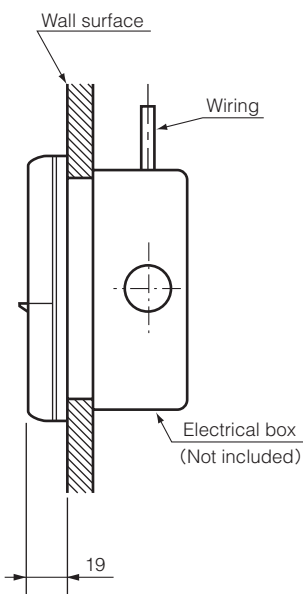
Wiring outlet
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.



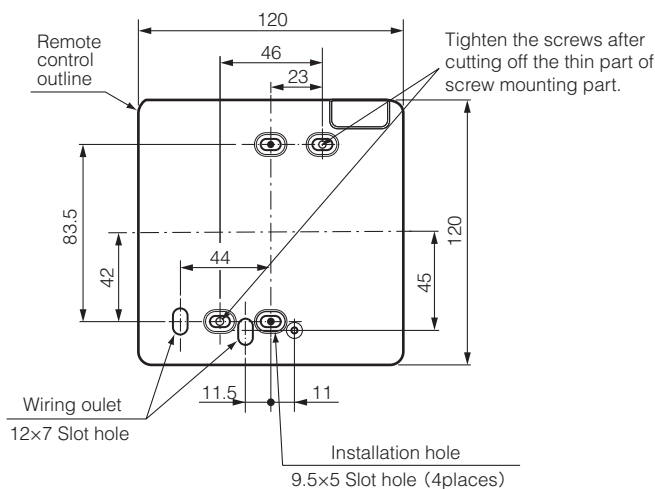
The peeling-off length of sheath	
Pulling out from upper left	Pulling out from center
X wiring : 215mm	X wiring : 170mm
Y wiring : 195mm	Y wiring : 190mm



Embedded mounting



Remote control installation dimensions



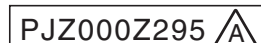
(1) Installation screw for remote control
M4 Screw (2 pieces)

Unit:mm

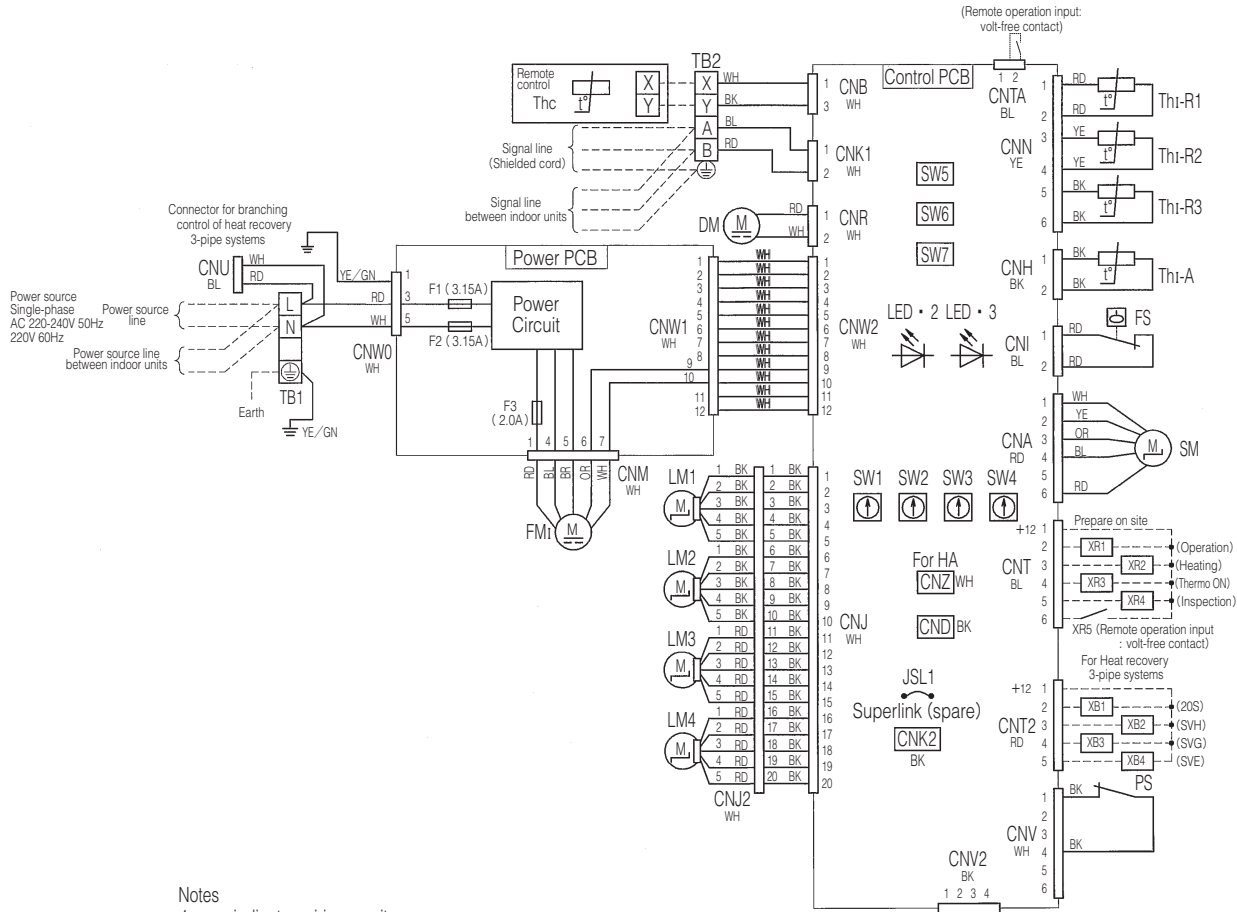
Wiring specifications

(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



PJF000Z289 



Notes

1. --- indicates wiring on site.
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that total length is more than 100m.
4. Do not put signal line and remote control line alongside power source line.

Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1-3	Fuse
FMi	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM1-4	Louver motor
PS	Panel switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

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

All models

4. ELECTRICAL WIRING

(1) Ceiling cassette-4 way type (FDT)

(2) Ceiling cassette-4 way Compact type (FDTC)
All models

Meaning of marks

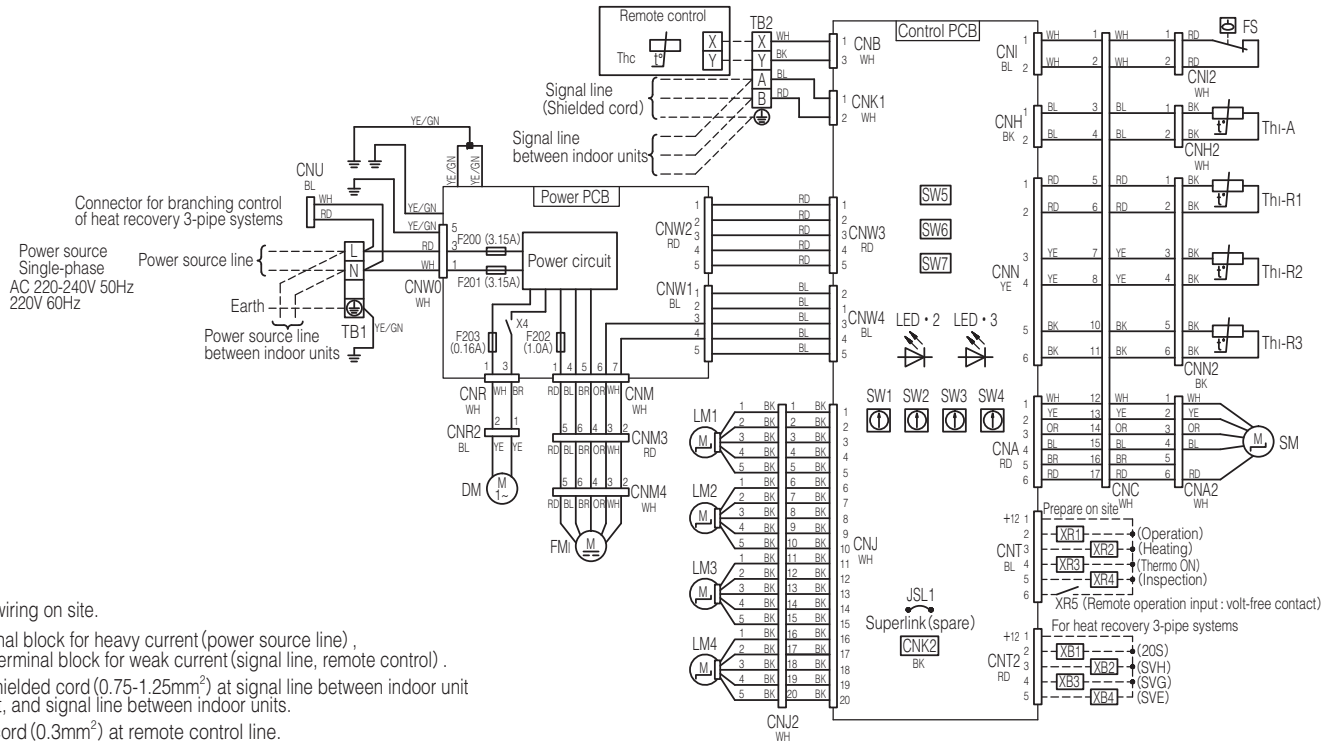
CNA-Z	Connector
DM	Drain motor
F200-203	Fuse
FMi	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM1-4	Louver motor

SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting

SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)
X4	Relay for DM
■ mark	Closed-end connector

Color marks

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



Notes

1. --- indicates wiring on site.
2. TB1 is the terminal block for heavy current (power source line), and TB2 is the terminal block for weak current (signal line, remote control).
3. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
4. 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.
5. Do not put signal line and remote control line alongside power source line.

PJA003Z400

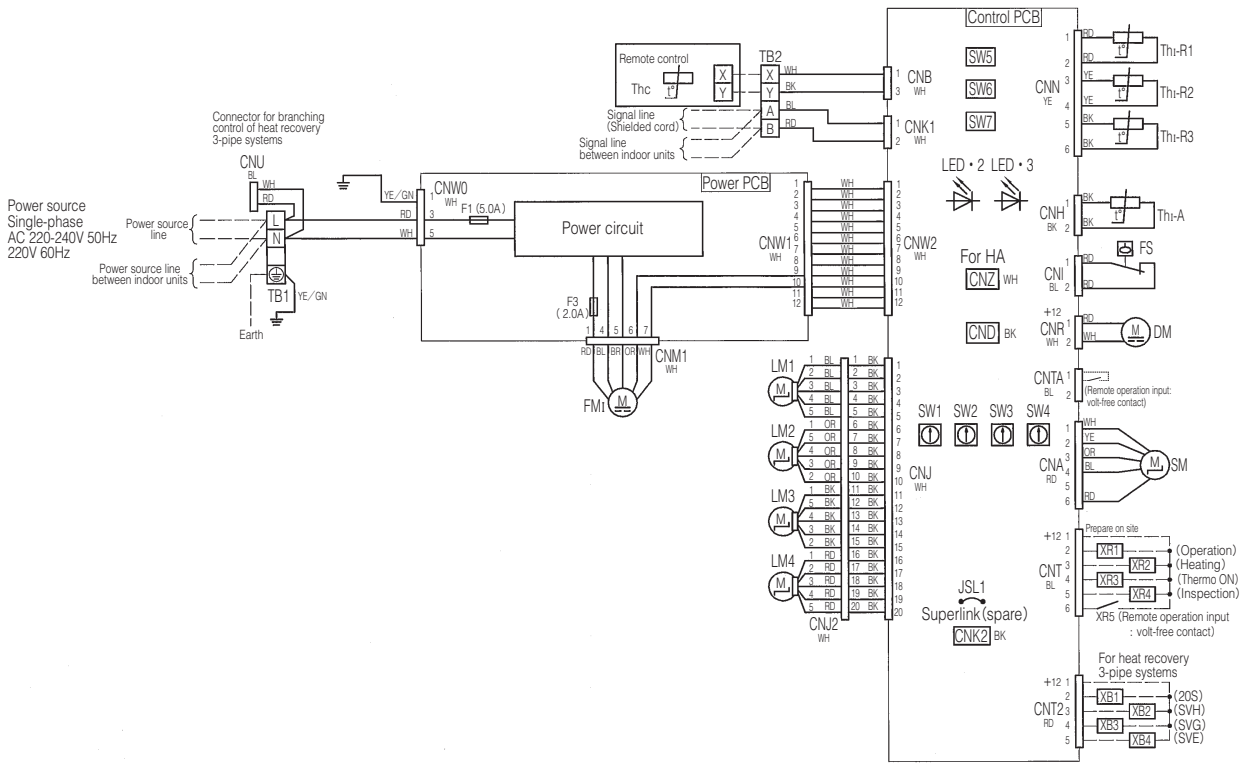
(3) Ceiling cassette-2 way type (FDTW)
 Models FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

Meaning of marks

CNA-Z	Connector (□ mark)
DM	Drain motor
F1(5.0A), F3(2.0A)	Fuse
FMi	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM1-4	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

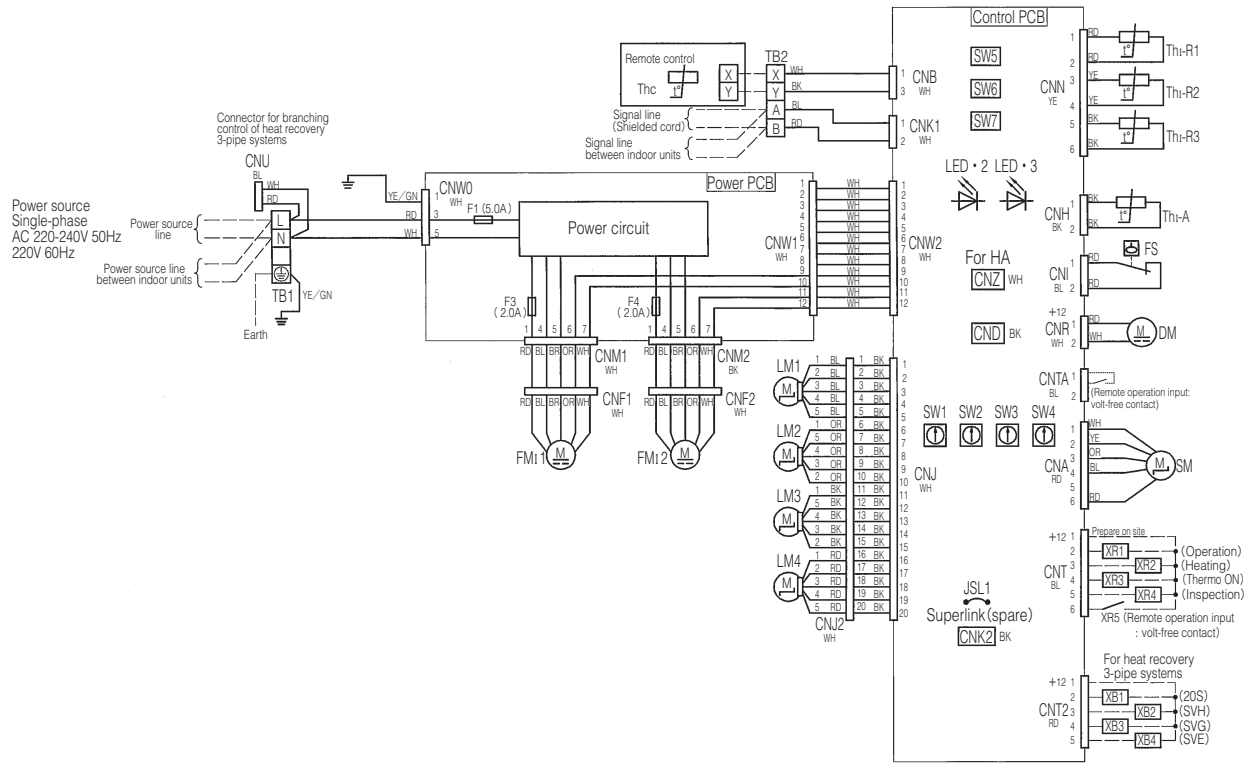
Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
RD	Red
WH	White
YE	Yellow
YE/GN	Yellow/Green



Notes

1. — indicates wiring on site.
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

PJB001Z715



Meaning of marks

CNA-Z	Connector (□ mark)
DM	Drain motor
F1(5.0A)	Fuse
F3(2.0A), F4(2.0A)	Fuse
FMI1,2	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM1-4	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

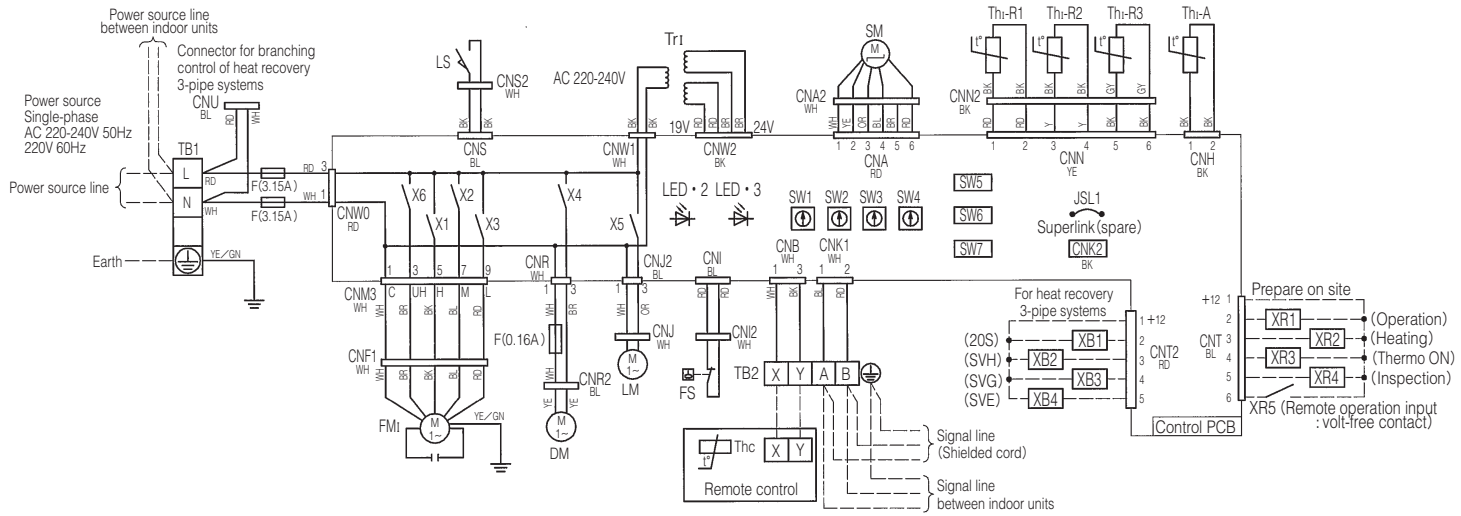
Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
RD	Red
WH	White
YE	Yellow
YE/GN	Yellow/Green

Notes

1. — indicates wiring on site.
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that total length is more than 100m.
4. Do not put signal line and remote control line alongside power source line.

PJB001Z716

(4) Ceiling cassette-1 way compact type (FDTQ)
(a) Direct blow type
All models



Notes

- indicates wiring on site.
- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
- 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.
- Do not put signal line and remote control line alongside power source line.

Meaning of marks

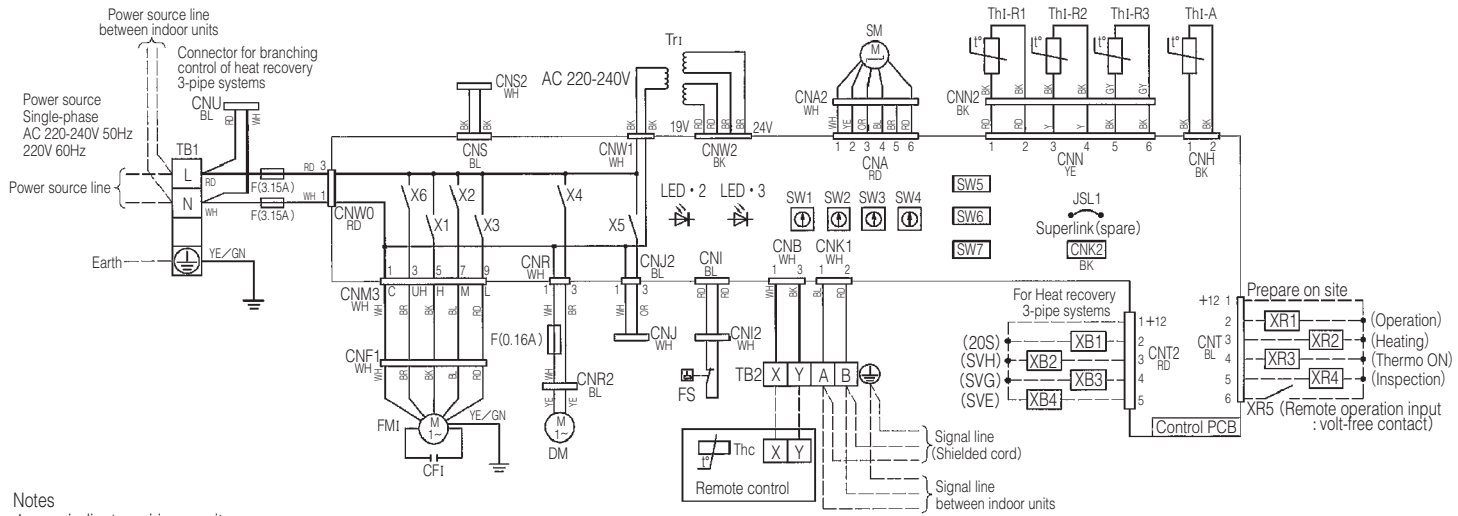
CF1	Capacitor for FM1
CNA-Z	Connector
DM	Drain motor
F	Fuse
FM1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED•2	Indication lamp (Green-Normal operation)
LED•3	Indication lamp (Red-Inspection)
LM	Louver motor
LS	Louver switch

SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run

TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM

Color marks

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



Notes

- indicates wiring on site.
- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
- 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.
- Do not put signal line and remote control line alongside power source line.

Color marks

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

Meaning of marks

CF1	Capacitor for FMI
CNA-Z	Connector
DM	Drain motor
F	Fuse
FMI	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)

SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run

TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM

Changing the fan tap

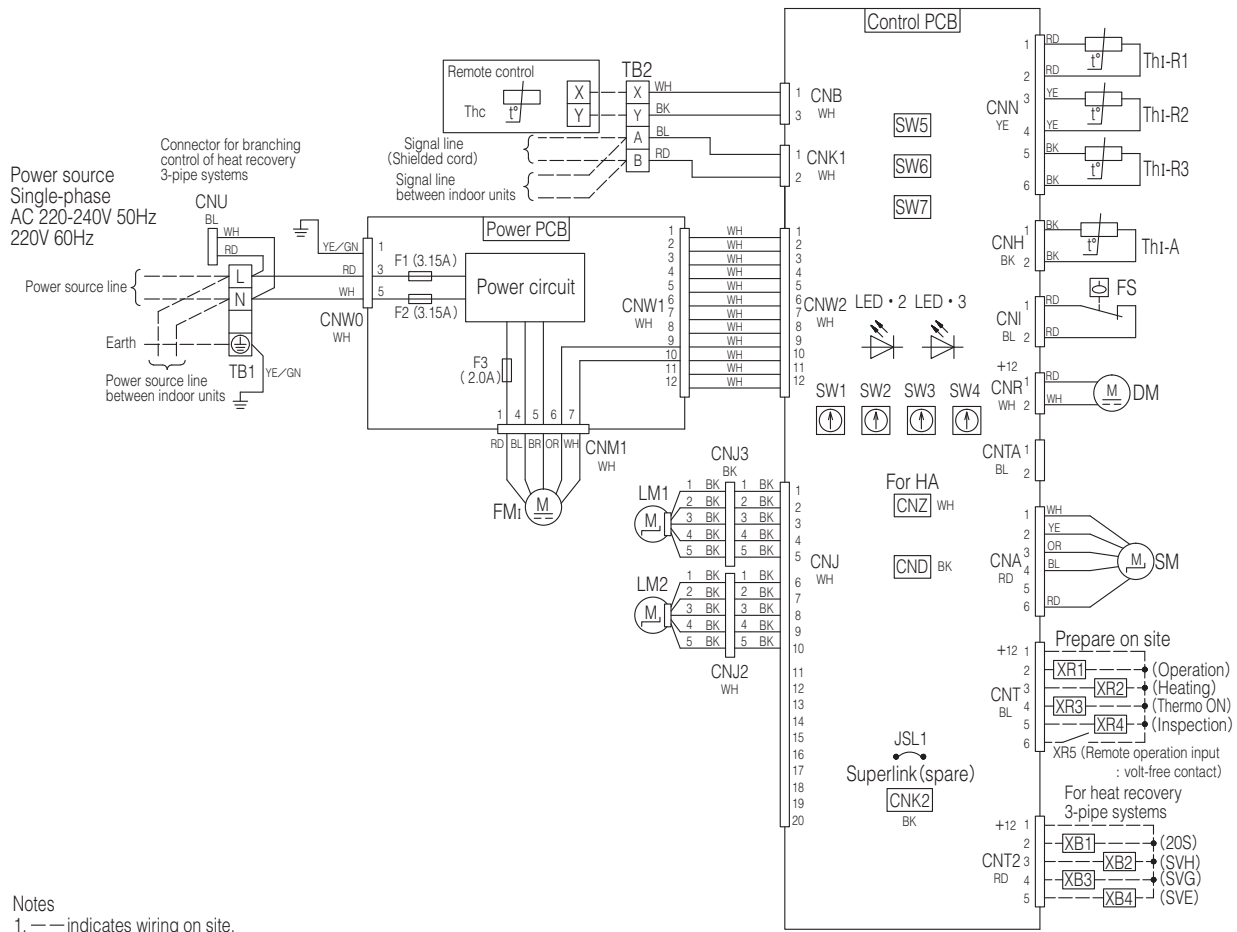
The factory setting of the fan tap is "Standard".
Change the fan tap to "High Speed 1" by using the function setting of the wired remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
I/U FUNCTION	02	FAN SPEED SET	HIGH SPEED 1

Invalidating the louver button

The factory setting of the louver button is "Valid".
Change the louver button to "Invalid" by using the function setting of the wired remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
FUNCTION (REMOTE CONTROL FUNCTION)	07	LOUVER SW	INVALID



Notes

1. — indicates wiring on site.
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

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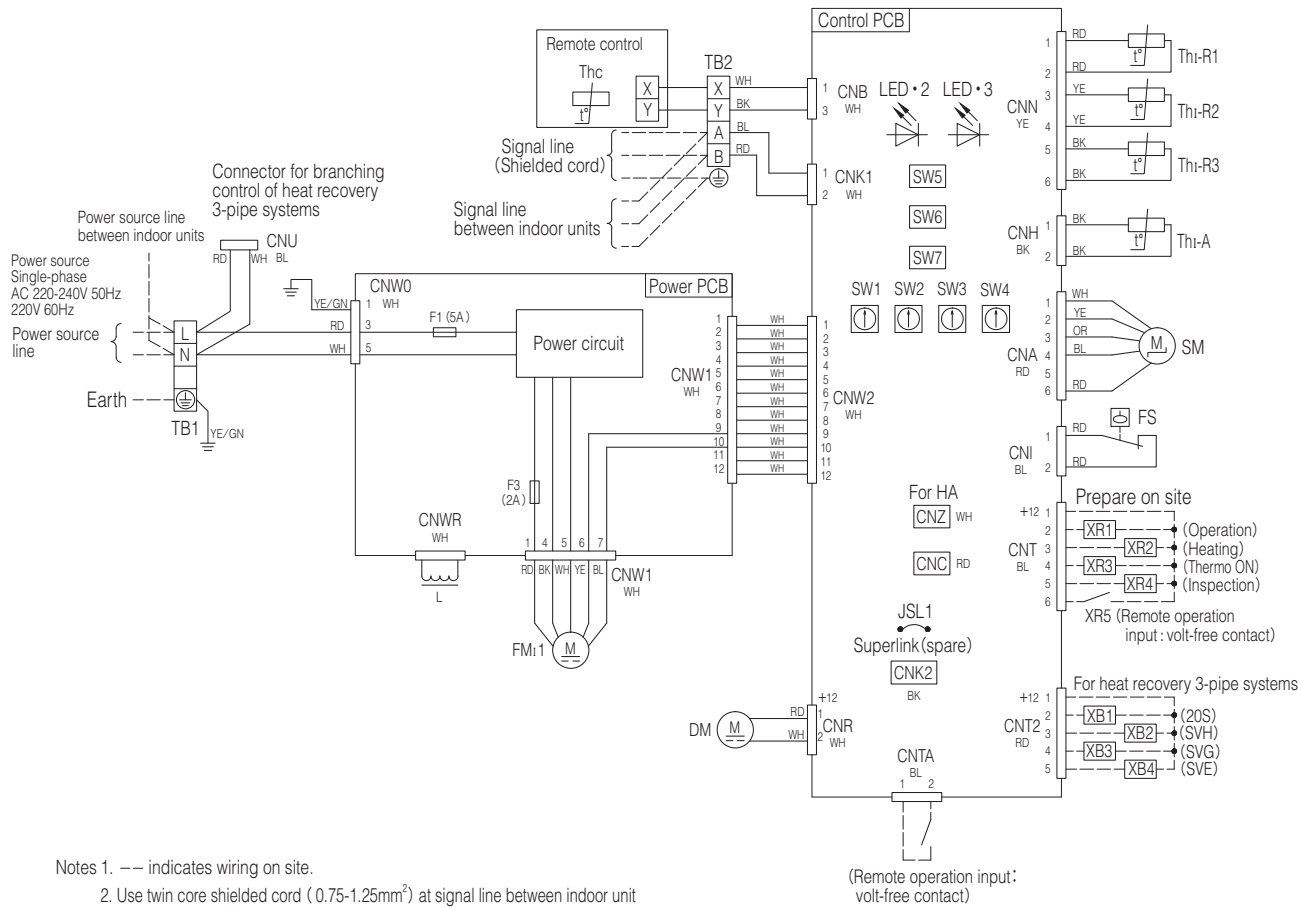
Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1-3	Fuse
FMi	Fan motor
FS	Float switch
JSL 1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM1,2	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

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

(5) Ceiling cassette-1 way type (FDTS)
Models FDTS4S4KXE6F, 71KXE6F



Notes 1. -- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

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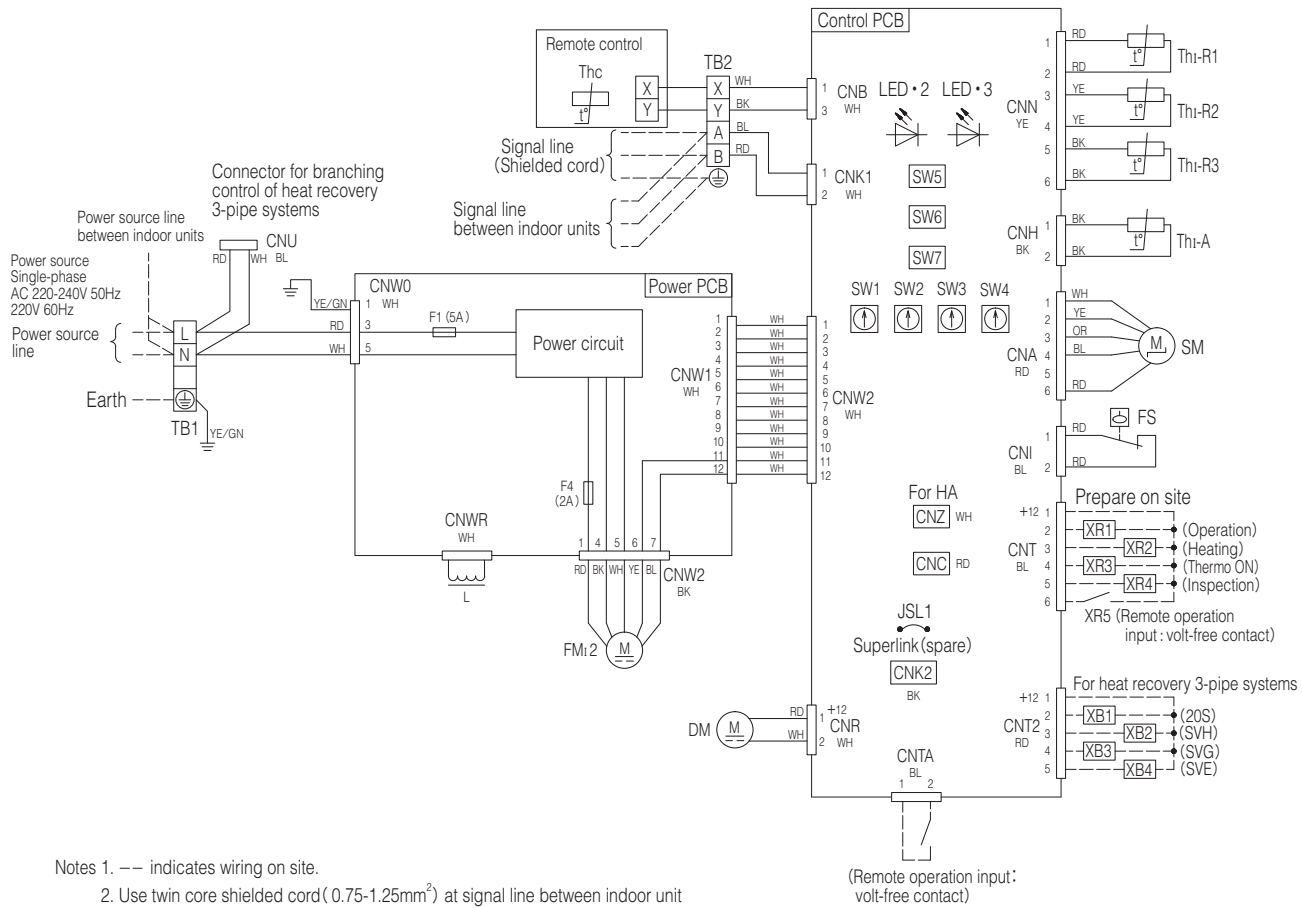
Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1,3	Fuse
FMi1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid / Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

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

(6) Duct connected-High static pressure type (FDU)
 Models FDU45KXE6F, 56KXE6F



Notes 1. --- indicates wiring on site.

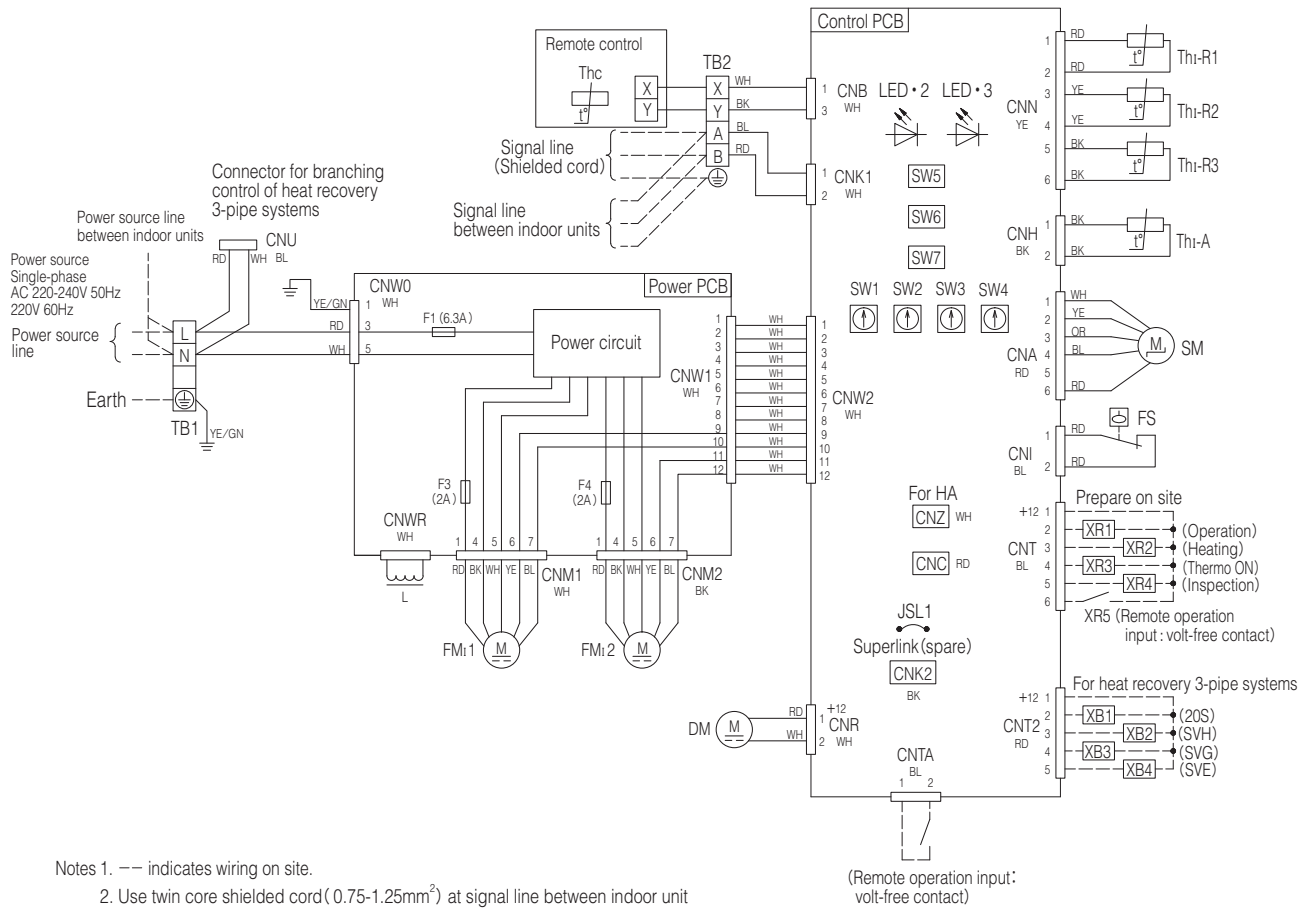
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that the total length is more than 100m.
4. Do not put signal line and remote control line alongside power source line.

Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1,4	Fuse
FMi2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid / Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

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



Notes 1. -- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

Meaning of marks

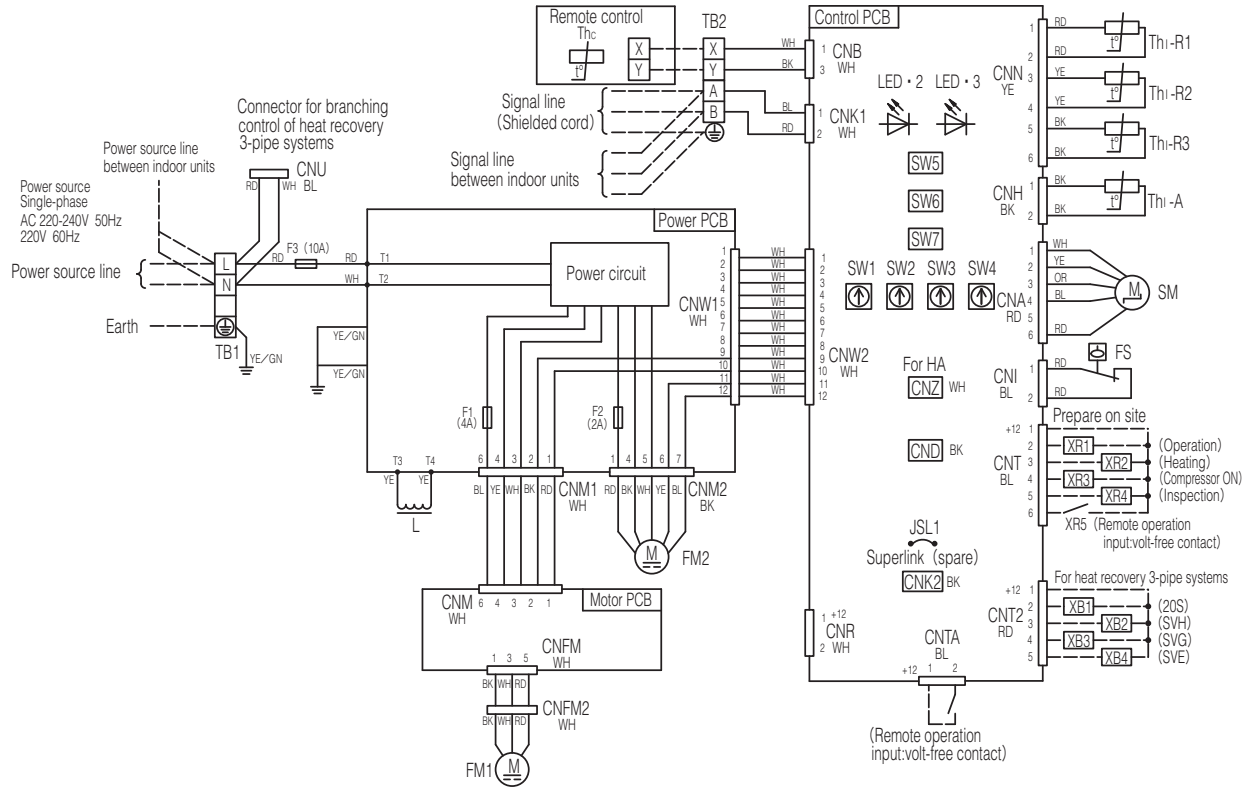
CNA-Z	Connector
DM	Drain motor
F1,3,4	Fuse
FMi1,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid / Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1, 2, 3	Thermistor (Heat exchanger)

Color marks

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

Models FDU12KXE6F, 140KXE6F, 160KXE6F

PJG000Z061



Notes 1. --- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

Meaning of marks

Mark	Parts name
CNA-Z	Connector
F1-3	Fuse
FM1,2	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (For spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address:tens place
SW2	Indoor unit address:ones place
SW3	Outdoor unit address:tens place
SW4	Outdoor unit address:ones place
SW5-1	Automatic adjustment./Fixed previous version of Superlink protocol
SW5-2	Indoor unit address:hundreds place
SW6	Model capacity setting
SW7-1	Operation check Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (mark)
TB2	Terminal block (Signal line) (mark)
Thc	Thermistor (Remote control)
Th i -A	Thermistor (Return air)
Th i -R1,2,3	Thermistor (Heat exchanger)

Color marks

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

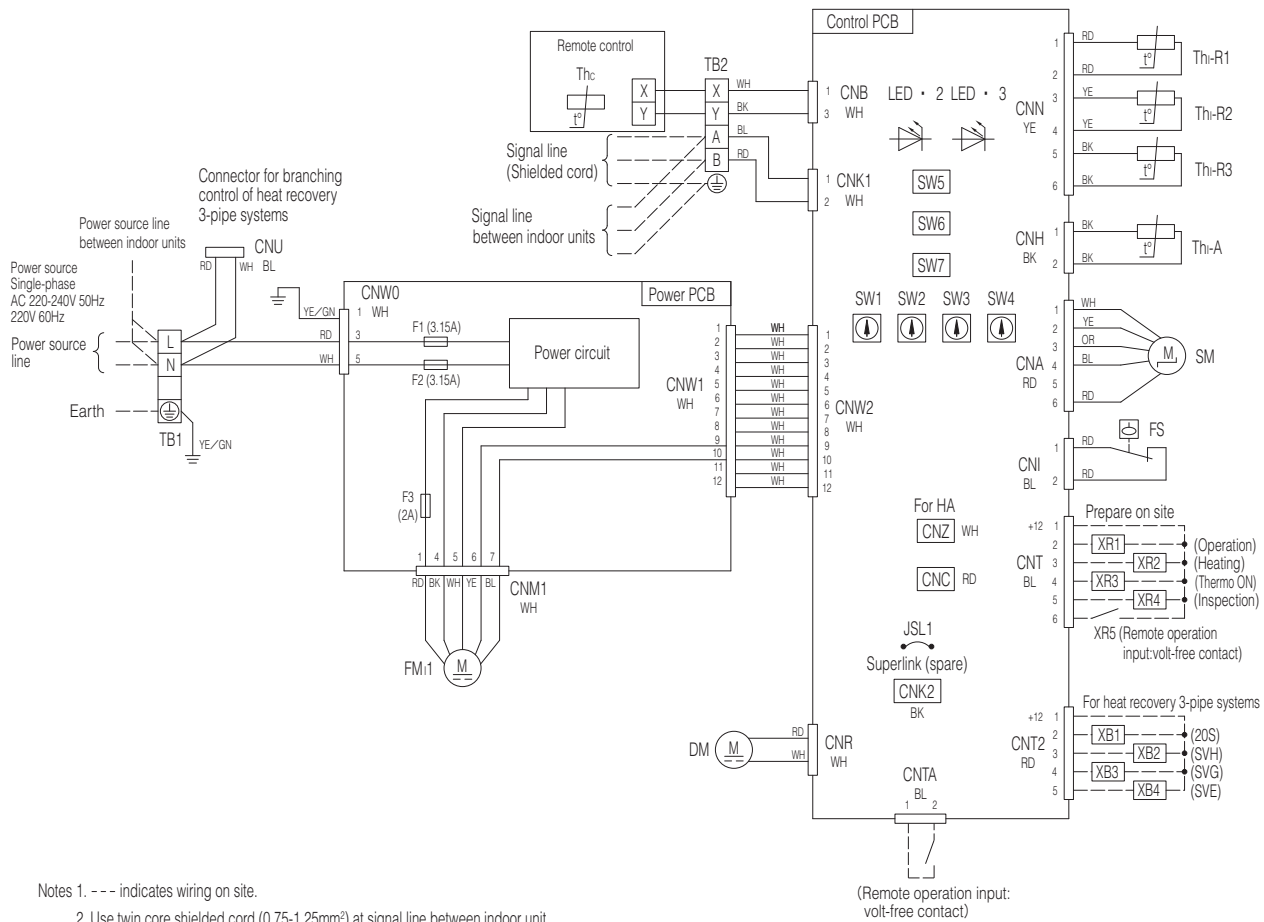
(7) Duct connected-Low/Middle static pressure type (FDUM)
 Models **FDUM22KXE6F**, **28KXE6F**, **36KXE6F**, **45KXE6F**, **56KXE6F**

Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1-3	Fuse
FMI1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block [Power source] (□mark)
TB2	Terminal block [Signal line] (□mark)
Thc	Thermistor [Remote control]
Th-A	Thermistor [Return air]
Th-R1,2,3	Thermistor [Heat exchanger]

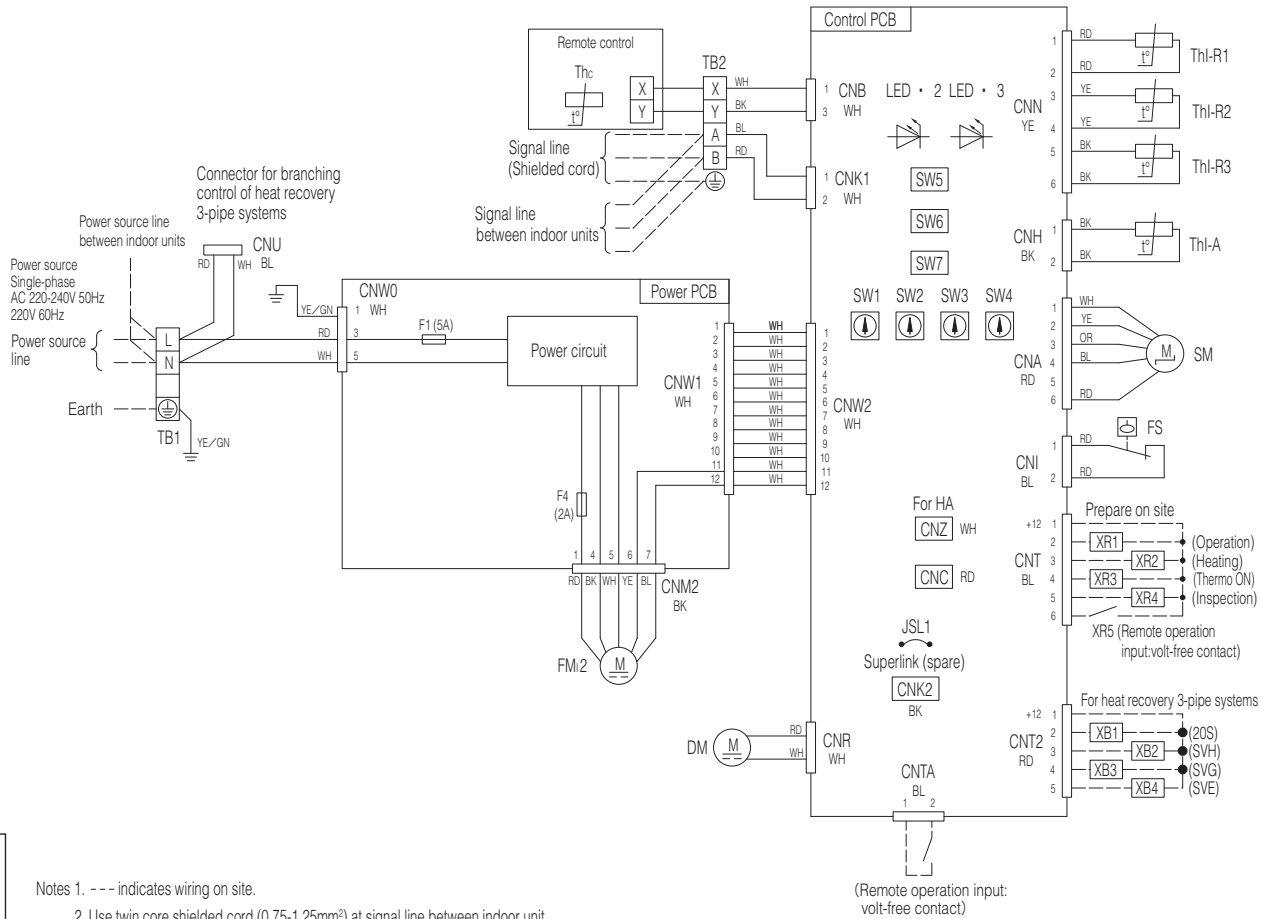
Color marks

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



PJG000Z019A

PJG000Z030A



Notes 1. --- indicates wiring on site.

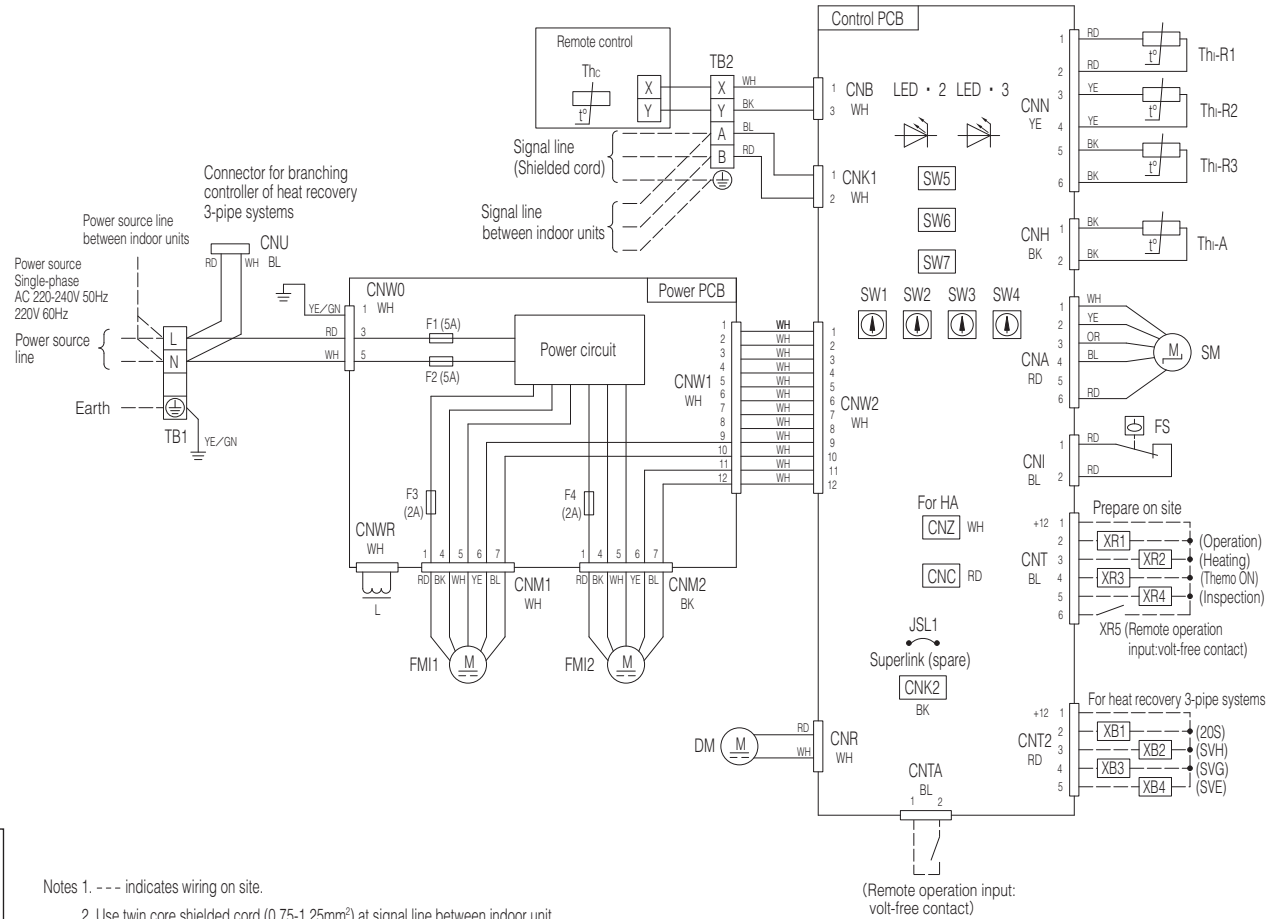
2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote control line.
See spec sheet of remote control in case that the total length is more than 100m.
4. Do not put signal line and remote control line alongside power source line.

Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1,4	Fuse
FM12	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block [Power source] (□mark)
TB2	Terminal block [Signal line] (□mark)
Thc	Thermistor [Remote control]
ThI-A	Thermistor [Return air]
ThI-R1,2,3	Thermistor [Heat exchanger]

Color marks

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



- Notes 1. --- indicates wiring on site.
 2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
 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 signal line and remote control line alongside power source line.

Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1-4	Fuse
FMI1,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
L	Reactor
LED · 2	Indication lamp (Green-Normal operation)
LED · 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment / Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid / Invalid
TB1	Terminal block [Power source] (□mark)
TB2	Terminal block [Signal line] (□mark)
Thc	Thermistor [Remote control]
Thi-A	Thermistor [Return air]
Thi-R1,2,3	Thermistor [Heat exchanger]

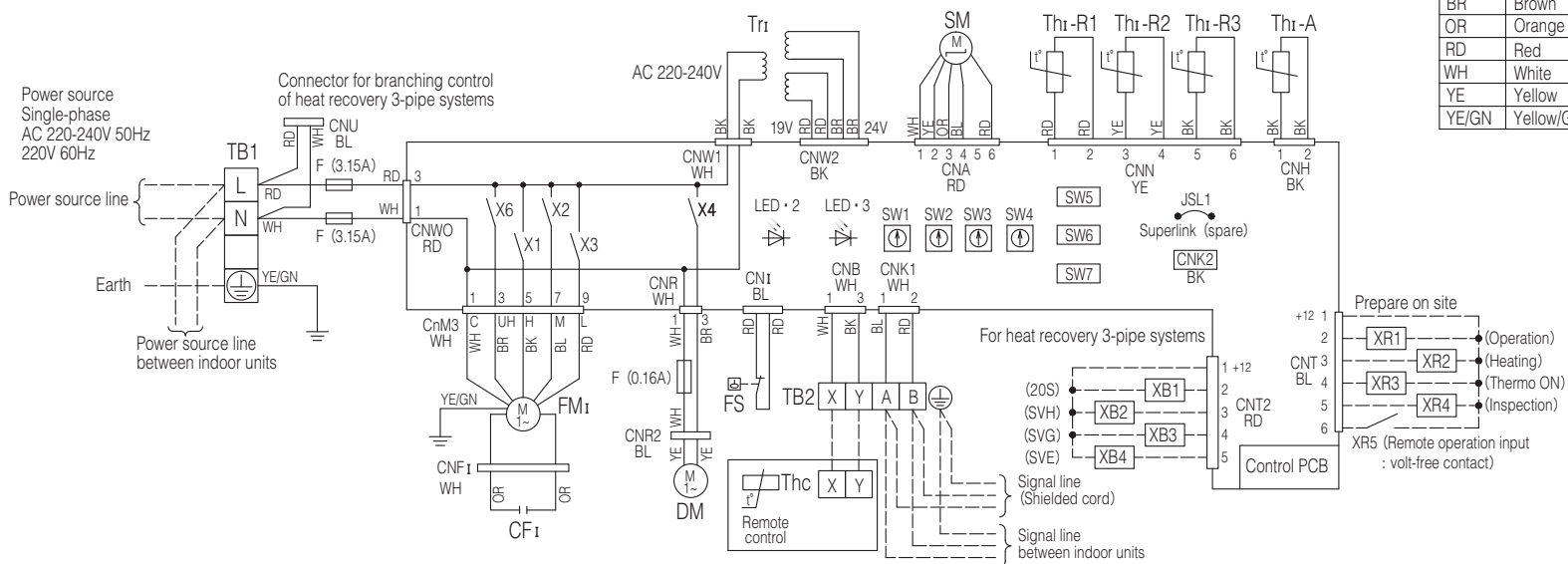
Color marks

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

(8) Duct connected (thin)-Low static pressure type (FDUT)
Models FDUT15KXE6F-E, 22KXE6F-E, 28KXE6F-E, 36KXE6F-E, 45KXE6F-E, 56KXE6F-E

Color marks

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

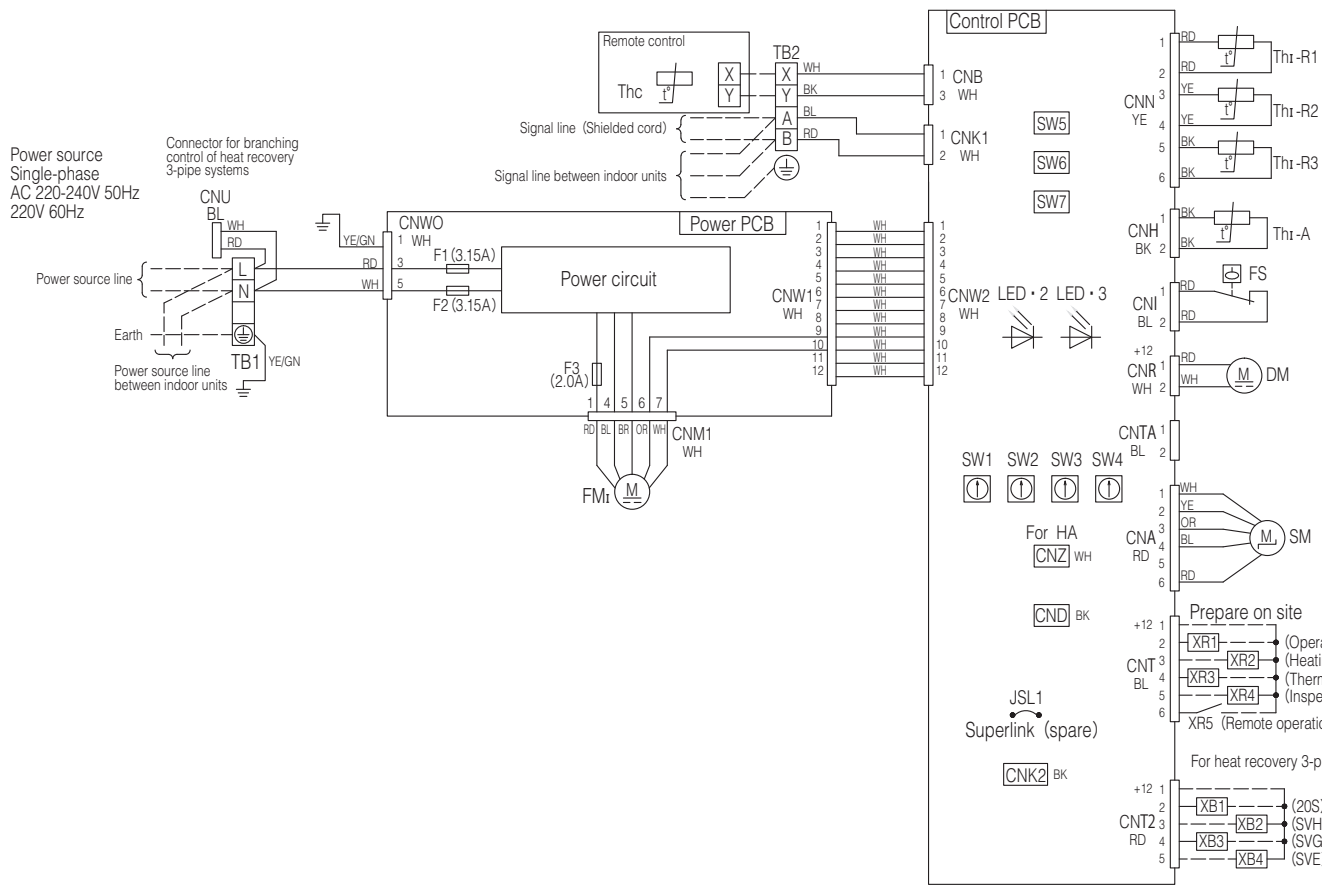


Meaning of marks

CF1	Capacitor for FM1	SW1	Indoor unit address : tens place	TB1	Terminal block (Power source) (□mark)
CNA-Z	Connector	SW2	Indoor unit address : ones place	TB2	Terminal block (Signal line) (□mark)
DM	Drain motor	SW3	Outdoor unit address : tens place	Thc	Thermistor (Remote control)
F	Fuse	SW4	Outdoor unit address : ones place	Th1-A	Thermistor (Return air)
FM1	Fan motor (with thermister)	SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol	Th1-R1,2,3	Thermistor (Heat exchanger)
JSL1	Live Superlink terminal setting (for spare)	SW5-2	Indoor unit address : hundreds place	Tr1	Transformer
LED • 2	Indication lamp (Green-Normal operation)	SW6	Model capacity setting	X1~3.6	Relay for FM
LED • 3	Indication lamp (Red-Inspection)	SW7-1	Operation check, Drain motor test run	X4	Relay for DM
SM	Stepping motor (For electronic expansion valve)				

Notes 1. -- indicates wiring on site.

- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
- 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.
- Do not put signal line and remote control line alongside power source line.



Meaning of marks

CNA-Z	Connector
DM	Drain motor
F1-3	Fuse
FMi	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1,2,3	Thermistor (Heat exchanger)

Color marks

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

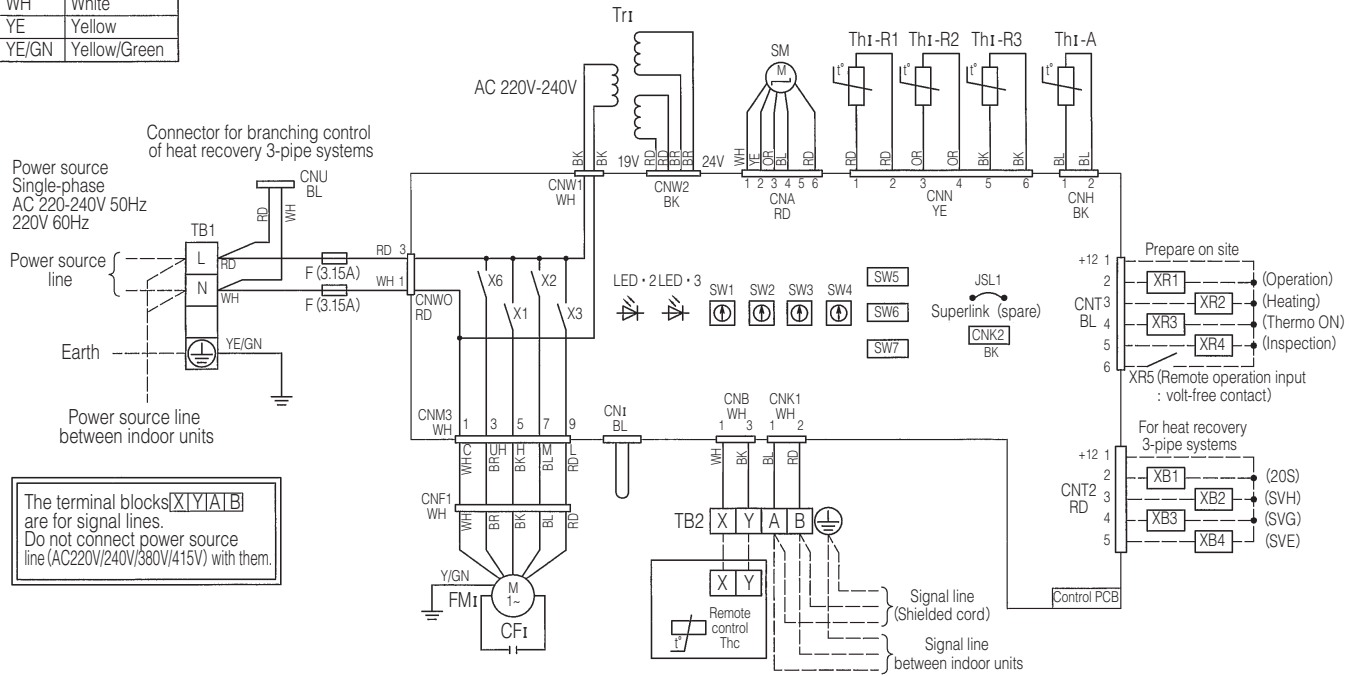
Notes 1. -- indicates wiring on site.

- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
- 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.
- Do not put signal line and remote control line alongside power source line.

PJH000Z018

Model FDUT71KXE6F-E

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

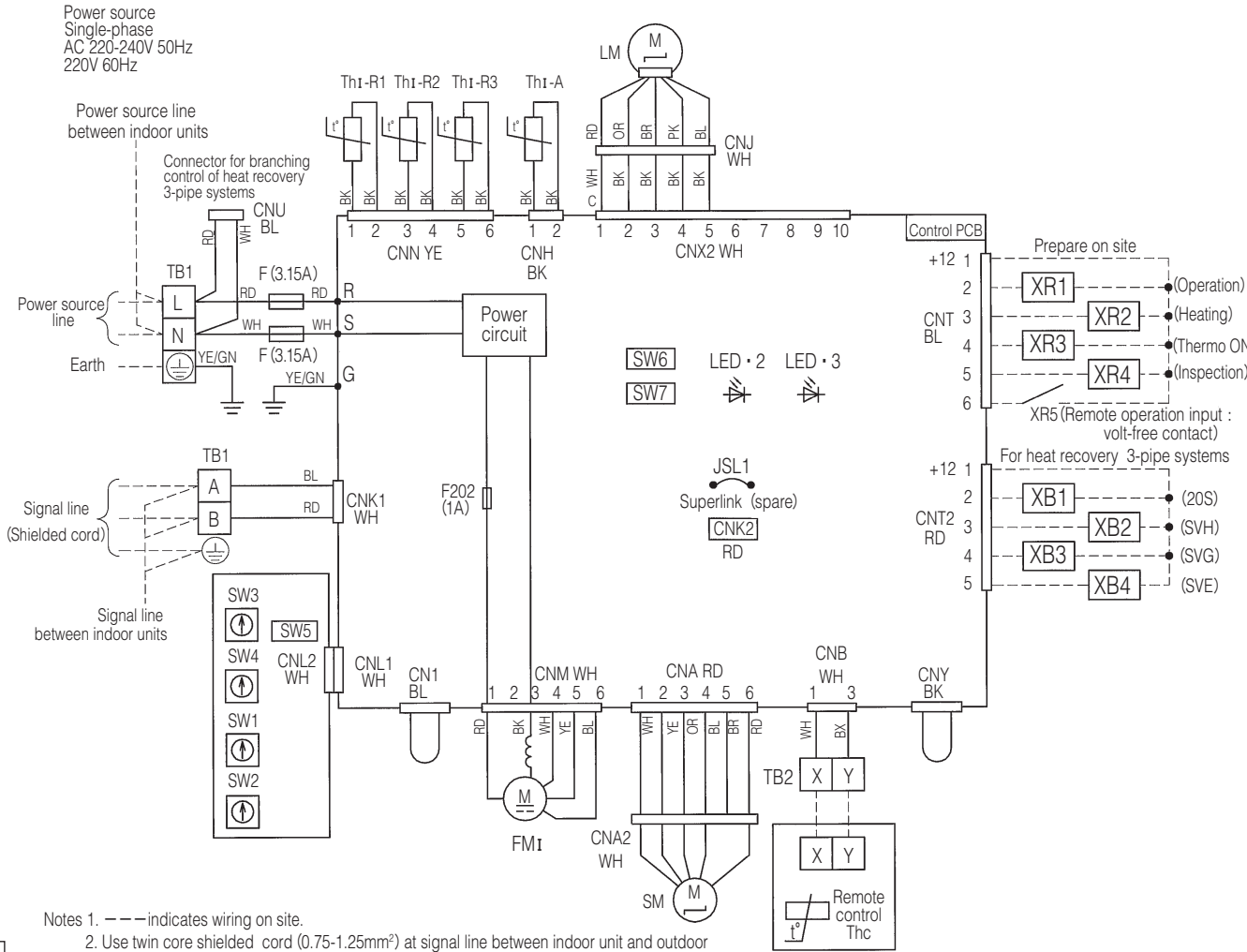


Meaning of marks

CF1	Capacitor for FM1
CNA-Z	Connector
F	Fuse
FM1	Fan motor (with thermister)
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)
Tr 1	Transformer
X1~3,6	Relay for FM

- Notes 1. — indicates wiring on site.
- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
 - 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.
 - Do not put signal line and remote control line alongside power source line.

PJC001Z284



Notes 1. --- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

Meaning of marks

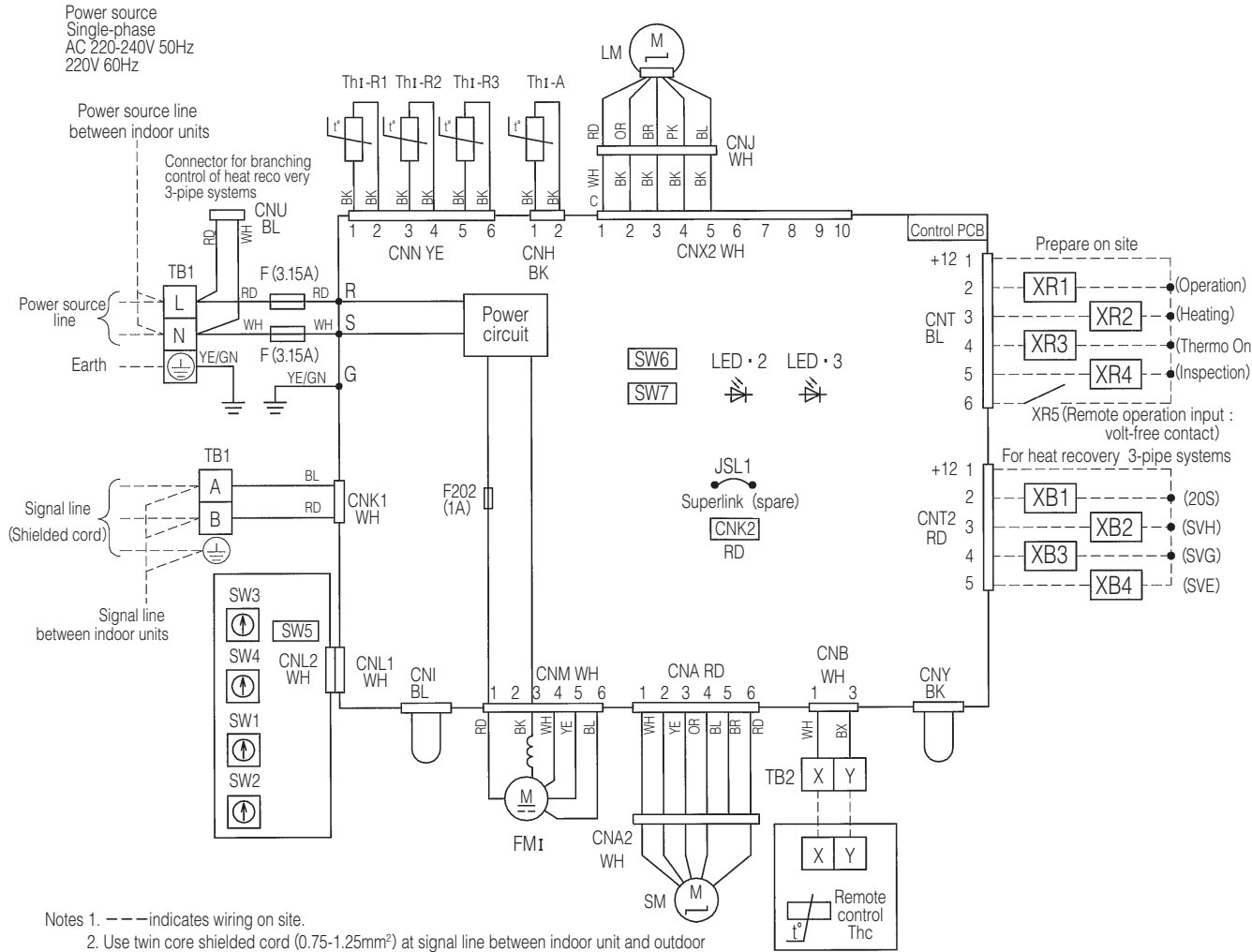
CNA-Z	Connector
F.F202	Fuse
FM1	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM	Louver motor
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check/Drain motor test run
TB1	Terminal block (□mark)
TB2	Terminal block (Remote Control) (□mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)

Color marks

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

(10) Wall mounted type (FDK)
Models FDK22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

PHA001Z029



- Notes 1. --- indicates wiring on site.
 2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
 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 signal line and remote control line alongside power source line.

PHA001Z030/B

Meaning of marks

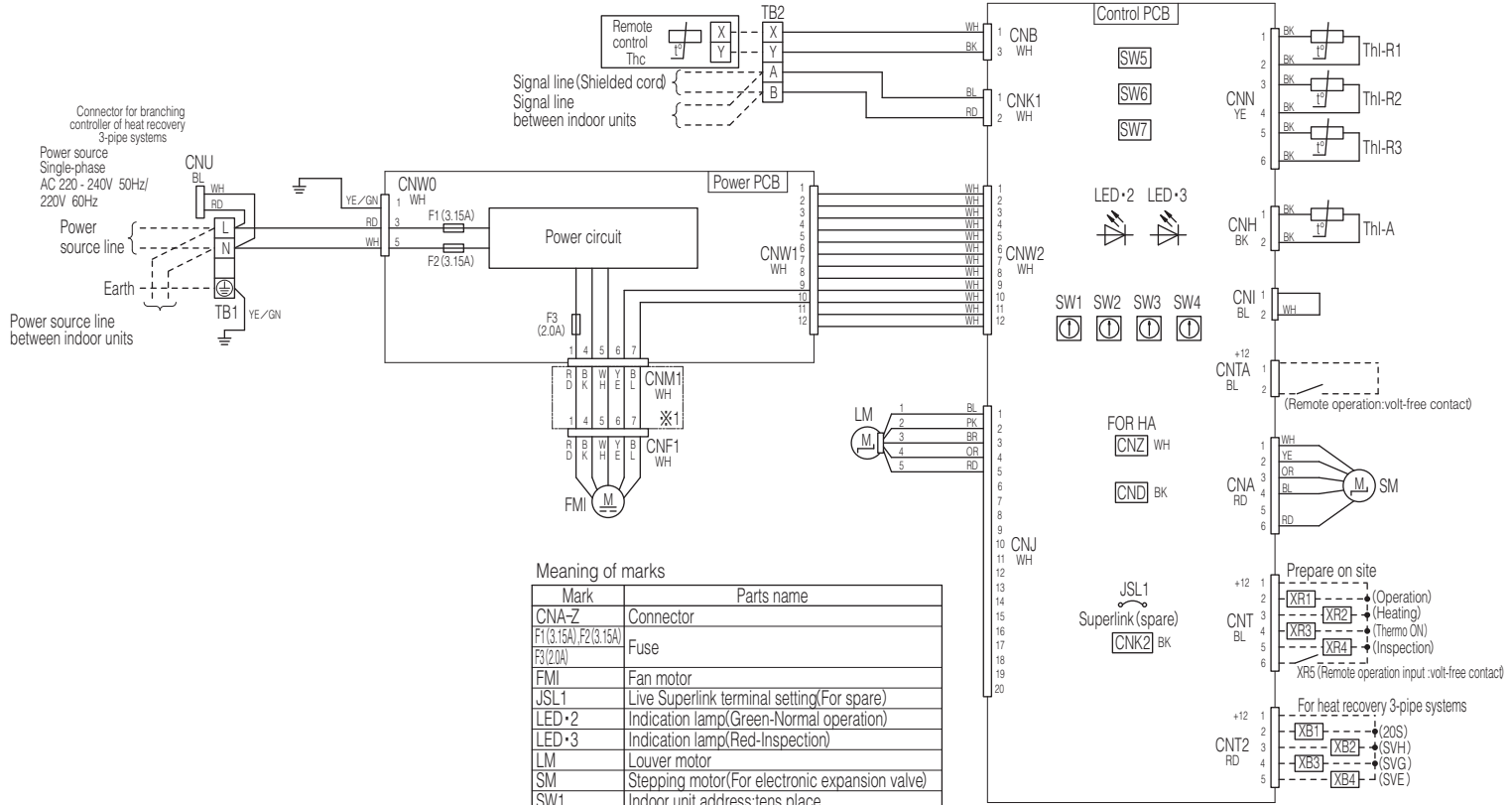
CNA-Z	Connector
F,F202	Fuse
FM1	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
LM	Louver motor
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check/Drain motor test run
TB1	Terminal block (□mark)
TB2	Terminal block (Remote Control) (□mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)

Color marks

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

Model FDK71 KXE6F

(11) Ceiling suspended type (FDE)
All models



Meaning of marks

Mark	Parts name
CNA-Z	Connector
F1(3.15A), F2(3.15A)	Fuse
F3(2.0A)	Fuse
FMI	Fan motor
JSL1	Live Superlink terminal setting(For spare)
LED•2	Indication lamp(Green-Normal operation)
LED•3	Indication lamp(Red-Inspection)
LM	Louver motor
SM	Stepping motor(For electronic expansion valve)
SW1	Indoor unit address:tens place
SW2	Indoor unit address:ones place
SW3	Outdoor unit address:tens place
SW4	Outdoor unit address:ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address:hundreds place
SW6	Model capacity setting
SW7-1	Operation check, drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block(Power source) (mark)
TB2	Terminal block(Signal line) (mark)
Thc	Thermistor (Remote control)
ThI-A	Thermistor (Return air)
ThI-R1,2,3	Thermistor (Heat exchanger)

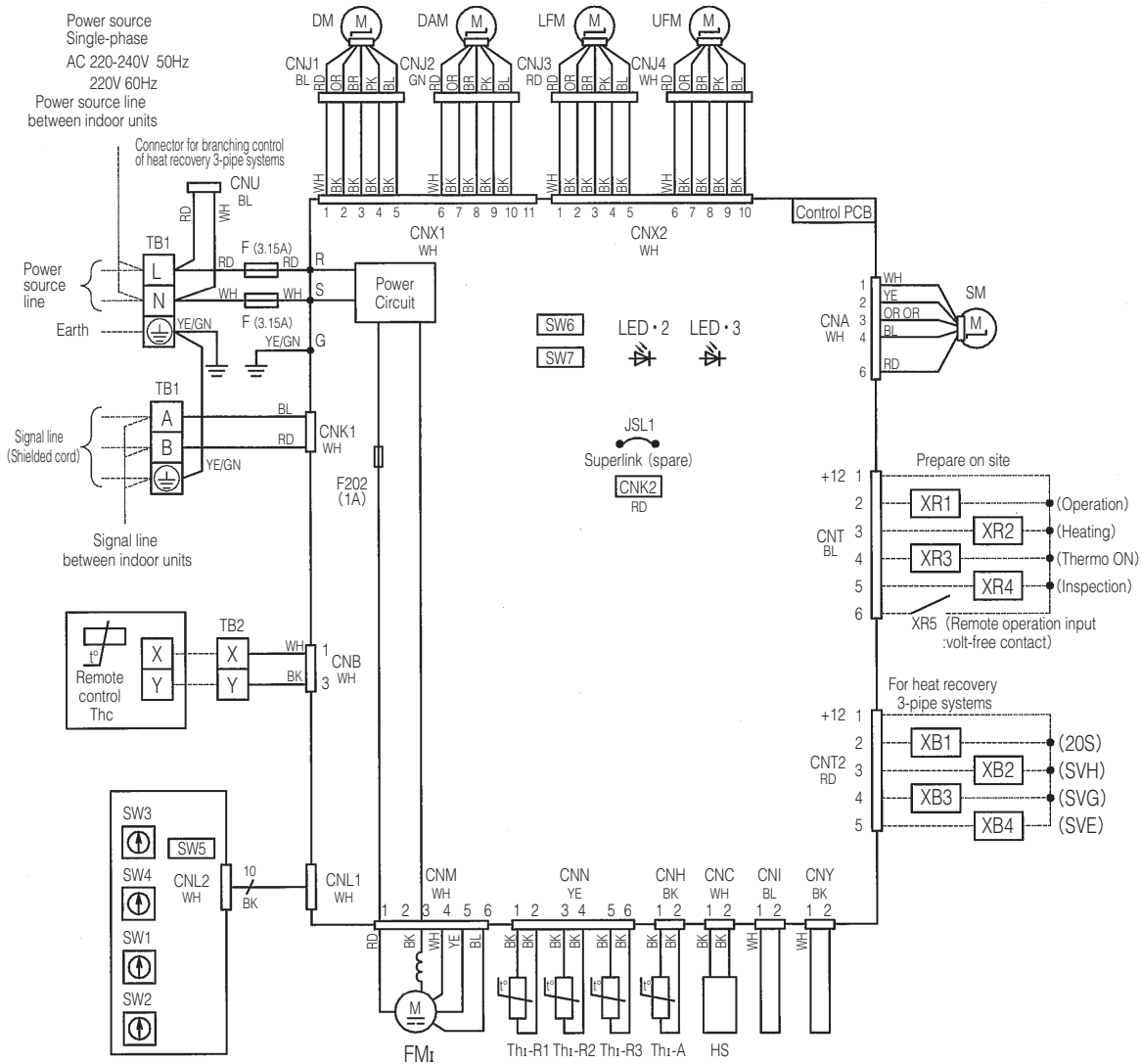
Color marks

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

Notes 1. ---- indicates wiring on site.

- Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
- 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.
- Do not put signal line and remote control line alongside power source line.
- Section 1 (※1) is provided on the models FDE112, 140 only.

PFA004Z039



- Notes 1. ---- indicates wiring on site.
 2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and out unit, and signal line between indoor units.
 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 signal line and remote control line alongside power source line.

PGF000Z004

Meaning of marks

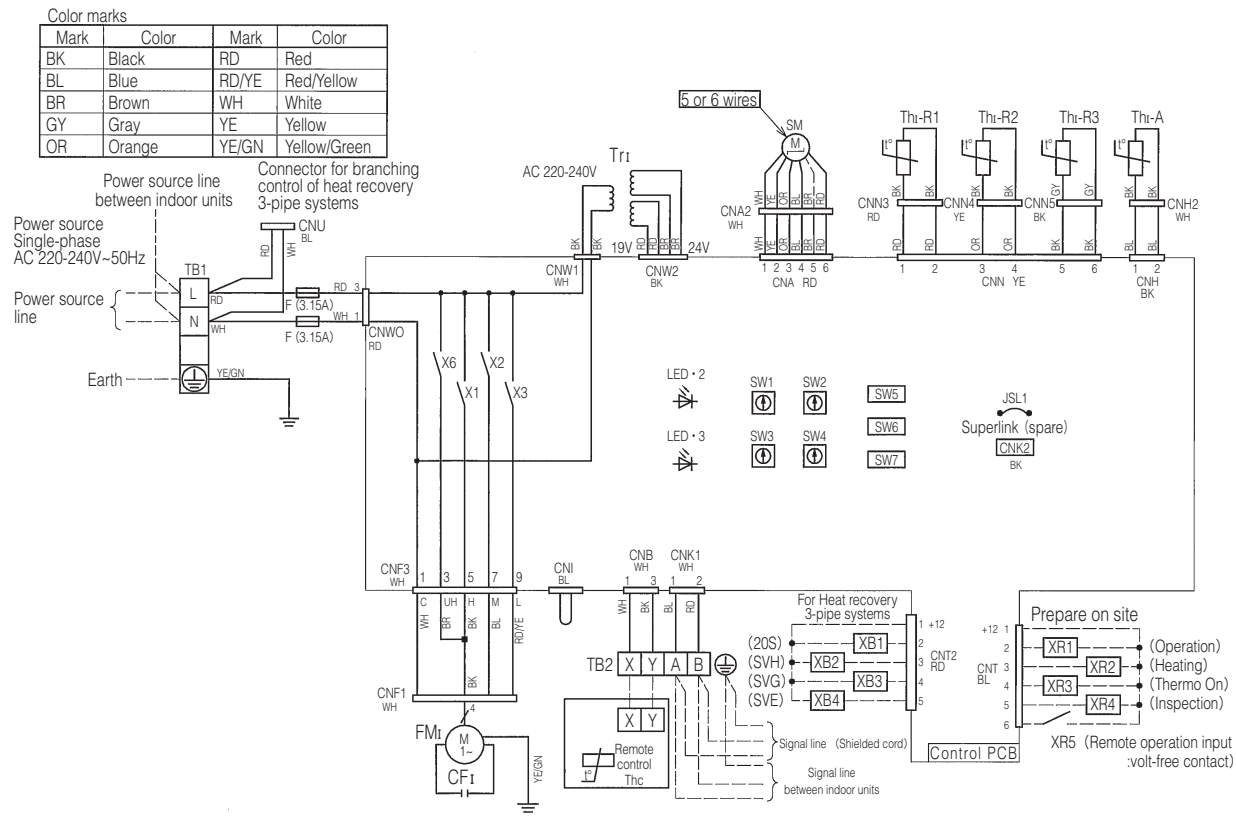
CNA-Z	Connector
F202	Fuse
FMr	Fan motor (with thermistor)
HS	Humidity sensor
JSL 1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
DM	Damper motor
DAM	Damper arm motor
LFM	Lower flap motor
UFM	Upper flap motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (□mark)
TB2	Terminal block (Remote controller) (□mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1,2,3	Thermistor (Heat exchanger)

Color marks

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

(12) Floor standing-2 way type (FDFW)
 All models

(13) Floor standing (with casing) type (FDL)
Model FDL71KXE6F



Color marks

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

Meaning of marks

CF1	Capacitor for FM1
CNA-Z	Connector
F	Fuse
FM1	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address:tens place
SW2	Indoor unit address:ones place
SW3	Outdoor unit address:tens place
SW4	Outdoor unit address:ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address:hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1,2,3	Thermistor (Heat exchanger)
Tr1	Transformer
X1-3,6	Relay for FM
■mark	Closed-end connector

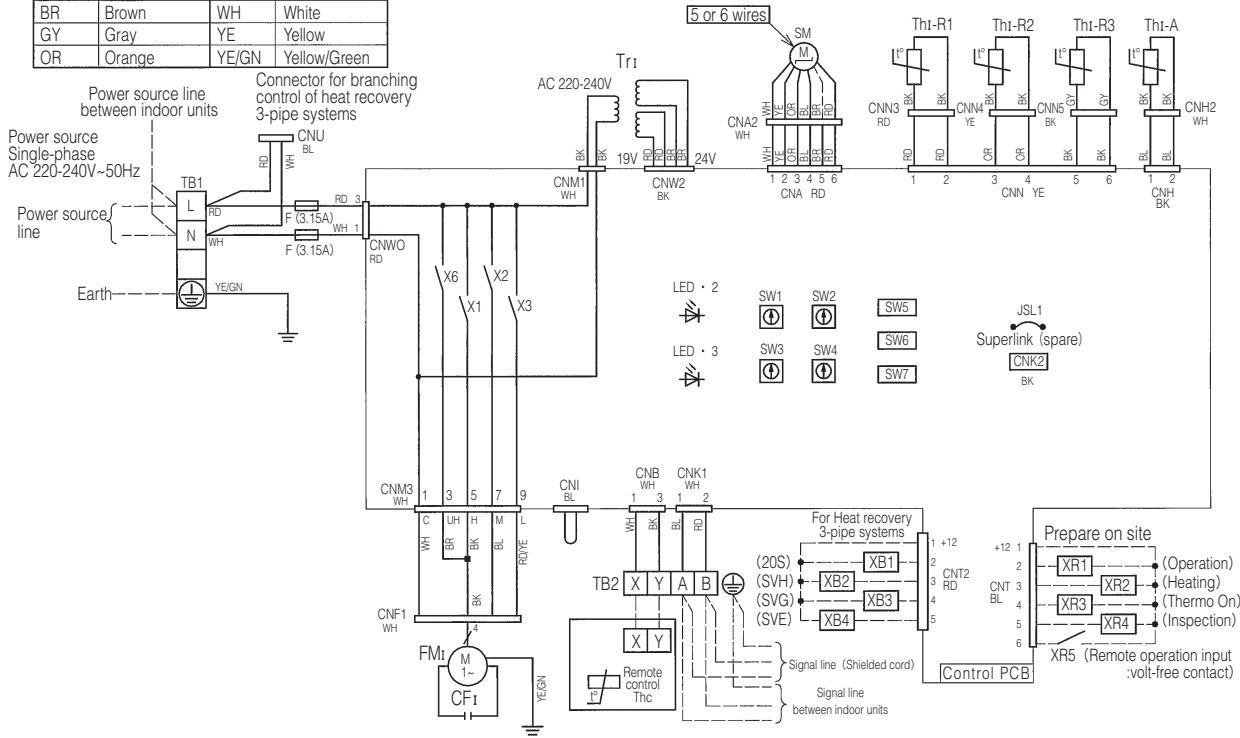
Notes 1. — — indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

PGD00002053

Color marks

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



Meaning of marks

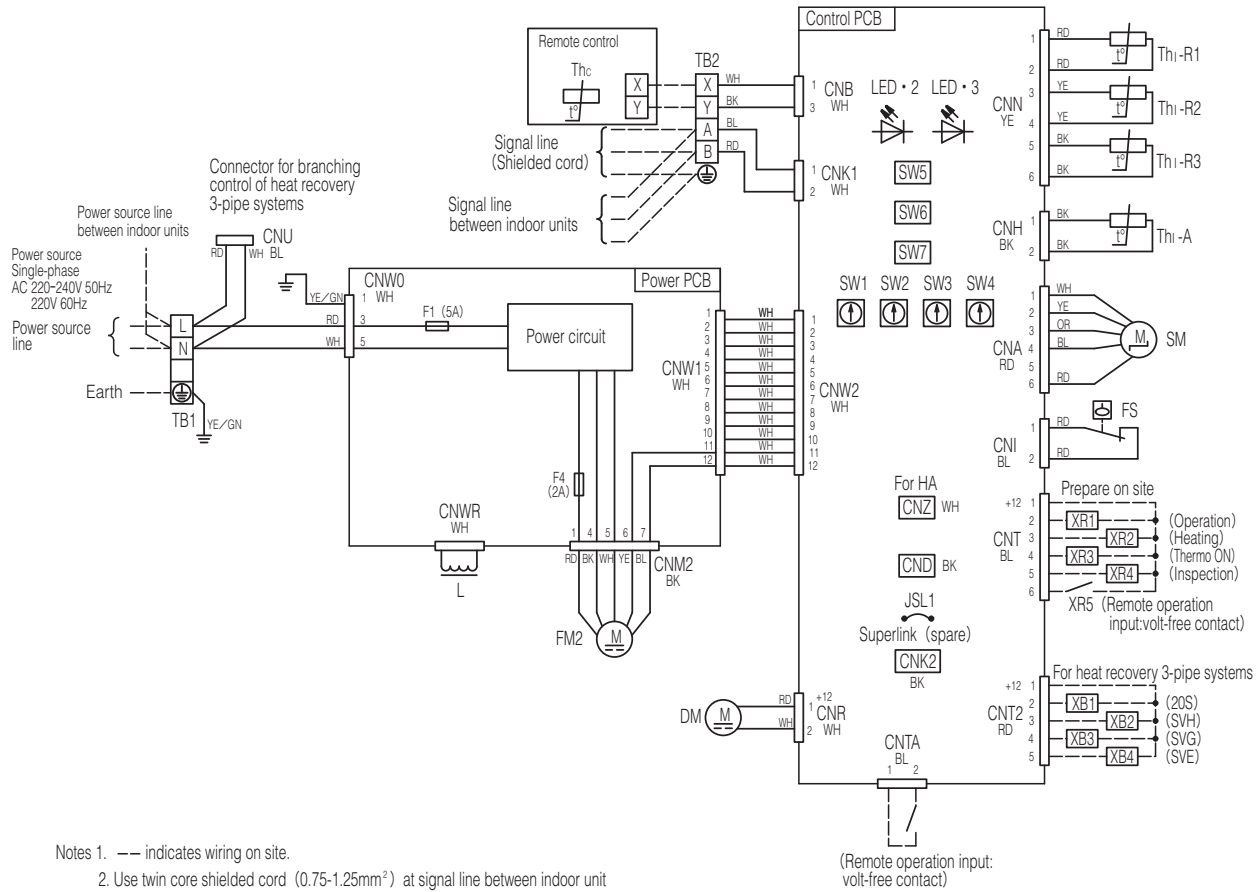
CF1	Capacitor for FM1
CNA-Z	Connector
F	Fuse
FM1	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED · 2	Indication lamp (Green-Normal operation)
LED · 3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : one place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check/Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)
Tr1	Transformer
X1-3,6	Relay for FM
■mark	Closed-end connector

Notes 1. — — indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

(14) Floor standing (without casing) type (FDFU)
All models

(15) Outdoor air processing unit (FDU-F)
Model FDU650FKXZE1



Notes 1. --- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

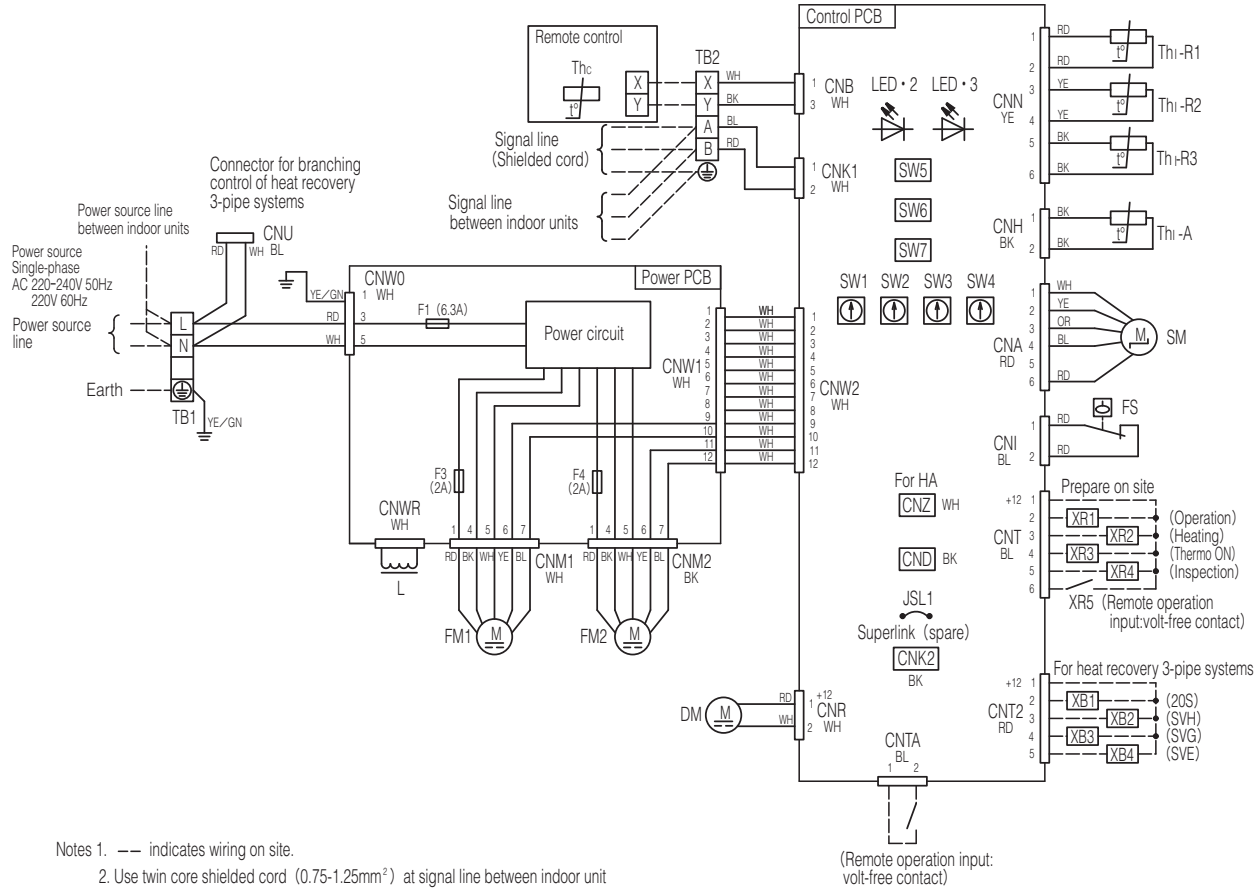
Meaning of marks

Mark	Parts name
CNA-Z	Connector
DM	Drain motor
F1,4	Fuse
FM2	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (For spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)

Color marks

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

PJG000Z298



Notes 1. --- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

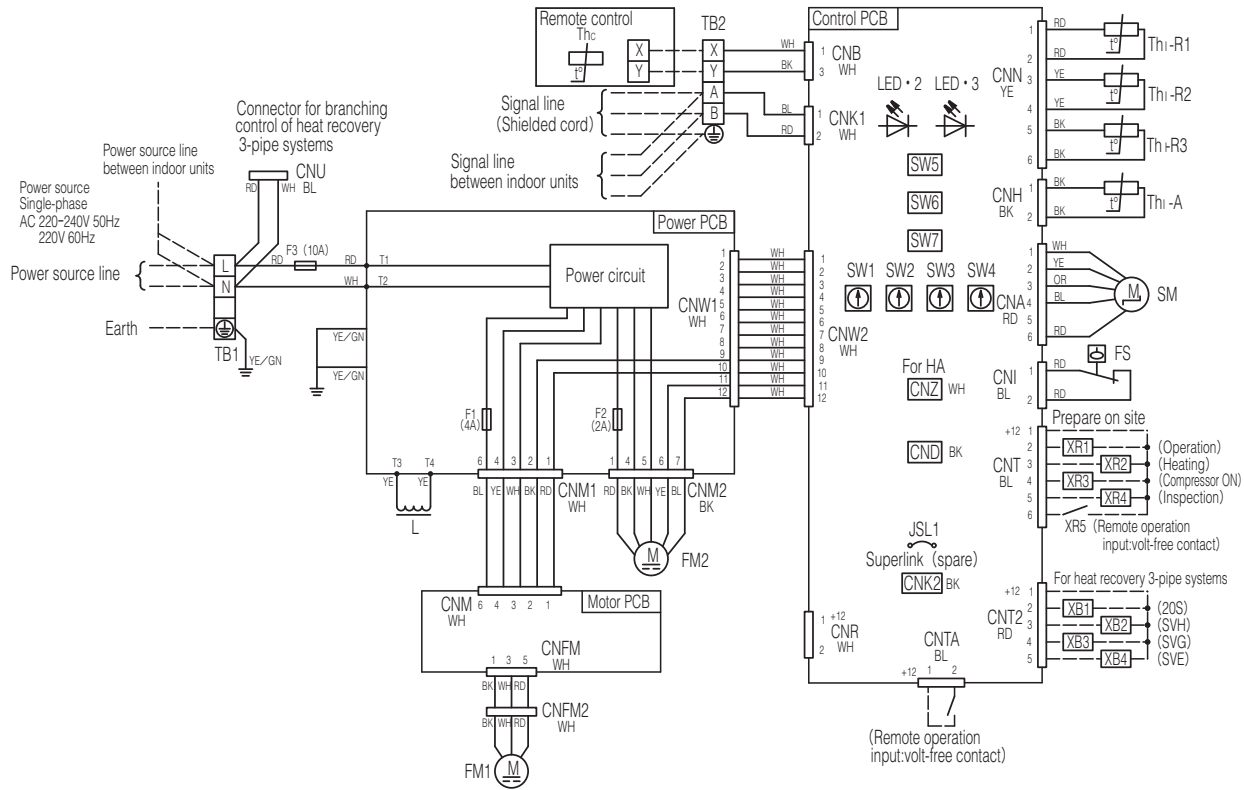
PJG000Z299

Meaning of marks

Mark	Parts name
CNA-Z	Connector
DM	Drain motor
F1,3,4	Fuse
FM1,2	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (For spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address : tens place
SW2	Indoor unit address : ones place
SW3	Outdoor unit address : tens place
SW4	Outdoor unit address : ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address : hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote control)
Th-A	Thermistor (Return air)
Th-R1,2,3	Thermistor (Heat exchanger)

Color marks

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



Notes 1. --- indicates wiring on site.

2. Use twin core shielded cord (0.75-1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
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 signal line and remote control line alongside power source line.

Meaning of marks

Mark	Parts name
CNA-Z	Connector
F1-3	Fuse
FM1,2	Fan motor
FS	Float switch
JSL1	Live Superlink terminal setting (For spare)
L	Reactor
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address:tens place
SW2	Indoor unit address:ones place
SW3	Outdoor unit address:tens place
SW4	Outdoor unit address:ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address:hundreds place
SW6	Model capacity setting
SW7-1	Operation check/Drain motor test run
SW7-3	Powerful mode Valid/Invalid
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
Thc	Thermistor (Remote control)
Th i -A	Thermistor (Return air)
Th i -R1,2,3	Thermistor (Heat exchanger)

Color marks

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

PJG000Z300

Models FDU1 800FKXZE1, 2400FKXZE1

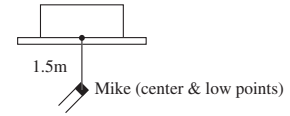
5. NOISE LEVEL

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

Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(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.

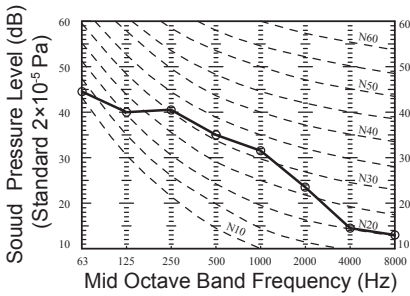


(1) Ceiling cassette-4 way type (FDT)

Measured based on JIS B 8616
Mike position as right

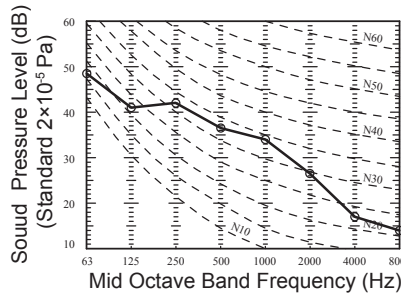
Models FDT28,36,45KXE6F

Noise level 37 dB (A) at P-HIGH
33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



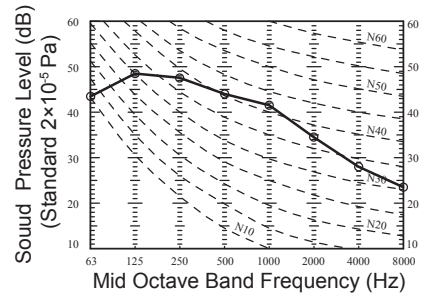
Model FDT56KXE6F

Noise level 39 dB (A) at P-HIGH
33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



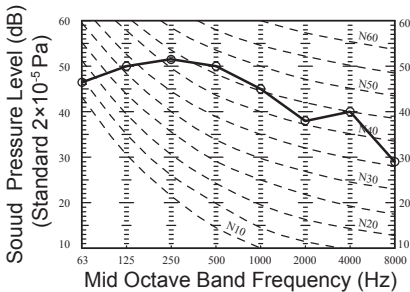
Model FDT71KXE6F

Noise level 46 dB (A) at P-HIGH
33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



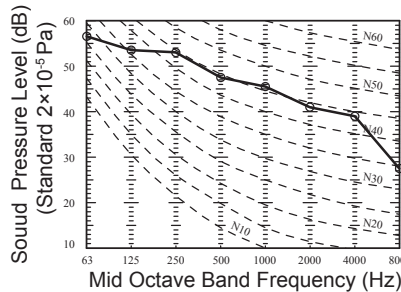
Models FDT90,112KXE6F

Noise level 51 dB (A) at P-HIGH
40 dB (A) at HIGH
37 dB (A) at MEDIUM
35 dB (A) at LOW



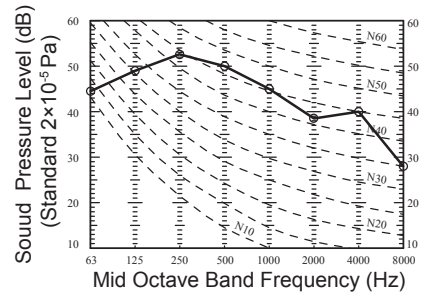
Model FDT140KXE6F

Noise level 51 dB (A) at P-HIGH
42 dB (A) at HIGH
40 dB (A) at MEDIUM
37 dB (A) at LOW



Model FDT160KXE6F

Noise level 51 dB (A) at P-HIGH
43 dB (A) at HIGH
41 dB (A) at MEDIUM
38 dB (A) at LOW



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

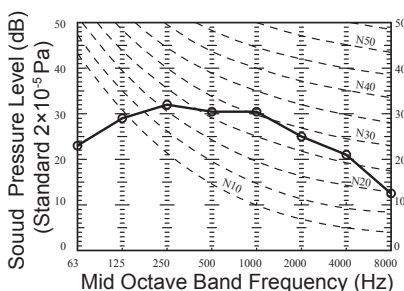
Note (1) Value in [] are for the heating mode.

Measured based on JIS B 8616
Mike position as right



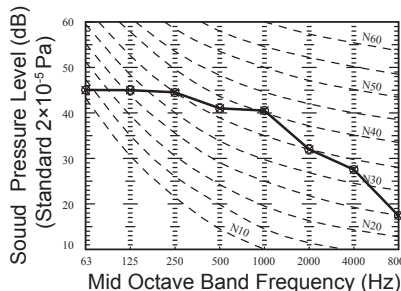
Model FDTC15KXE6F

Noise level 34 dB (A) at P-HIGH
32 dB (A) at HIGH
28 dB (A) at MEDIUM
25 dB (A) at LOW



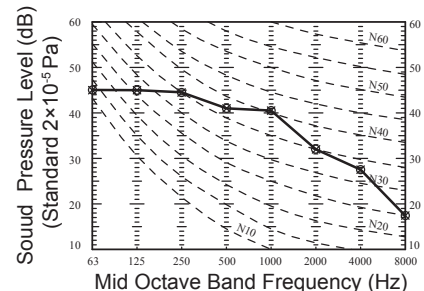
Model FDTC22KXE6F

Noise level 44 [44] dB (A) at P-HIGH
35 [35] dB (A) at HIGH
33 [33] dB (A) at MEDIUM
30 [32] dB (A) at LOW



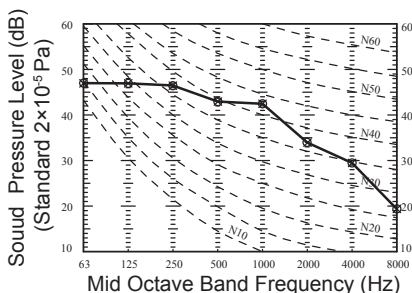
Model FDTC28KXE6F

Noise level 44 [44] dB (A) at P-HIGH
35 [35] dB (A) at HIGH
33 [33] dB (A) at MEDIUM
30 [32] dB (A) at LOW



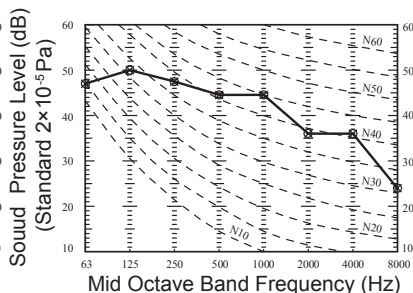
Model FDTC36KXE6F

Noise level 46 [46] dB (A) at P-HIGH
 38 [38] dB (A) at HIGH
 36 [36] dB (A) at MEDIUM
 31 [34] dB (A) at LOW



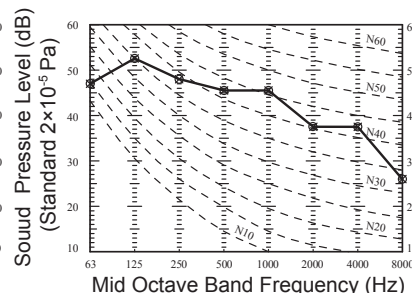
Model FDTC45KXE6F

Noise level 48 [48] dB (A) at P-HIGH
 40 [40] dB (A) at HIGH
 37 [37] dB (A) at MEDIUM
 31 [34] dB (A) at LOW



Model FDTC56KXE6F

Noise level 49 [49] dB (A) at P-HIGH
 45 [45] dB (A) at HIGH
 39 [39] dB (A) at MEDIUM
 31 [34] dB (A) at LOW

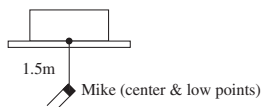


Note (1) Value in () are for the heating mode.

(3) Ceiling cassette-2 way type (FDTW)

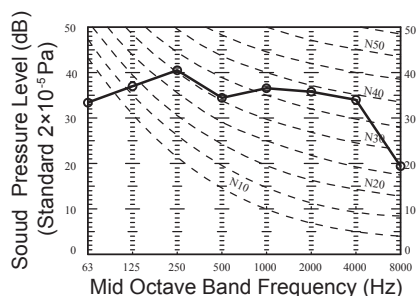
Measured based on JIS B 8616

Mike position as right



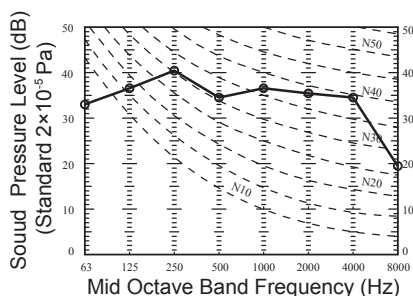
Models FDTW28, 45, 56KXE6F

Noise level 42 dB (A) at P-HIGH
 38 dB (A) at HIGH
 34 dB (A) at MEDIUM
 31 dB (A) at LOW



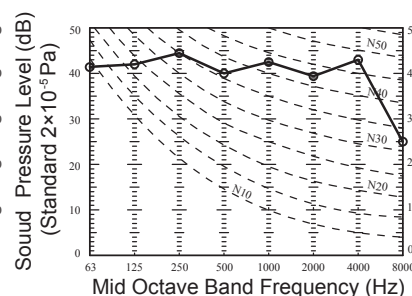
Model FDTW71KXE6F

Noise level 42 dB (A) at P-HIGH
 38 dB (A) at HIGH
 34 dB (A) at MEDIUM
 31 dB (A) at LOW



Models FDTW90,112,140KXE6F

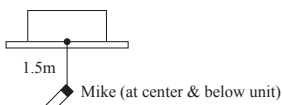
Noise level 48 dB (A) at P-HIGH
 45 dB (A) at HIGH
 41 dB (A) at MEDIUM
 37 dB (A) at LOW



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

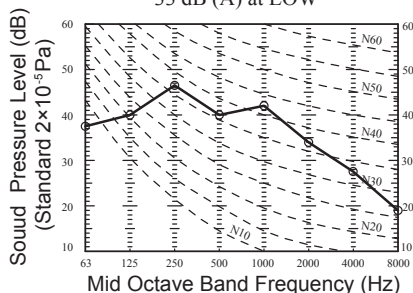
Measured based on JIS B 8616

Mike position as below



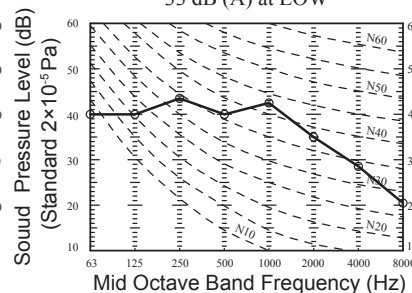
Models FDTQ22,28KXE6F

Noise level 45 dB (A) at P-HIGH
 41 dB (A) at HIGH
 38 dB (A) at MEDIUM
 33 dB (A) at LOW



Model FDTQ36KXE6F

Noise level 45 dB (A) at P-HIGH
 41 dB (A) at HIGH
 38 dB (A) at MEDIUM
 33 dB (A) at LOW



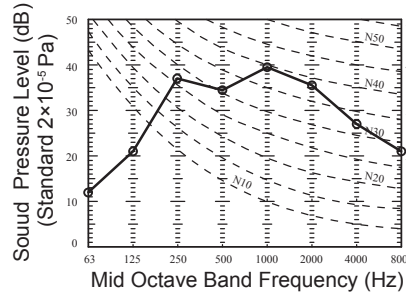
(5) Ceiling cassette-1 way type (FDTS)

Measured based on JIS B 8616
Mike position as below



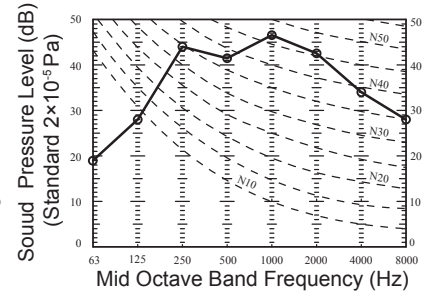
Model FDTS45KXE6F

Noise level 42 dB (A) at P-HIGH
40 dB (A) at HIGH
38 dB (A) at MEDIUM
35 dB (A) at LOW



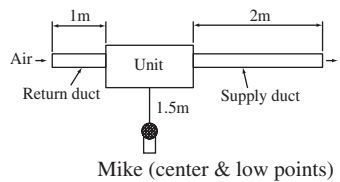
Model FDTS71KXE6F

Noise level 49 dB (A) at P-HIGH
46 dB (A) at HIGH
41 dB (A) at MEDIUM
36 dB (A) at LOW



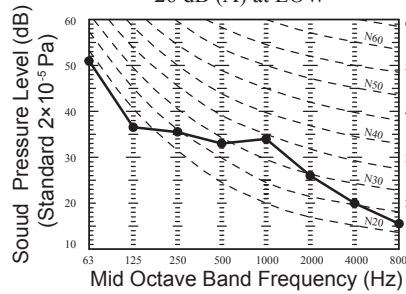
(6) Duct connected-High static pressure type (FDU)

Measured based on JIS B 8616
Mike position as below



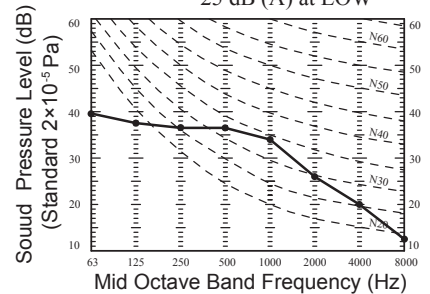
Models FDU45,56KXE6F

Noise level 37 dB (A) at P-HIGH
32 dB (A) at HIGH
29 dB (A) at MEDIUM
26 dB (A) at LOW



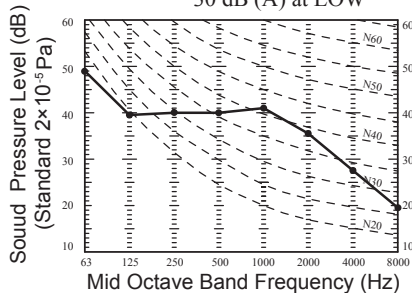
Models FDU71,90KXE6F

Noise level 38 dB (A) at P-HIGH
33 dB (A) at HIGH
29 dB (A) at MEDIUM
25 dB (A) at LOW



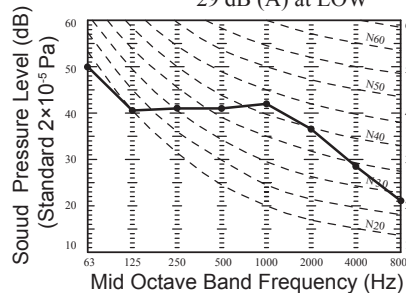
Model FDU112KXE6F

Noise level 44 dB (A) at P-HIGH
38 dB (A) at HIGH
36 dB (A) at MEDIUM
30 dB (A) at LOW



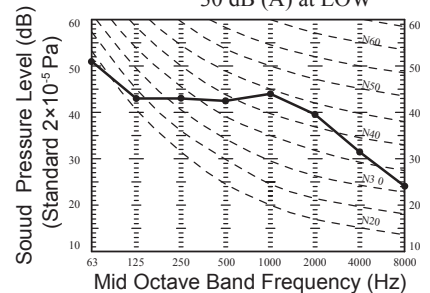
Model FDU140KXE6F

Noise level 45 dB (A) at P-HIGH
40 dB (A) at HIGH
34 dB (A) at MEDIUM
29 dB (A) at LOW



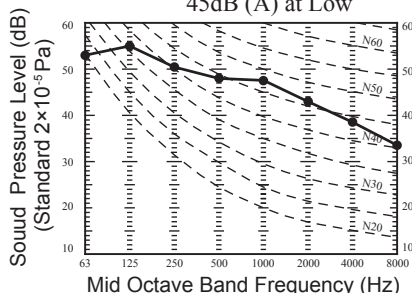
Model FDU160KXE6F

Noise level 47 dB (A) at P-HIGH
40 dB (A) at HIGH
35 dB (A) at MEDIUM
30 dB (A) at LOW



Models FDU224, 280KXZE1

Noise level 52dB (A) at P-High
50dB (A) at High
47dB (A) at Medium
45dB (A) at Low



Power level

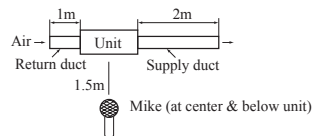
Measurement conditions : JIS B 8616
Measurement location : reverberation chamber

MODEL	dB(A)
FDU224KXZE1	75
FDU280KXZE1	

Note (1) Values are for external static pressure of 200Pa.

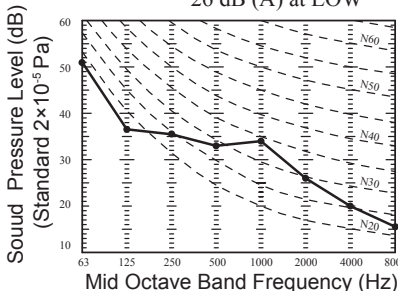
(7) Duct connected-Low/Middle static pressure type (FDUM)

Measured based on JIS B 8616
Mike position as right



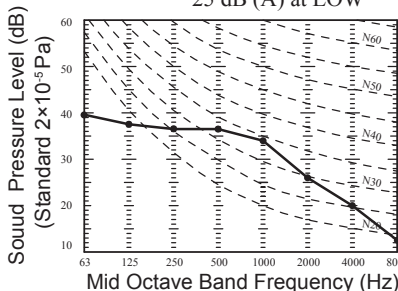
Models FDUM22,28,36,45,56KXE6F

Noise level 37 dB (A) at P-HIGH
32 dB (A) at HIGH
29 dB (A) at MEDIUM
26 dB (A) at LOW



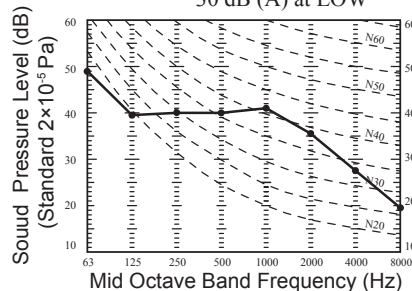
Models FDUM71,90KXE6F

Noise level 38 dB (A) at P-HIGH
33 dB (A) at HIGH
29 dB (A) at MEDIUM
25 dB (A) at LOW



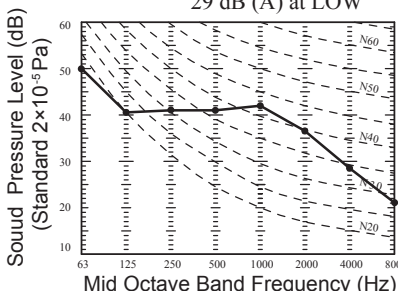
Model FDUM112KXE6F

Noise level 44 dB (A) at P-HIGH
38 dB (A) at HIGH
36 dB (A) at MEDIUM
30 dB (A) at LOW



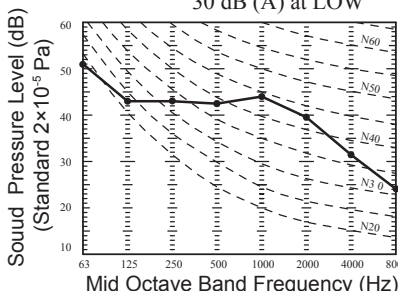
Model FDUM140KXE6F

Noise level 45 dB (A) at P-HIGH
40 dB (A) at HIGH
34 dB (A) at MEDIUM
29 dB (A) at LOW



Model FDUM160KXE6F

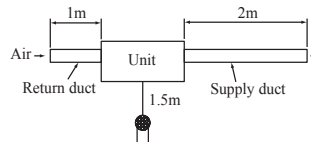
Noise level 47 dB (A) at P-HIGH
40 dB (A) at HIGH
35 dB (A) at MEDIUM
30 dB (A) at LOW



(8) Duct connected (thin)-Low static pressure type (FDUT)

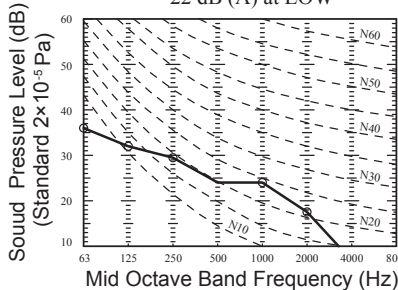
(a) Mike position : 1.5m b/w the unit

Measured based on JIS B 8616 ANNEX3 (Duct setting)
Mike position as right



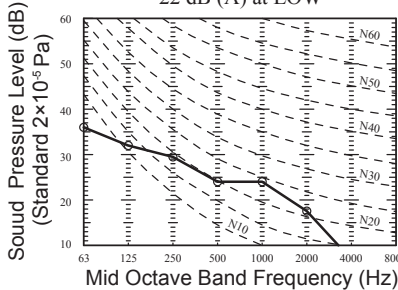
Model FDUT15KXE6F-E

Noise level 28 dB (A) at HIGH
26 dB (A) at MEDIUM
22 dB (A) at LOW



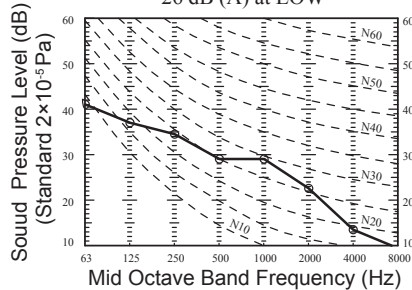
Models FDUT22, 28KXE6F-E

Noise level 28 dB (A) at HIGH
26 dB (A) at MEDIUM
22 dB (A) at LOW



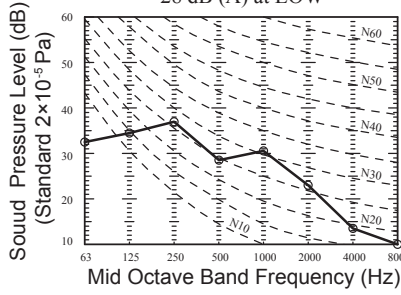
Model FDUT36KXE6F-E

Noise level 33 dB (A) at HIGH
30 dB (A) at MEDIUM
26 dB (A) at LOW



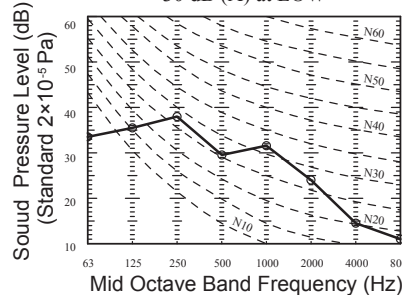
Model FDUT45KXE6F-E

Noise level 34 dB (A) at HIGH
32 dB (A) at MEDIUM
28 dB (A) at LOW



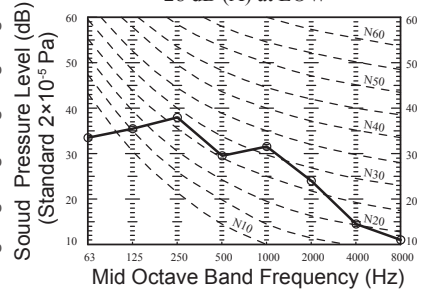
Model FDUT56KXE6F-E

Noise level 35 dB (A) at HIGH
33 dB (A) at MEDIUM
30 dB (A) at LOW

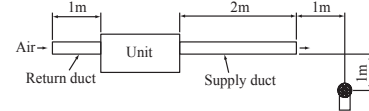


Model FDUT71KXE6F-E

Noise level 35 dB (A) at HIGH
31 dB (A) at MEDIUM
28 dB (A) at LOW

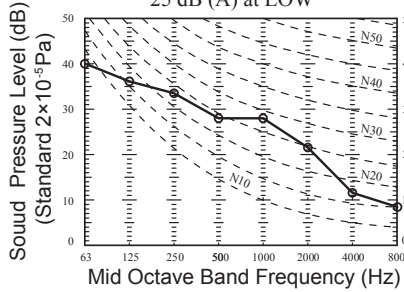


(b) Mike position : 1m in front and 1m below of the air supply duct
Measured based on JIS B 8616 ANNEX3 (Duct setting)
Mike position as right



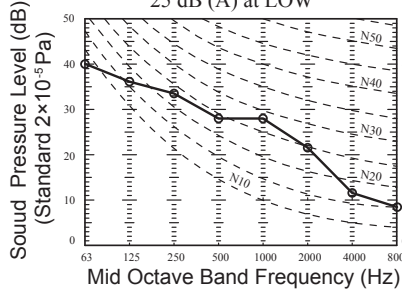
Model FDUT15KXE6F-E

Noise level 32 dB (A) at HIGH
29 dB (A) at MEDIUM
25 dB (A) at LOW



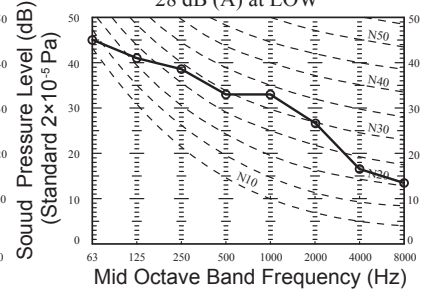
Models FDUT22,28KXE6F-E

Noise level 32 dB (A) at HIGH
29 dB (A) at MEDIUM
25 dB (A) at LOW



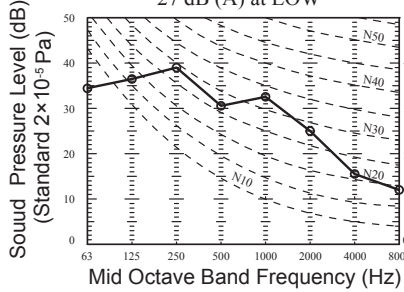
Model FDUT36KXE6F-E

Noise level 37 dB (A) at HIGH
34 dB (A) at MEDIUM
28 dB (A) at LOW



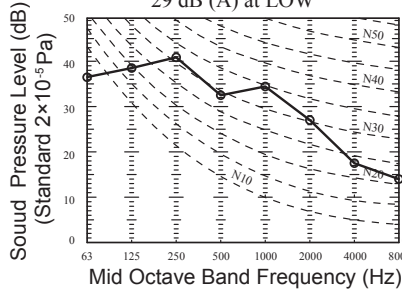
Model FDUT45KXE6F-E

Noise level 36 dB (A) at HIGH
33 dB (A) at MEDIUM
27 dB (A) at LOW



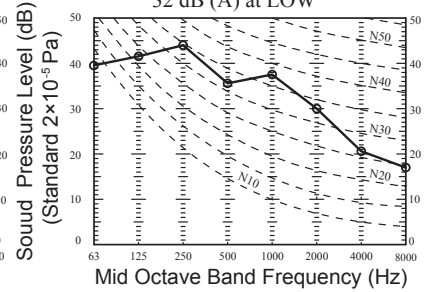
Model FDUT56KXE6F-E

Noise level 38 dB (A) at HIGH
33 dB (A) at MEDIUM
29 dB (A) at LOW



Model FDUT71KXE6F-E

Noise level 41 dB (A) at HIGH
37 dB (A) at MEDIUM
32 dB (A) at LOW



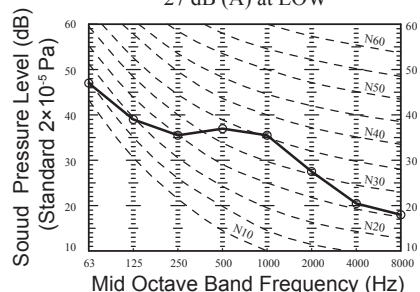
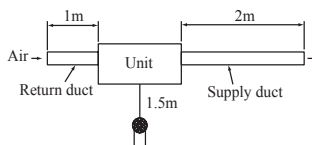
(9) Duct connected (Compact and Flexible) type (FDUH)

Models FDUH22,28,36KXE6F

Noise level 39 dB (A) at P-HIGH
 33 dB (A) at HIGH
 30 dB (A) at MEDIUM
 27 dB (A) at LOW

Measured based on JIS B 8616

Mike position as below



(10) Wall mounted type (FDK)

Measured based on JIS B 8616

Mike position as right



Models FDK22,28KXE6F

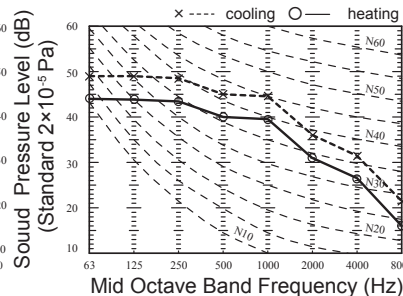
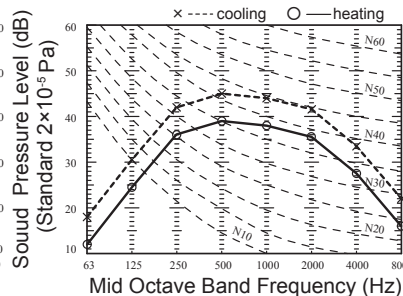
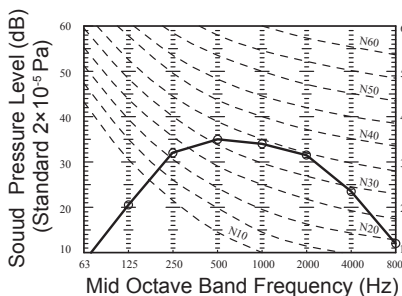
Noise level 38 [38] dB (A) at P-HIGH
 35 [35] dB (A) at HIGH
 33 [33] dB (A) at MEDIUM
 31 [31] dB (A) at LOW

Model FDK36KXE6F

Noise level 48 [42] dB (A) at P-HIGH
 41 [39] dB (A) at HIGH
 35 [35] dB (A) at MEDIUM
 31 [31] dB (A) at LOW

Model FDK45KXE6F

Noise level 48 [43] dB (A) at P-HIGH
 42 [42] dB (A) at HIGH
 37 [37] dB (A) at MEDIUM
 33 [33] dB (A) at LOW

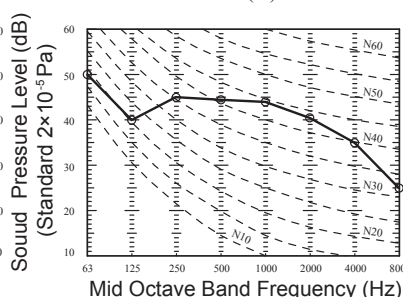
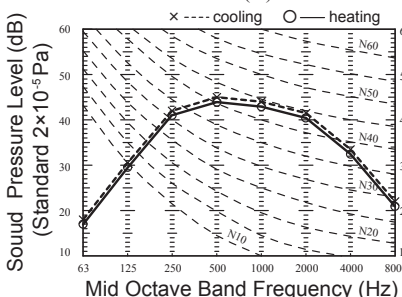


Model FDK56KXE6F

Noise level 48 [47] dB (A) at P-HIGH
 46 [46] dB (A) at HIGH
 42 [42] dB (A) at MEDIUM
 37 [37] dB (A) at LOW

Model FDK71KXE6F

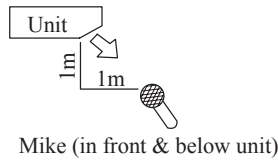
Noise level 48 [48] dB (A) at P-HIGH
 47 [47] dB (A) at HIGH
 43 [43] dB (A) at MEDIUM
 39 [39] dB (A) at LOW



Note (1) Value in [] are for the heating mode.

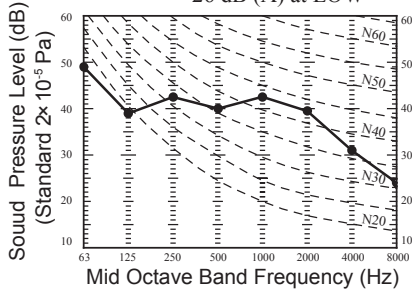
(11) Ceiling suspended type (FDE)

Measured based on JIS B 8616
Mike position as right



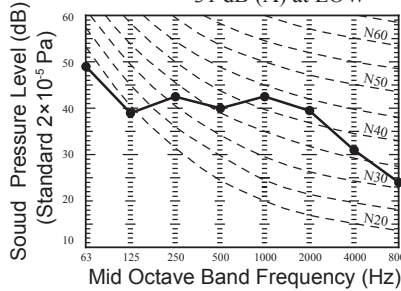
Model FDE36KXZE1

Noise level 46 dB (A) at P-HIGH
38 dB (A) at HIGH
31 dB (A) at MEDIUM
26 dB (A) at LOW



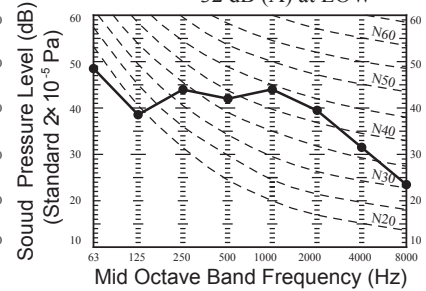
Models FDE45, 56KXZE1

Noise level 46 dB (A) at P-HIGH
38 dB (A) at HIGH
36 dB (A) at MEDIUM
31 dB (A) at LOW



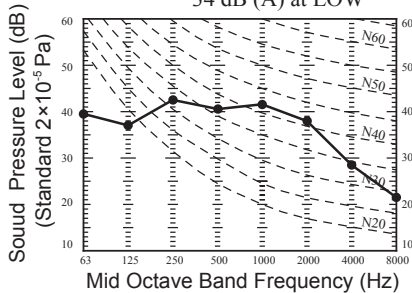
Model FDE71KXZE1

Noise level 47 dB (A) at P-HIGH
39 dB (A) at HIGH
37 dB (A) at MEDIUM
32 dB (A) at LOW



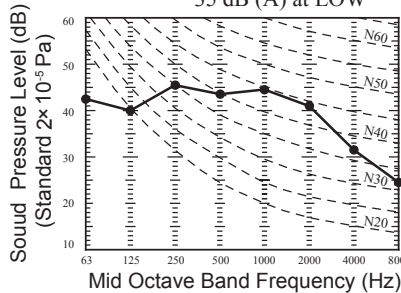
Model FDE112KXZE1

Noise level 45 dB (A) at P-HIGH
42 dB (A) at HIGH
38 dB (A) at MEDIUM
34 dB (A) at LOW



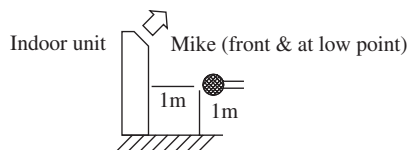
Model FDE140KXZE1

Noise level 48 dB (A) at P-HIGH
43 dB (A) at HIGH
40 dB (A) at MEDIUM
35 dB (A) at LOW



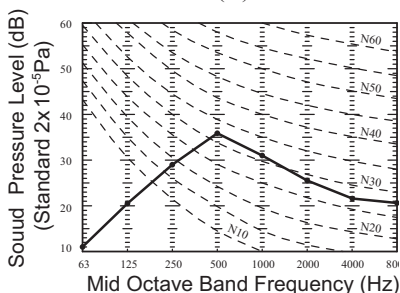
(12) Floor standing-2 way type (FDW)

Measured based on JIS B 8616
Mike position as right



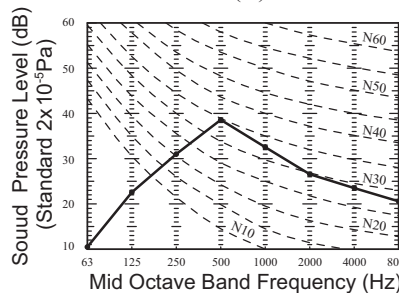
Model FDFW28KXE6F

Noise level 36 dB (A) at HIGH
34 dB (A) at MEDIUM
30 dB (A) at LOW



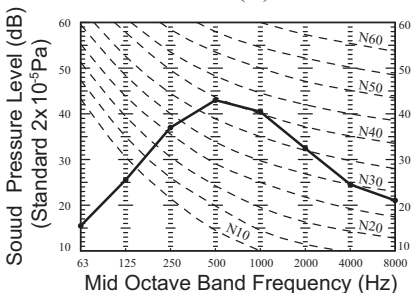
Model FDFW45KXE6F

Noise level 38 dB (A) at HIGH
36 dB (A) at MEDIUM
33 dB (A) at LOW



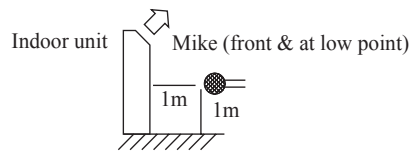
Model FDFW56KXE6F

Noise level 44 dB (A) at HIGH
37 dB (A) at MEDIUM
33 dB (A) at LOW



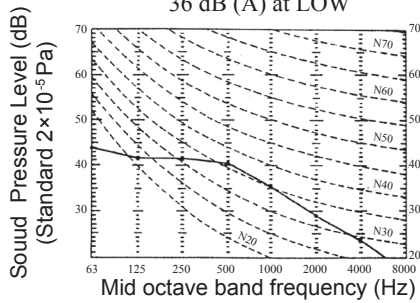
- (13) Floor standing (with casing) type (FDL)
- (14) Floor standing (without casing) type (FDU)

Measured based on JIS B 8616
Mike position as right



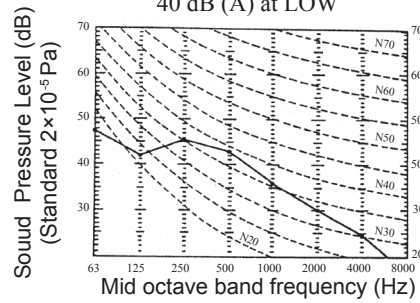
Model FDFU28KXE6F

Noise level 41 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



**Models FDFL71KXE6F
FDU45, 56, 71KXE6F**

Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
40 dB (A) at LOW

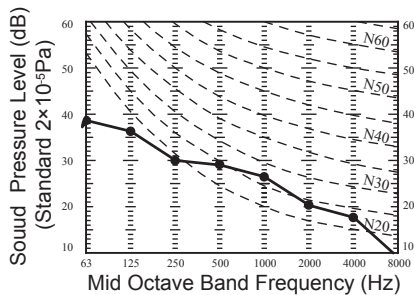


(15) Outdoor Air Processing unit (FDU-F)

Notes(1) Values are for external static pressure of 200Pa.

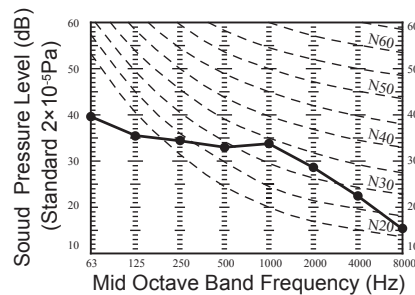
Model FDU650FKXE1

Noise level 31dB (A) at High



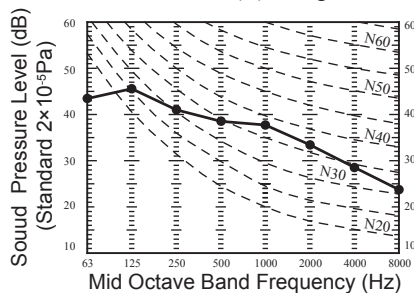
Model FDU1100FKXE1

Noise level 37dB (A) at High



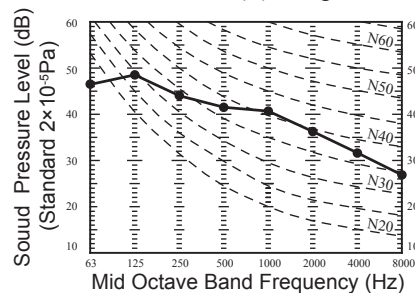
Model FDU1800FKXE1

Noise level 42dB (A) at High



Model FDU2400FKXE1

Noise level 45dB (A) at High



Power level

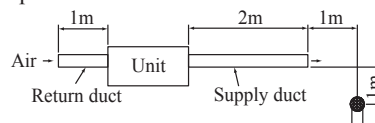
Measurement conditions : JIS B 8616
Measurement location : reverberation chamber

MODEL	dB(A)	MODEL	dB(A)
FDU650FKXE1	55	FDU1800FKXE1	68
FDU1100FKXE1	62	FDU2400FKXE1	70

Note (1) Values are for external static pressure of 200Pa.

Measured based on JIS B 8616

Mike position as below

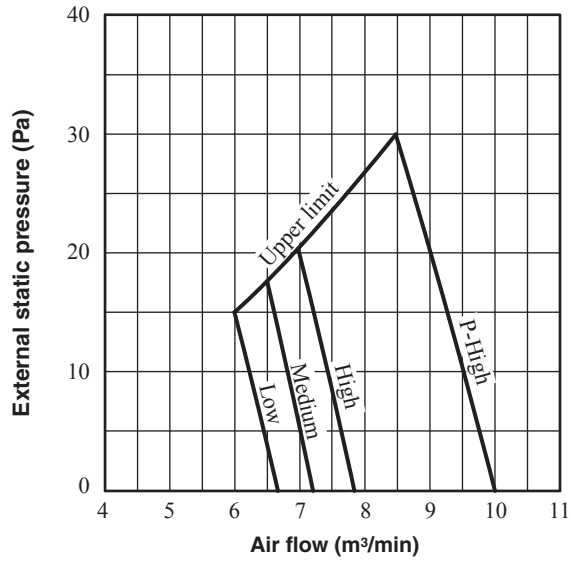


6. CHARACTERISTICS OF FAN

(1) Ceiling cassette-1 way compact type (FDTQ)

(Only when FDTQ22, 28 and 36 model are used for the duct panel)

Models FDTQ22KXE6F,28KXE6F,36KXE6F



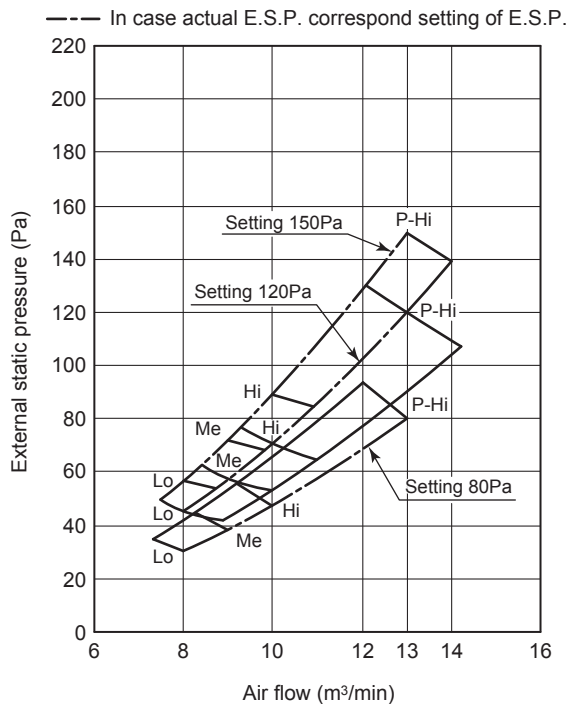
(2) Duct connected-High static pressure type (FDU)

- 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.

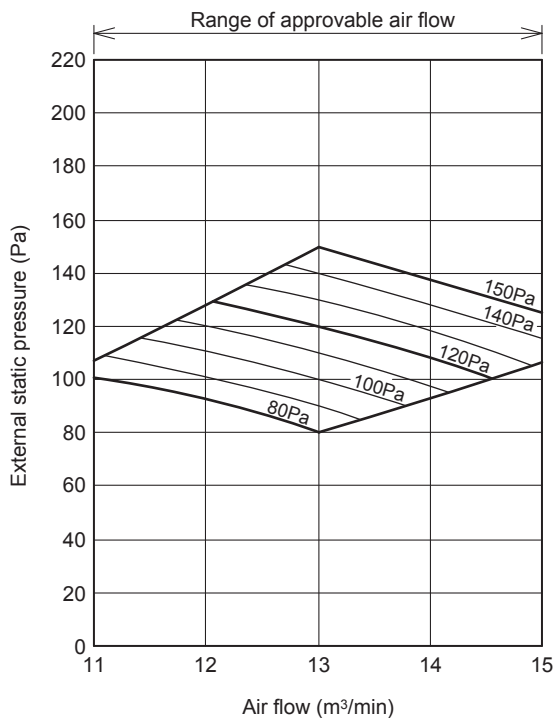
Models FDU45KXE6F, 56KXE6F

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

Characteristic FAN (1)

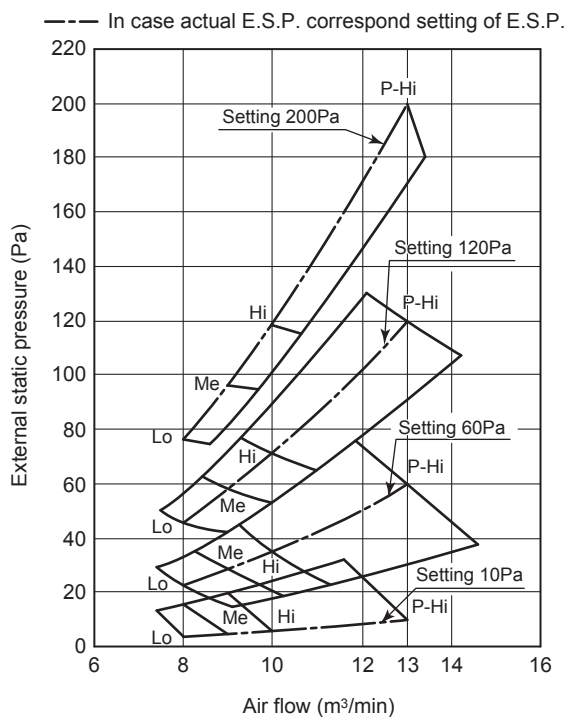


Characteristic FAN (2)

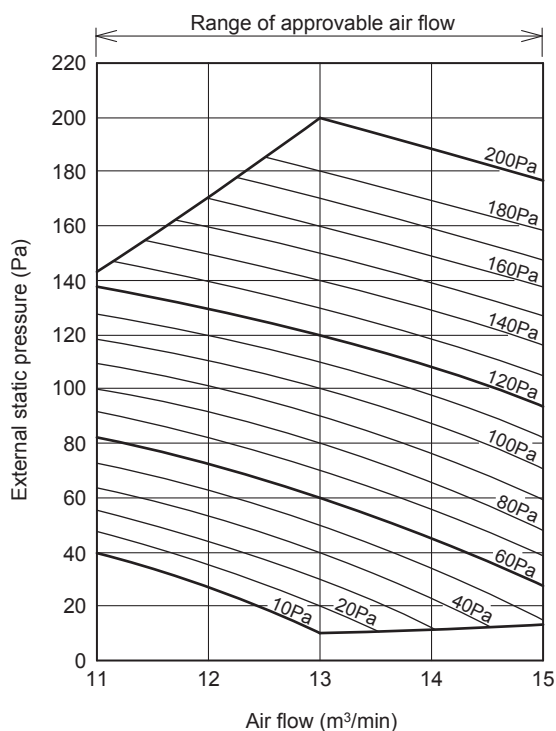


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



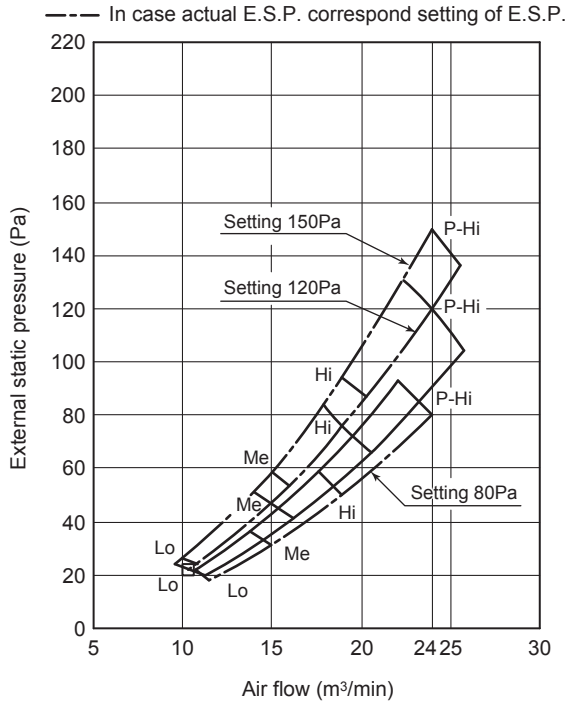
Characteristic FAN (2)



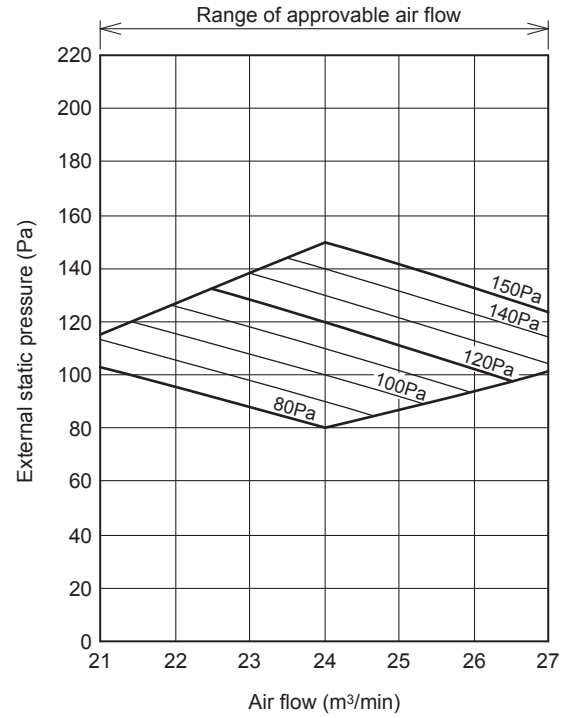
Models FDU71KXE6F, 90KXE6F

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

Characteristic FAN (1)

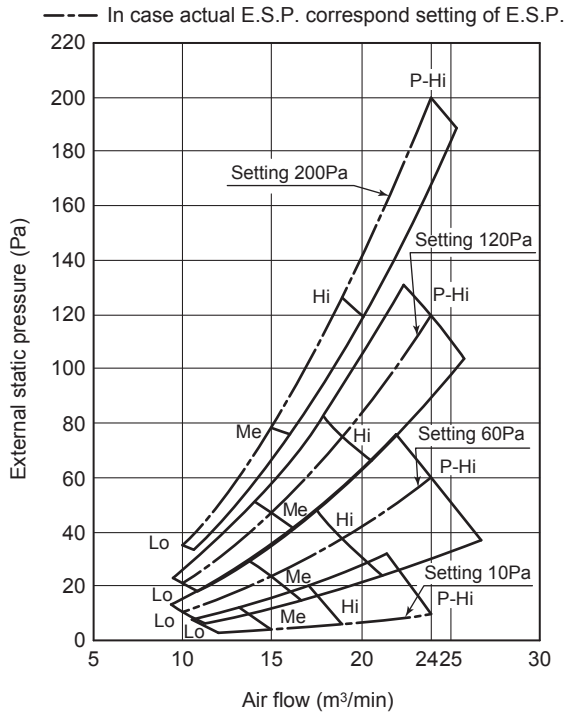


Characteristic FAN (2)

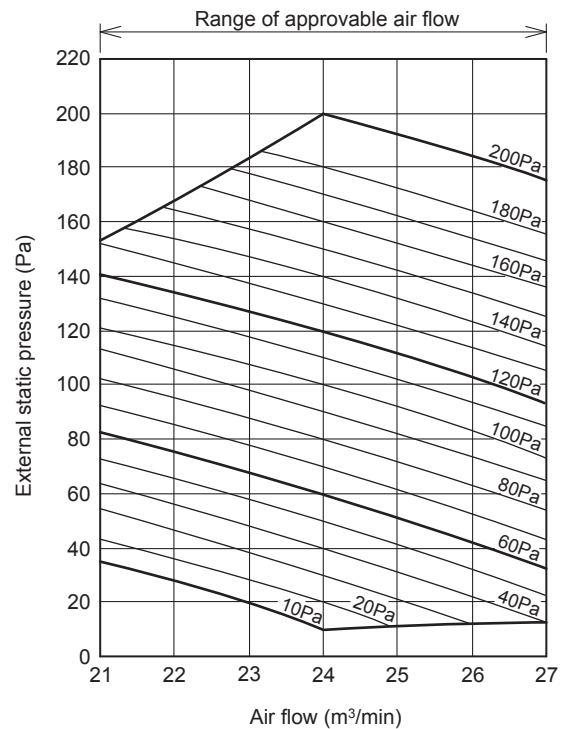


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



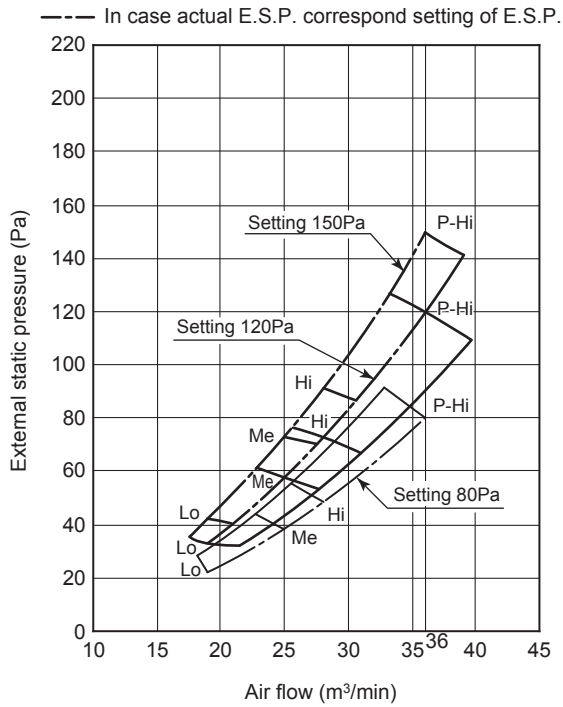
Characteristic FAN (2)



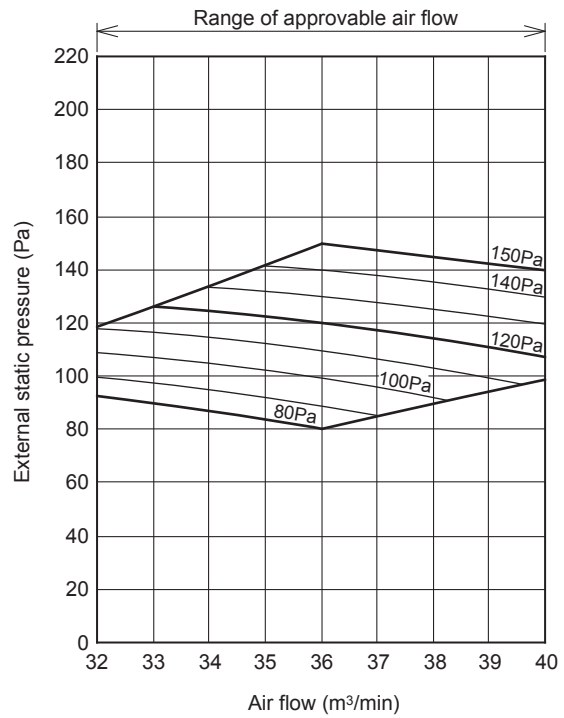
Model FDU112KXE6F

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

Characteristic FAN (1)

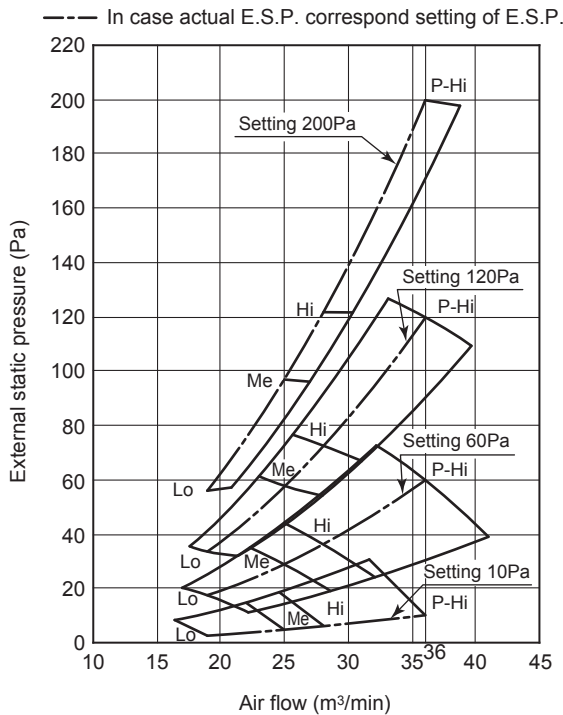


Characteristic FAN (2)

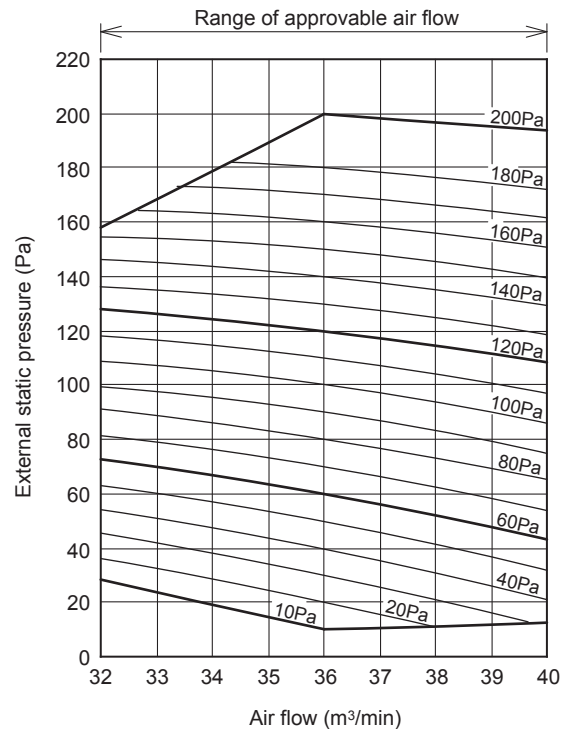


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



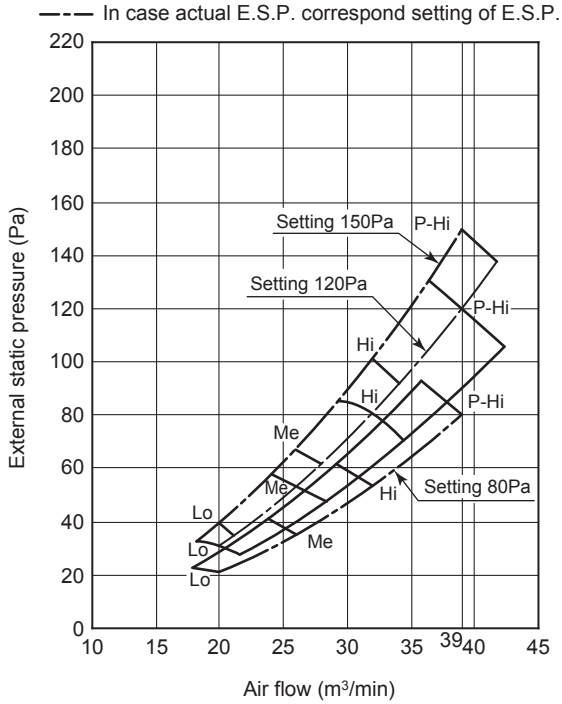
Characteristic FAN (2)



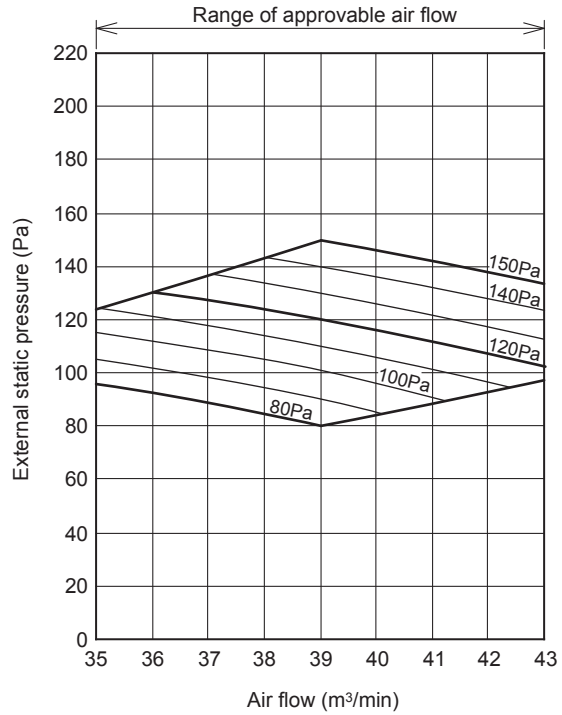
Model FDU140KXE6F

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

Characteristic FAN (1)

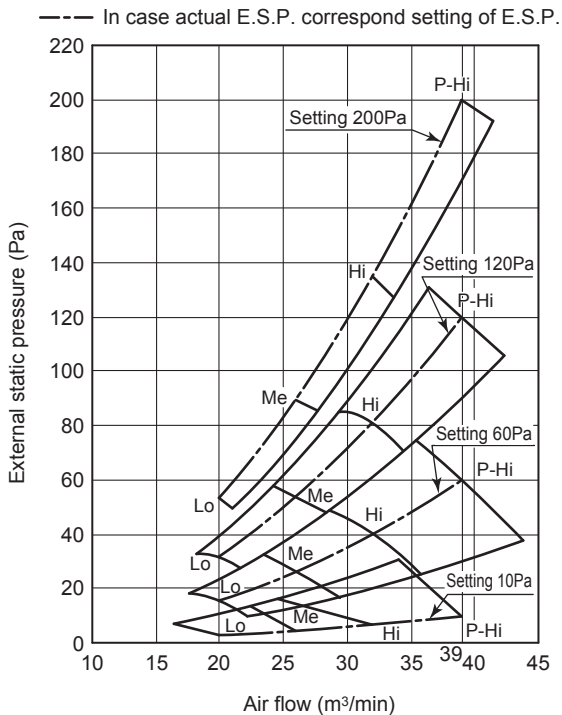


Characteristic FAN (2)

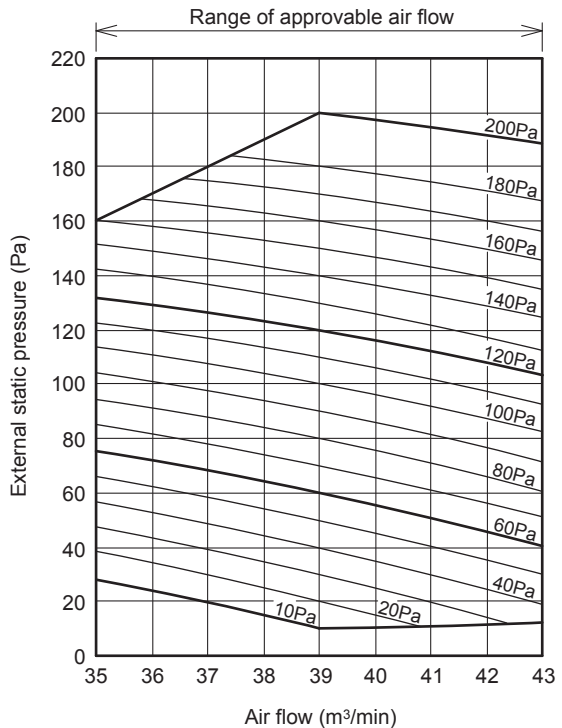


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



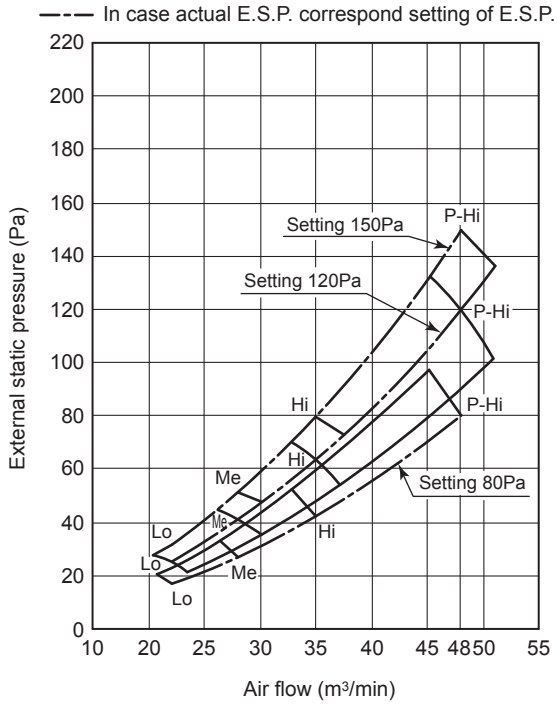
Characteristic FAN (2)



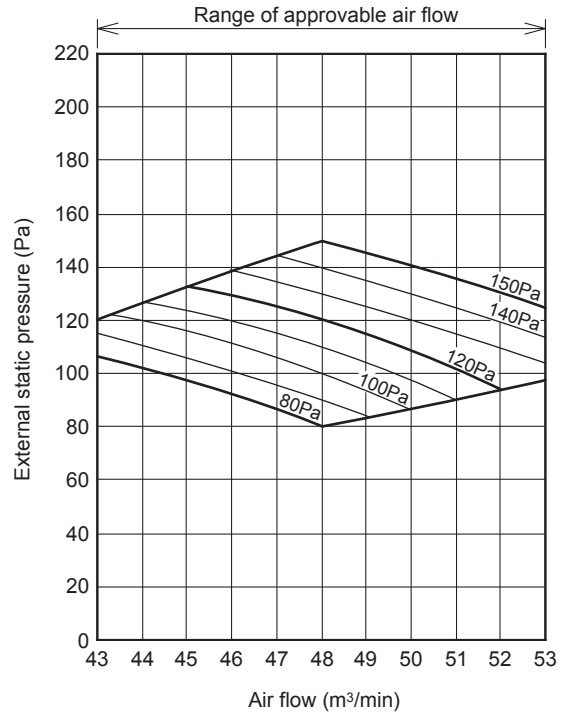
Model FDU160KXE6F

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

Characteristic FAN (1)

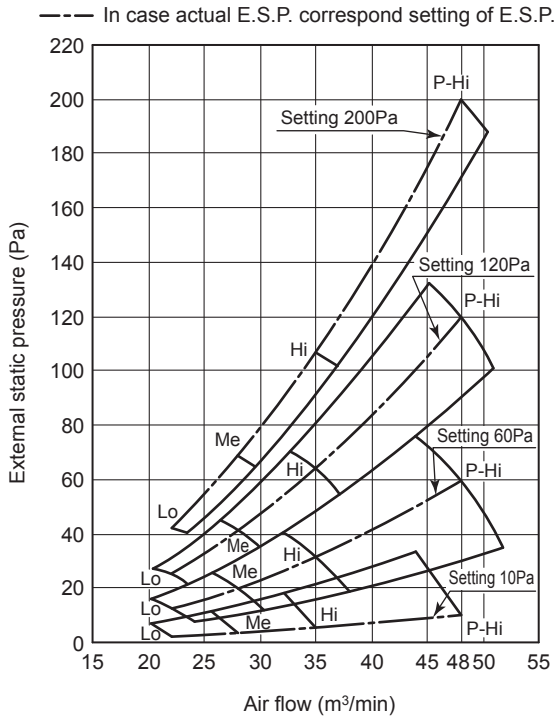


Characteristic FAN (2)

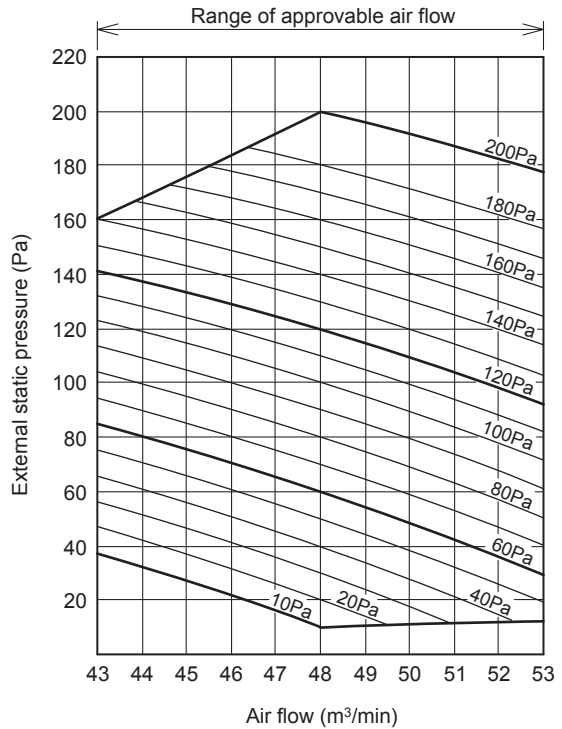


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



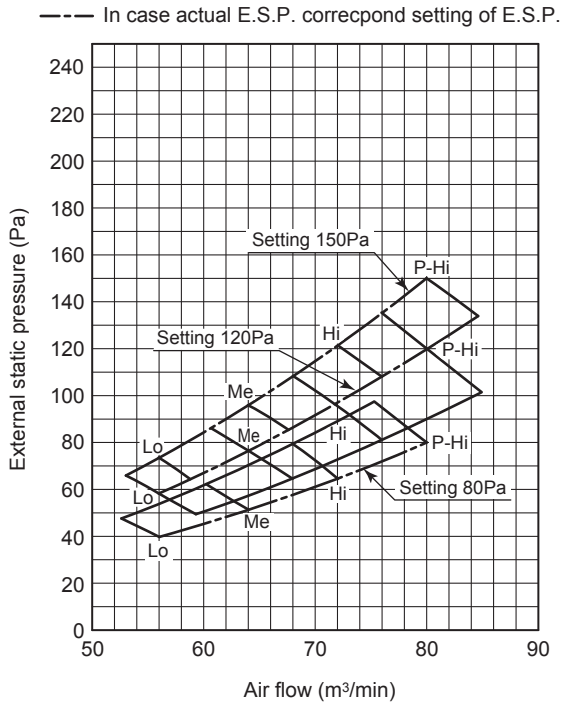
Characteristic FAN (2)



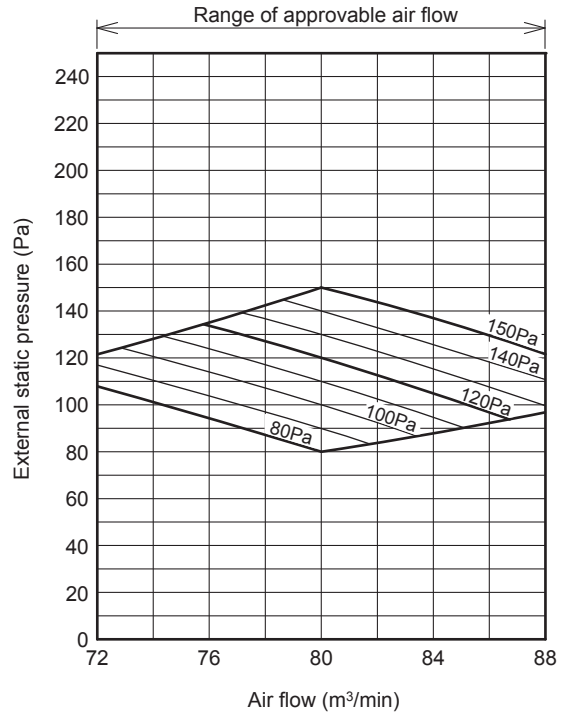
Models FDU224KXZE1, 280KXZE1

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

Characteristic FAN (1)

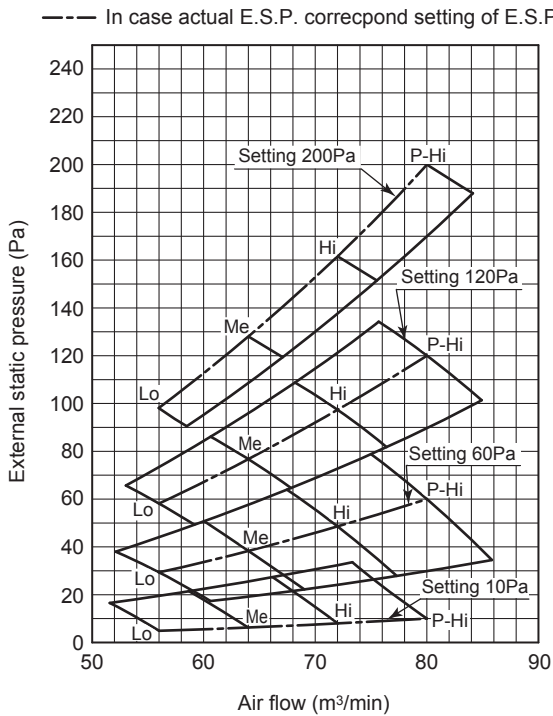


Characteristic FAN (2)

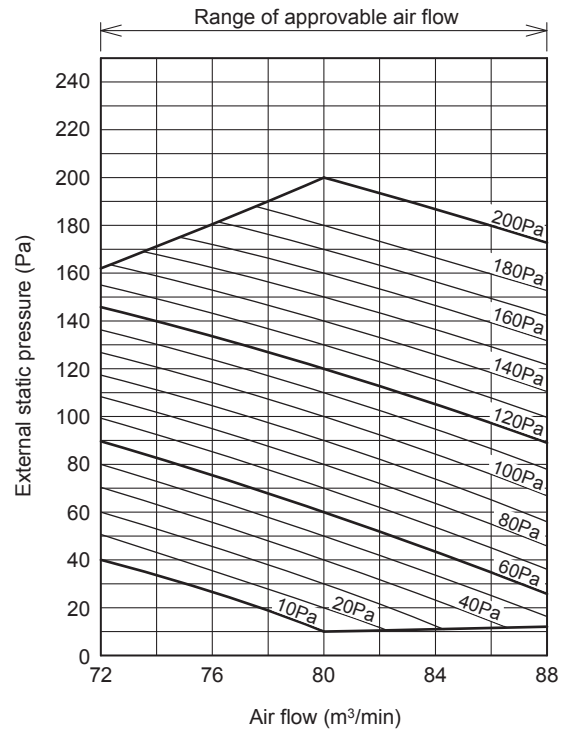


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



Characteristic FAN (2)

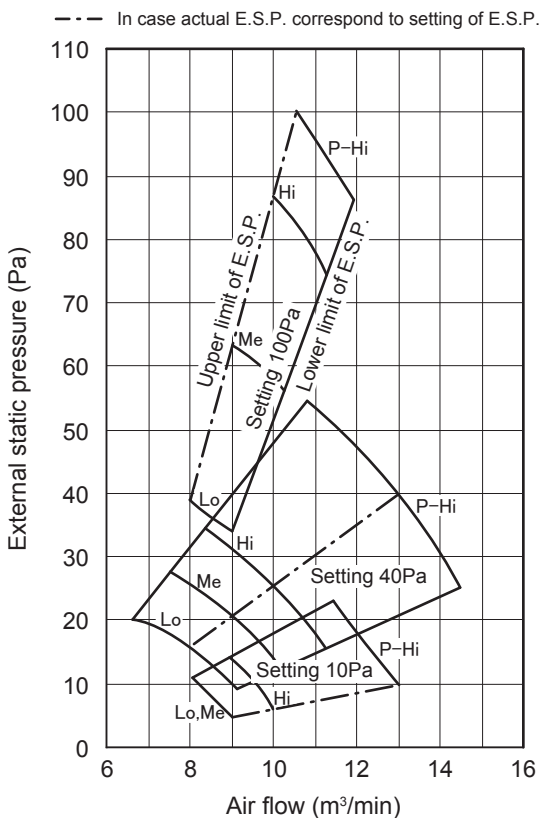


(3) Duct connected-Low/Middle static pressure (FDUM)

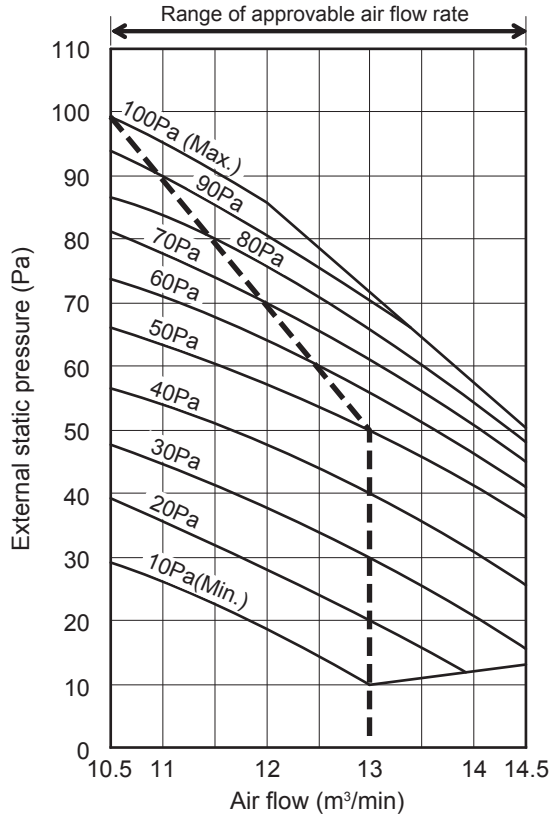
- Characteristic FAN (1) shows air flow vs. External Static Pressure (E.S.P.) range where settings of E.S.P. are maximum E.S.P. (100Pa), rated E.S.P., and minimum E.S.P. (10Pa)
- Characteristic FAN (2) shows air flow vs. E.S.P curve when set fan tap is set P-Hi with each setting of E.S.P. by remote control.
- 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 FDUM22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

Characteristic FAN(1)

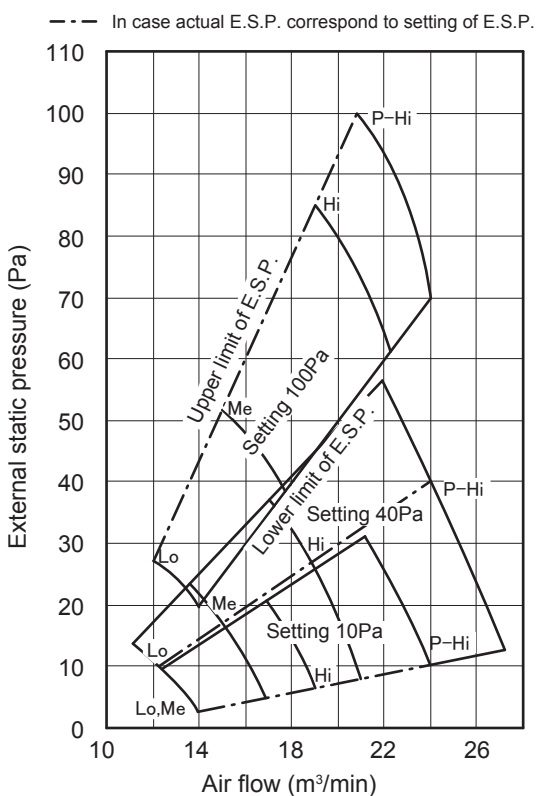


Characteristic FAN(2)

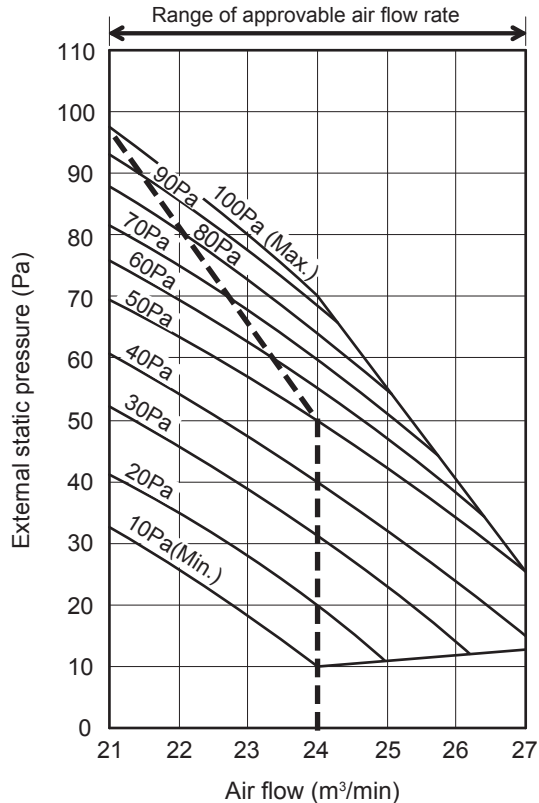


Models FDUM71KXE6F, 90KXE6F

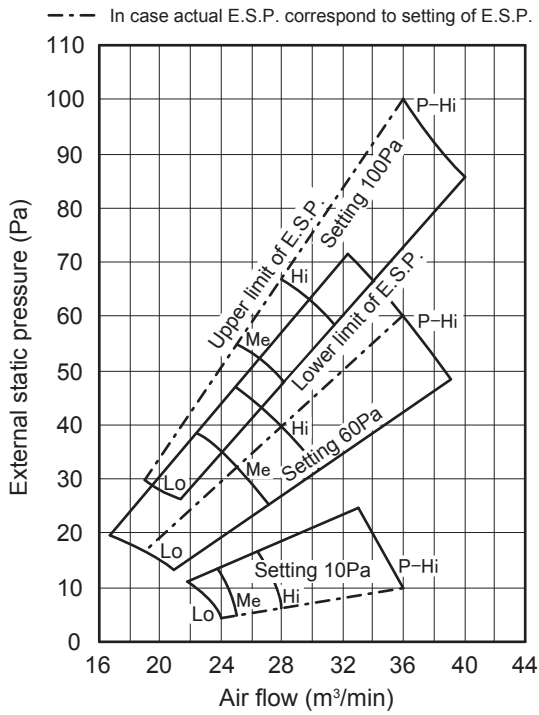
Characteristic FAN(1)



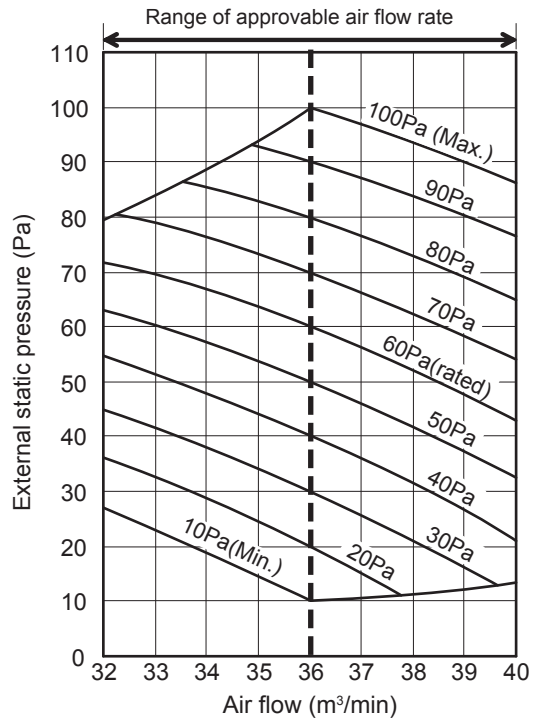
Characteristic FAN(2)



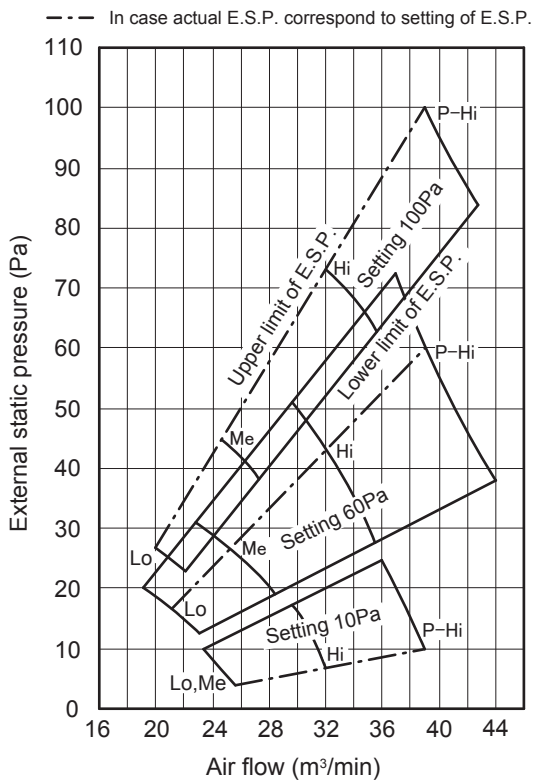
Model FDUM112KXE6F
Characteristic FAN(1)



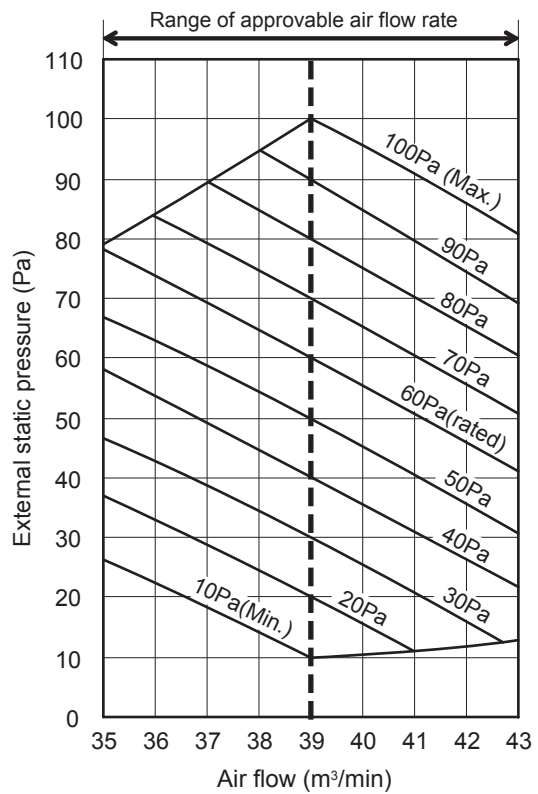
Characteristic FAN(2)



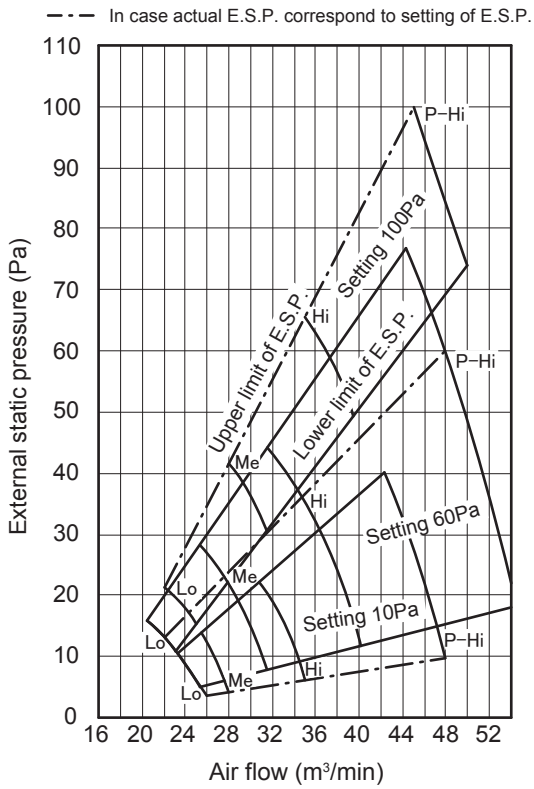
Model FDUM140KXE6F
Characteristic FAN(1)



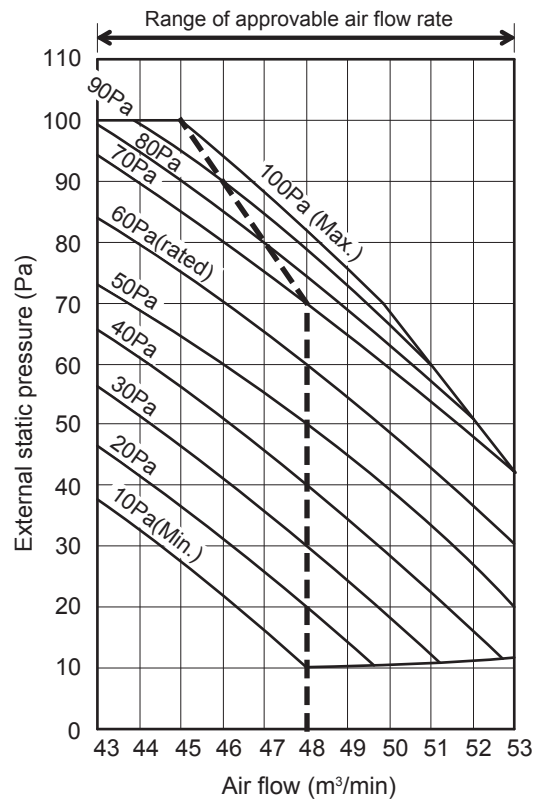
Characteristic FAN(2)



**Model FDUM160KXE6F
Characteristic FAN(1)**

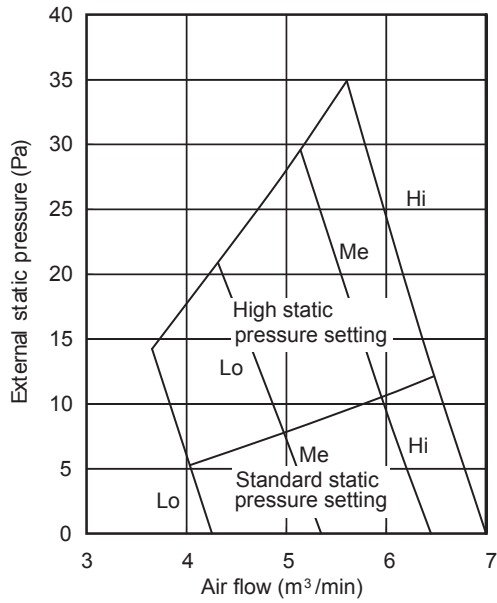


Characteristic FAN(2)

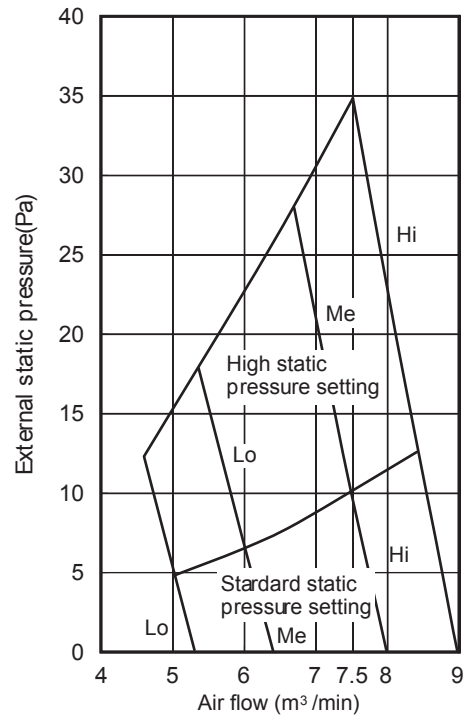


(4) Duct connected (thin)-Low static pressure type (FDUT)

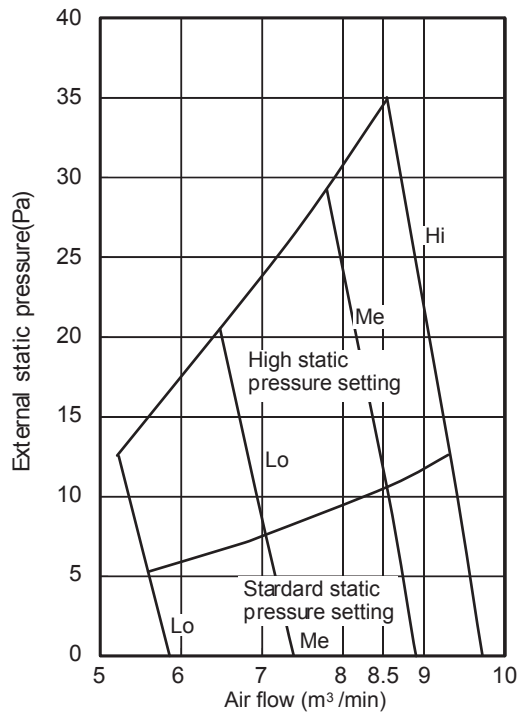
Model FDUT15KXE6F-E



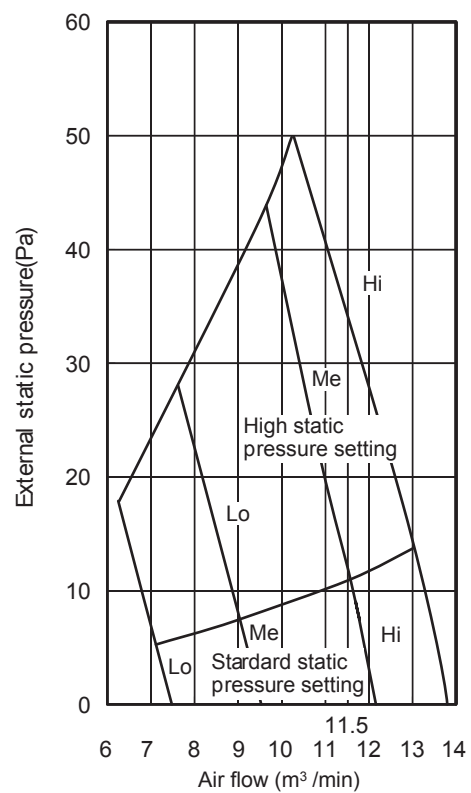
Models FDUT22, 28KXE6F-E



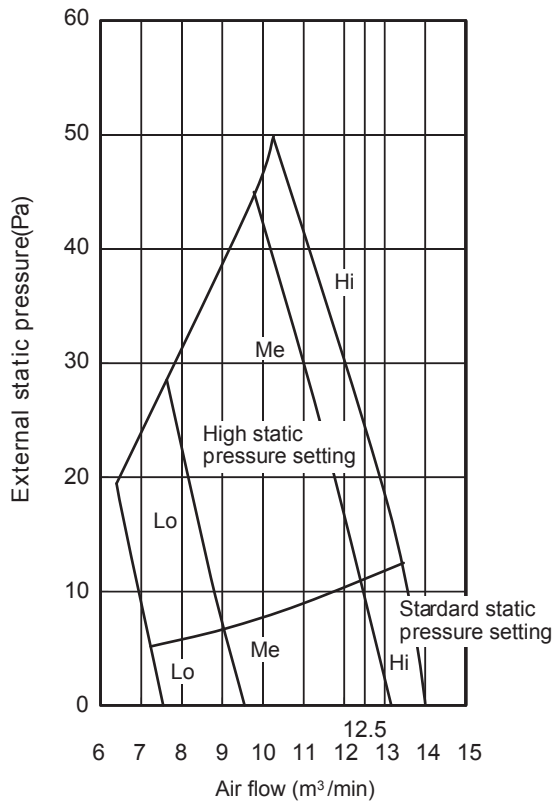
Model FDUT36KXE6F-E



Model FDUT45KXE6F-E



Model FDUT56KXE6F-E



Model FDUT71KXE6F-E

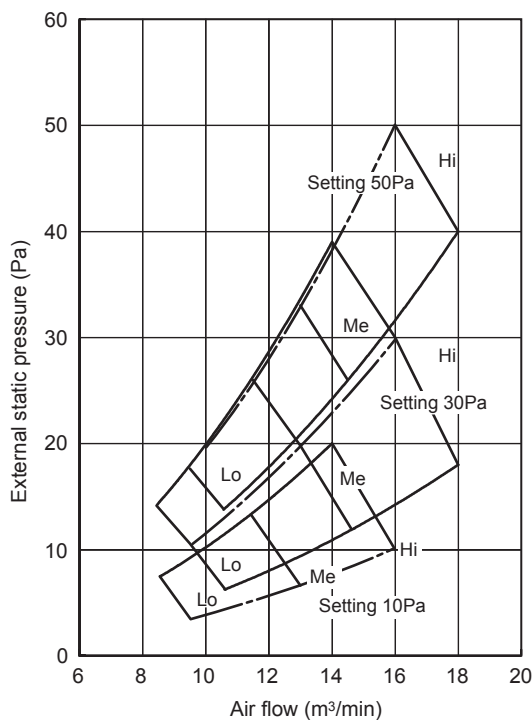
Characteristic FAN(1) shows air flow vs External Static Pressure(E.S.P.) range where settings of E.S.P. are maximum E.S.P.(50Pa), E.S.P.(30Pa), and minimum E.S.P.(10Pa).

Characteristic FAN(2) shows air flows vs E.S.P. curve when set fan tap is set Hi with each setting of E.S.P. by remote control. External Static Pressure(E.S.P.) can be set by wired remote control.

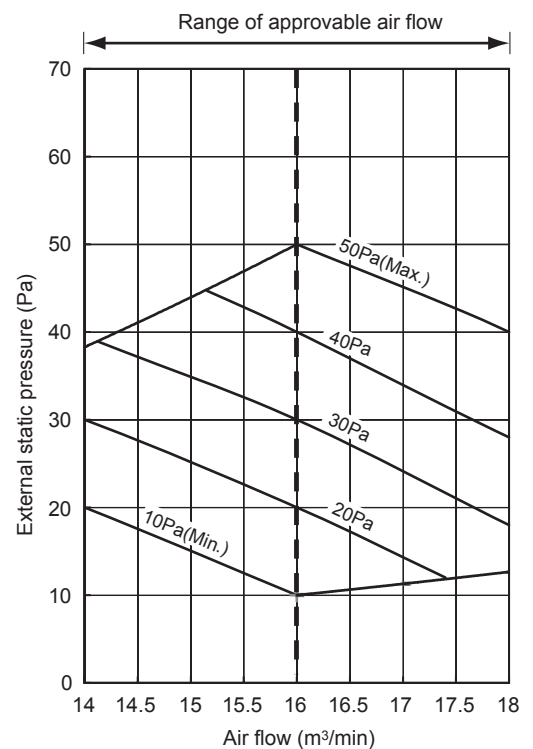
You can set required E.S.P. by wired remote control which calculate it with the set air flow rate and pressure loss of the duct connected.

Characteristic FAN (1)

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

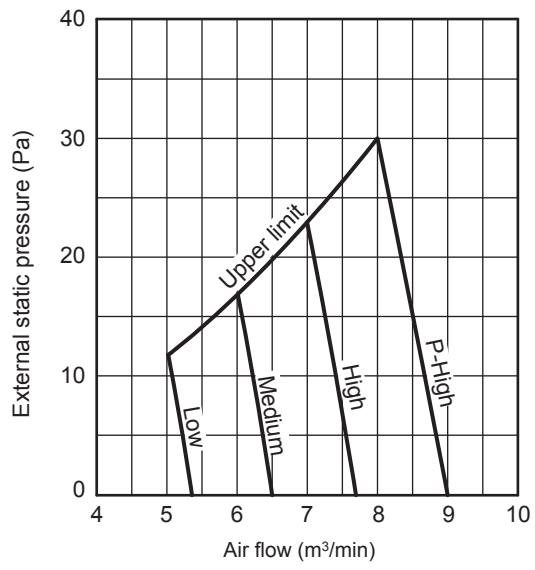


Characteristic FAN (2)



(5) Duct connected-Compact and Flexible type (FDUH)

Models FDUH22KXE6F,28KXE6F,36KXE6F



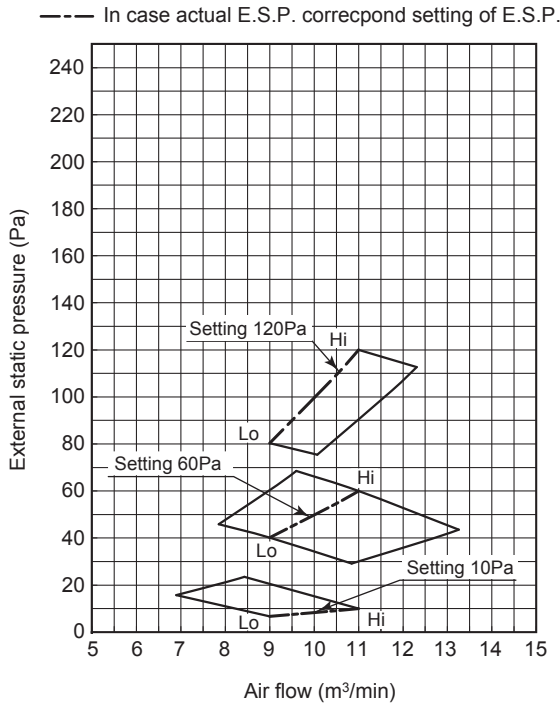
(6) Outdoor air processing unit (FDU-F)

- 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 : 120Pa, SW8-4 ON : 200Pa), rated E.S.P., and minimum E.S.P. (SW8-4 OFF : 10Pa, SW8-4 ON : 10Pa)
- Characteristic FAN (2) shows air flow vs. E.S.P curve when set fan tap is set 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.

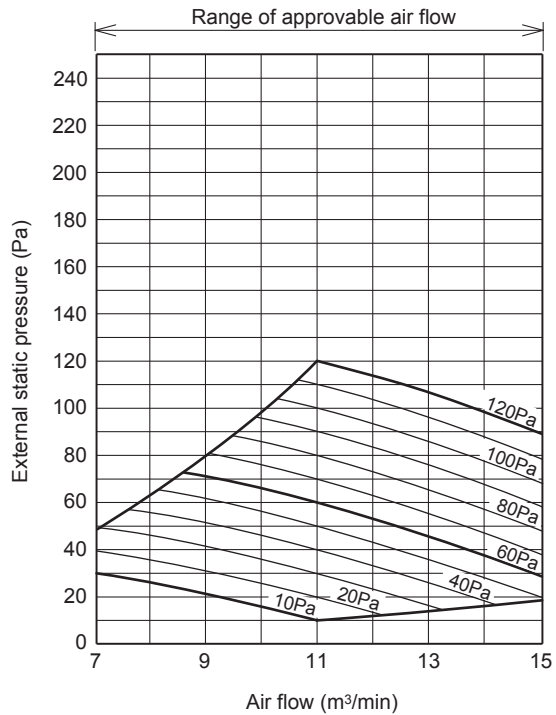
Model FDU650FKXZE1

■ SW8-4 : OFF (Range of use limitation : Setting 10Pa-120Pa)

Characteristic FAN (1)

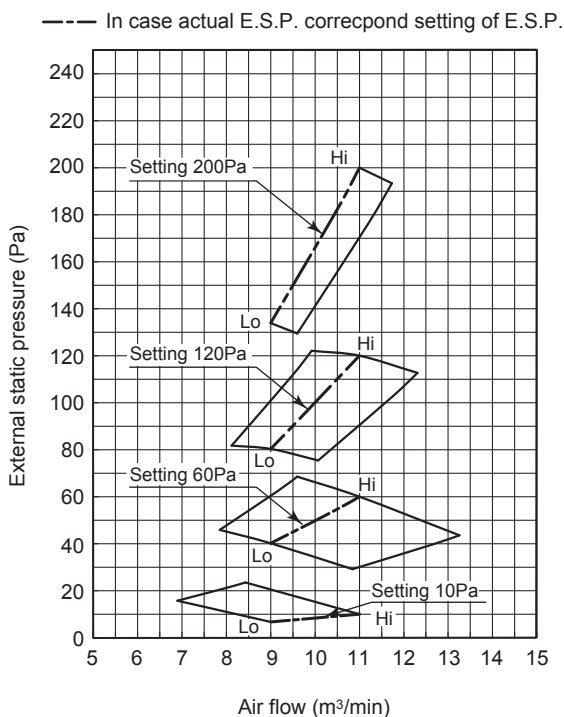


Characteristic FAN (2)

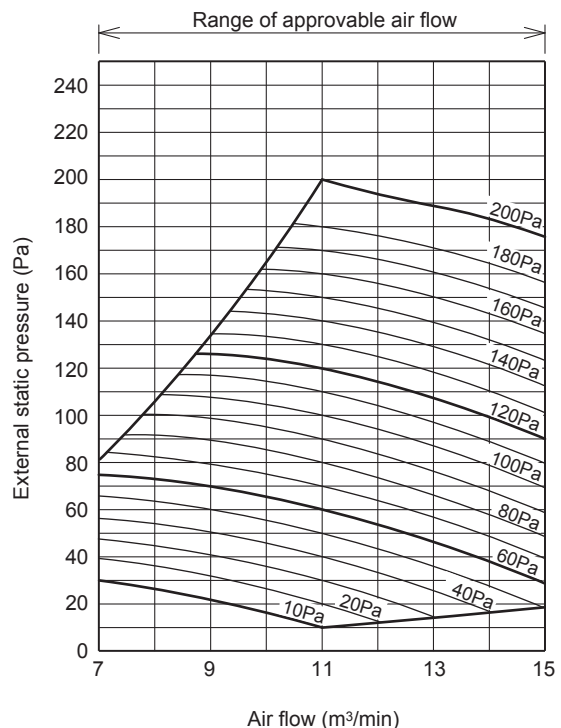


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



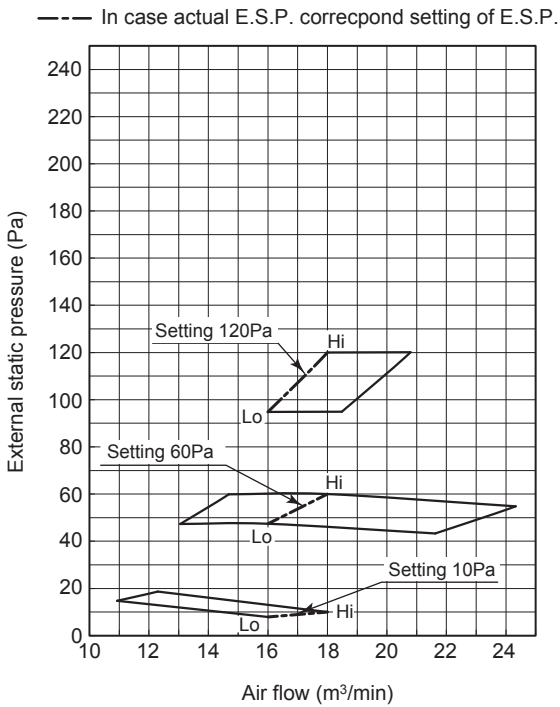
Characteristic FAN (2)



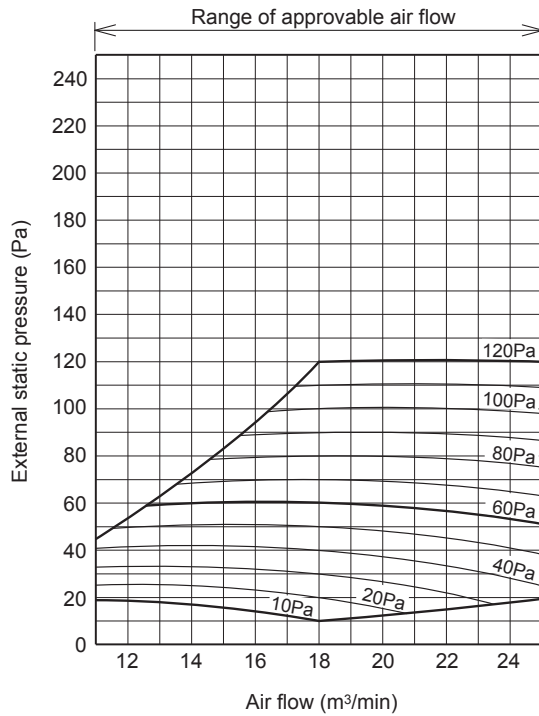
Model FDU1100FKXZE1

■SW8-4 : OFF (Range of use limitation : Setting 10Pa-120Pa)

Characteristic FAN (1)

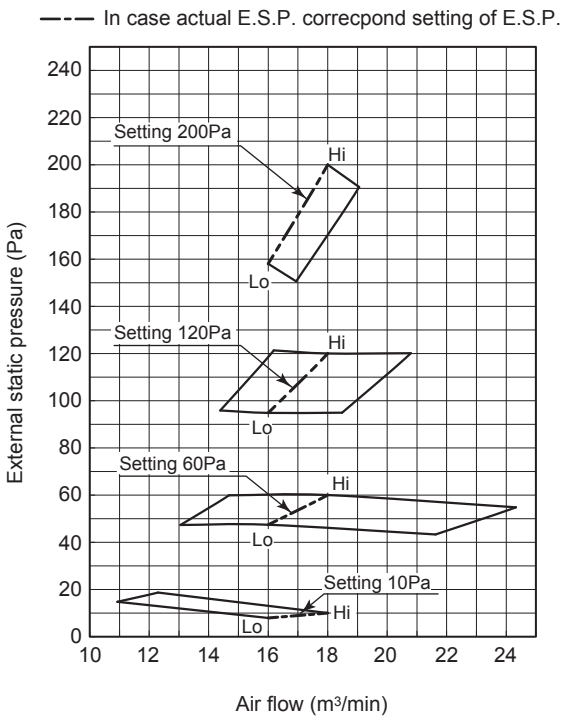


Characteristic FAN (2)

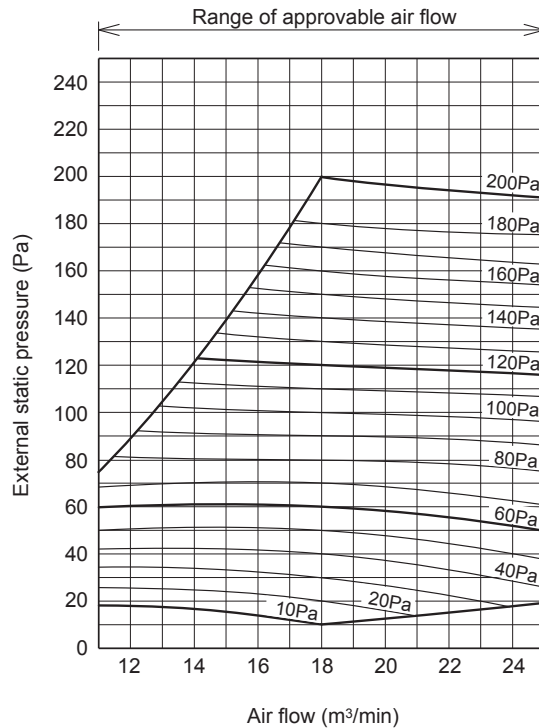


■SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



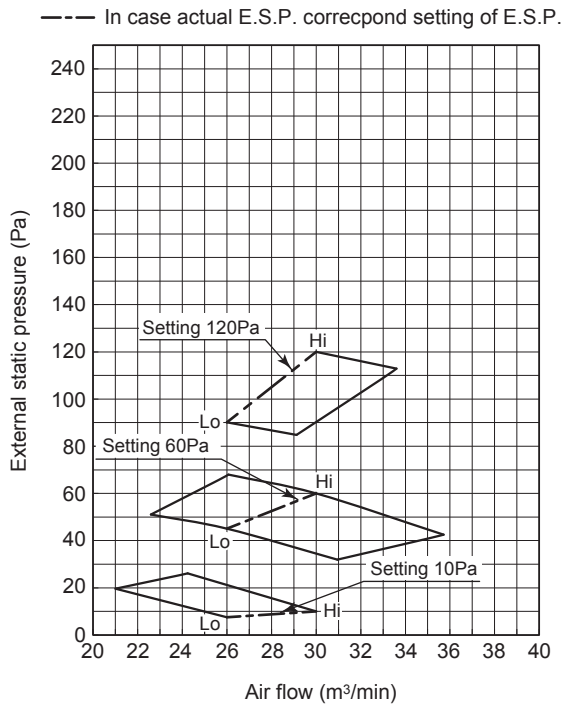
Characteristic FAN (2)



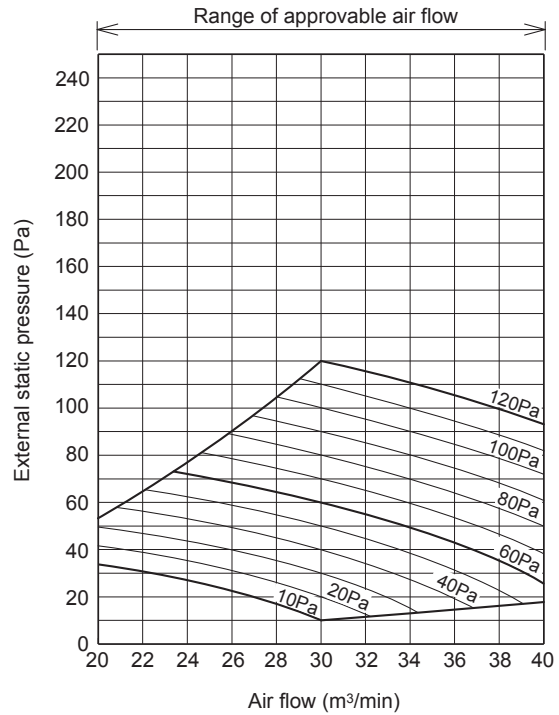
Model FDU1800FKXZE1

■ SW8-4 : OFF (Range of use limitation : Setting 10Pa-120Pa)

Characteristic FAN (1)

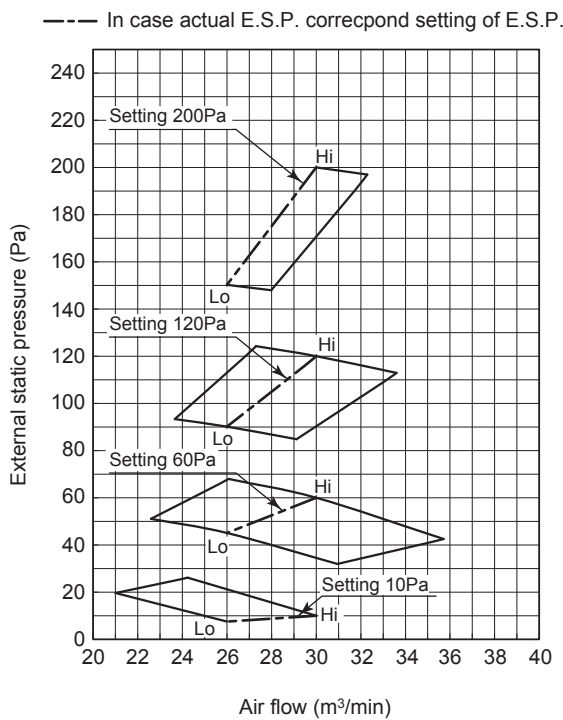


Characteristic FAN (2)

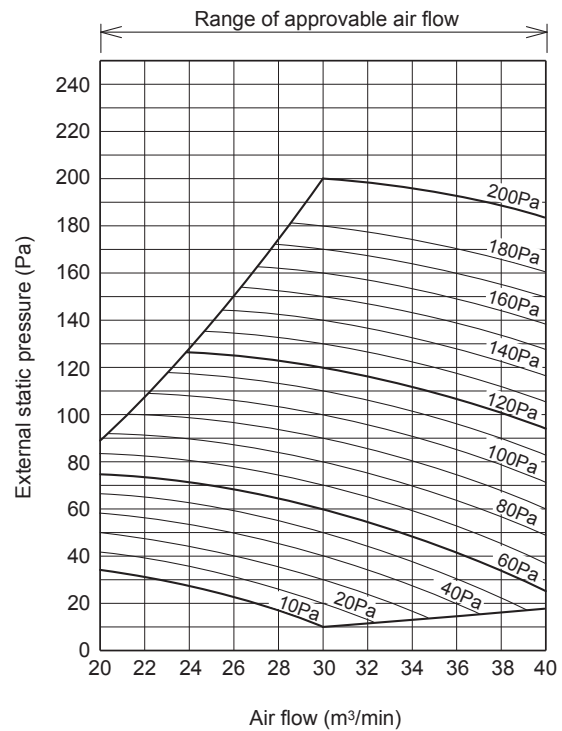


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



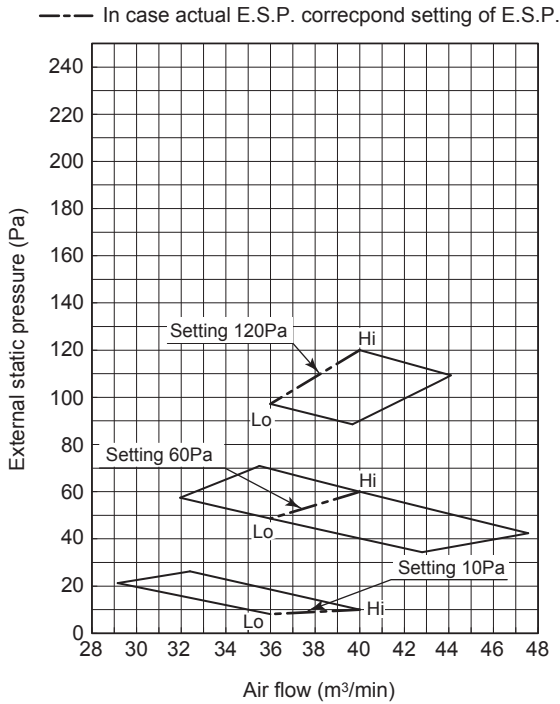
Characteristic FAN (2)



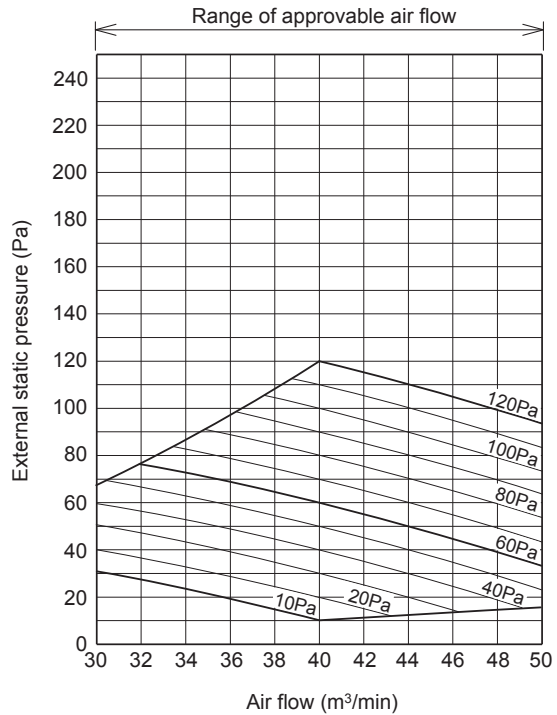
Model FDU2400FKXZE1

■ SW8-4 : OFF (Range of use limitation : Setting 10Pa-120Pa)

Characteristic FAN (1)

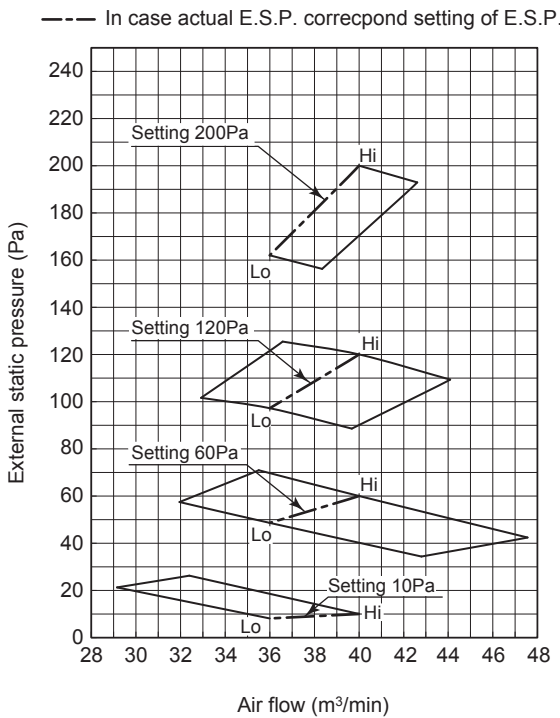


Characteristic FAN (2)

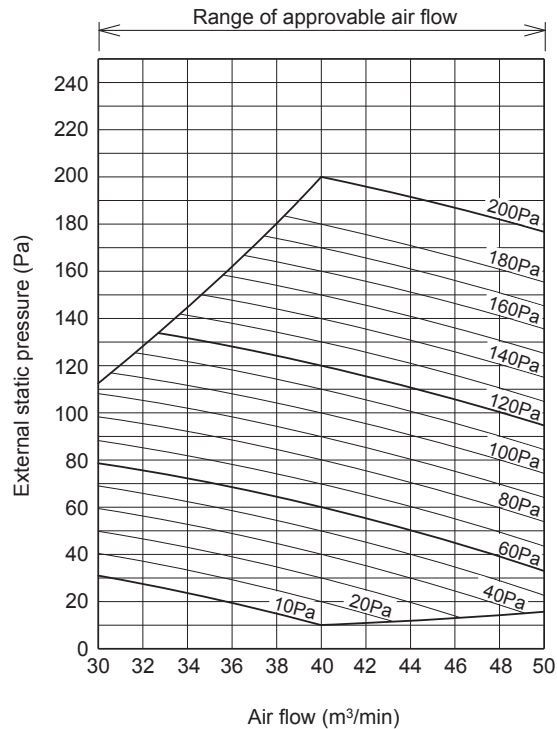


■ SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



Characteristic FAN (2)



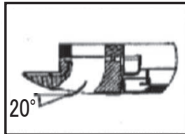
7. TEMPERATURE AND VELOCITY DISTRIBUTION

Indoor temperature
 Cooling 27°CDB/19°CWB, Heating 20°CDB
 [Note]

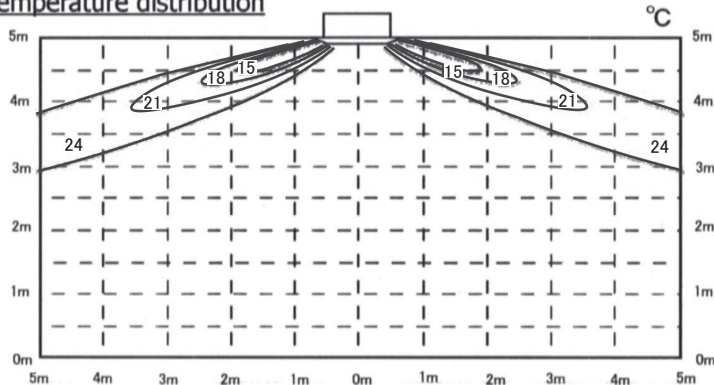
These figures represent the typical main range of temperature and velocity distribution at the center of air outlet within the published conditions.
 In the actual installation, they may differ from the typical figures under the influence of air temperature conditions, ceiling height, operation conditions and obstacles.

(1) Ceiling casset-4 way type (FDT)
Models FDT28, 36, 45, 56KXE6F
Cooling Airflow: P-Hi

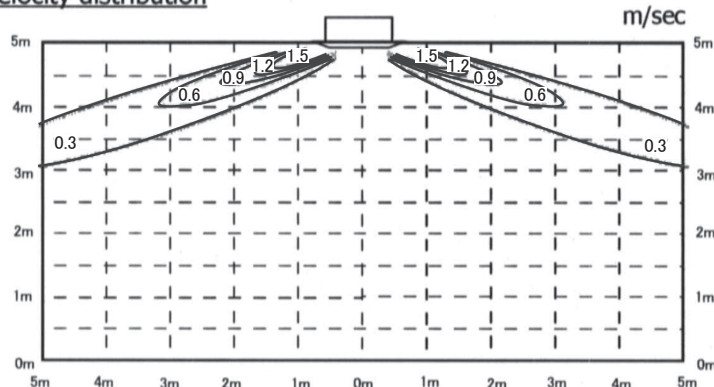
Louver position



Temperature distribution

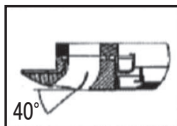


Velocity distribution

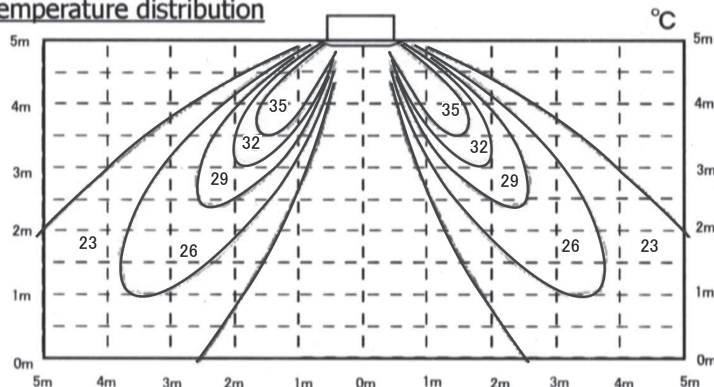


Heating Air flow : P-Hi

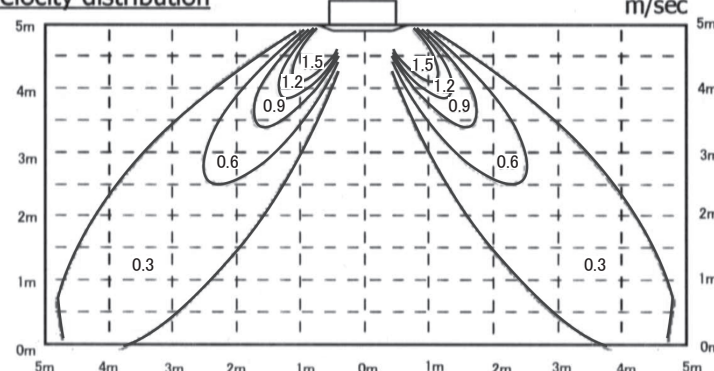
Louver position



Temperature distribution



Velocity distribution

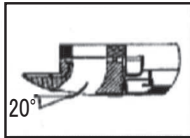


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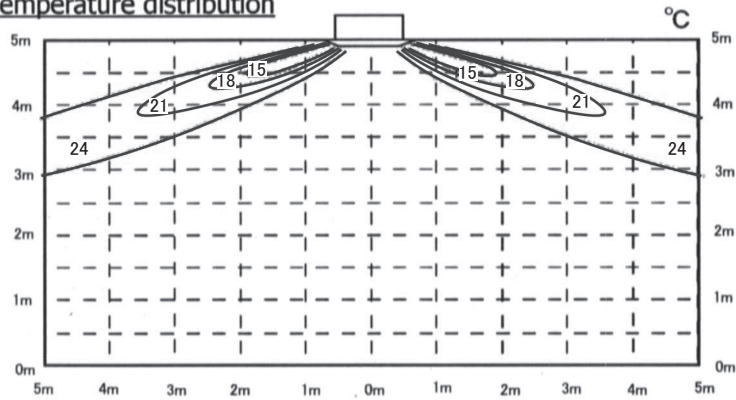
Model FDT71KXE6F

Cooling Airflow: P-Hi

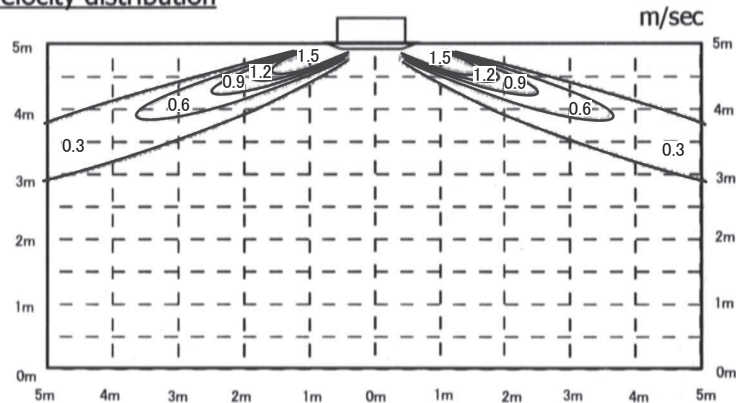
Louver position



Temperature distribution

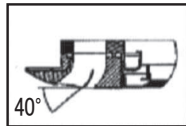


Velocity distribution

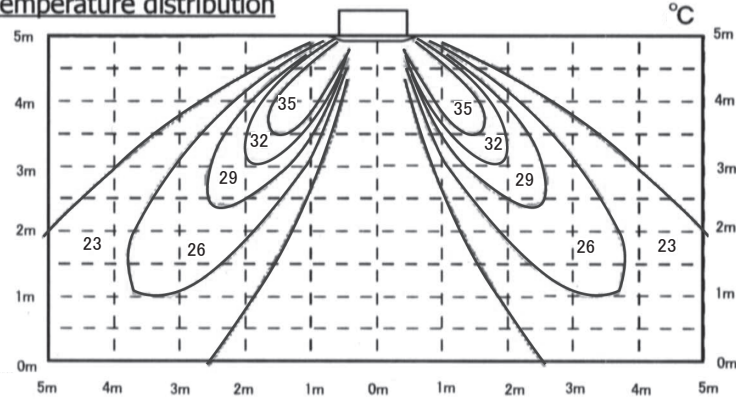


Heating Air flow : P-Hi

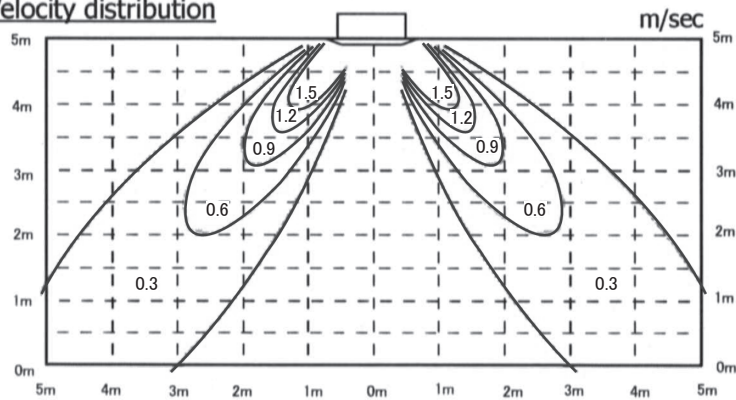
Louver position



Temperature distribution



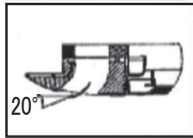
Velocity distribution



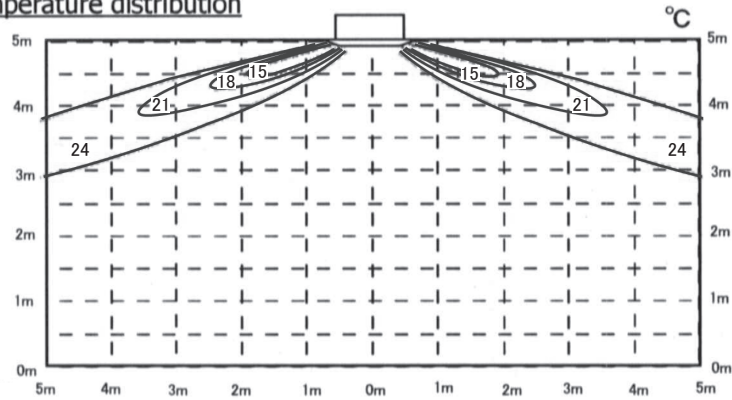
Models FDT90, 112, 140, 160KXE6F

Cooling Airflow: P-Hi

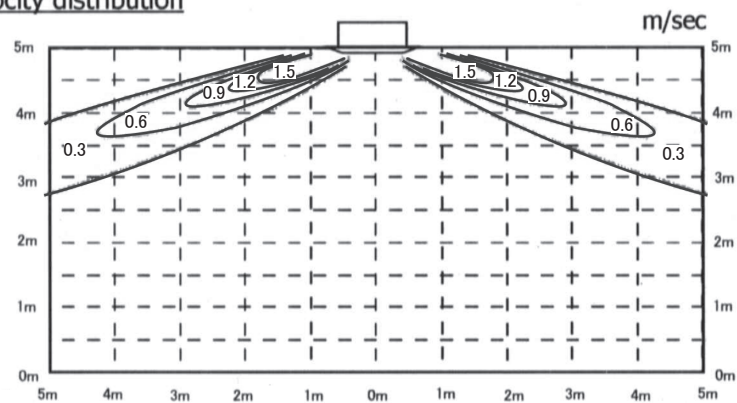
Louver position



Temperature distribution

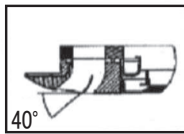


Velocity distribution

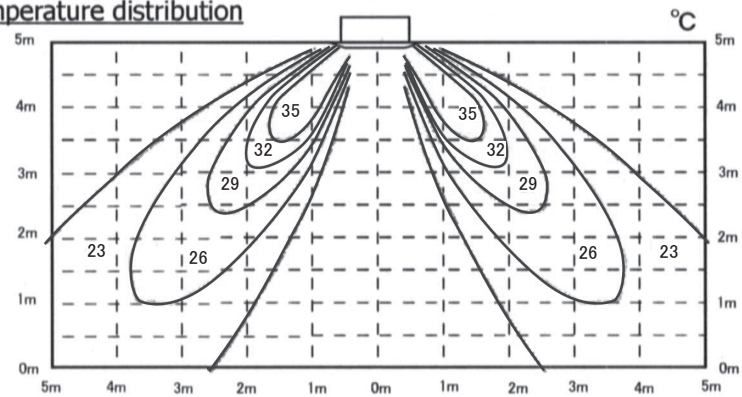


Heating Air flow : P-Hi

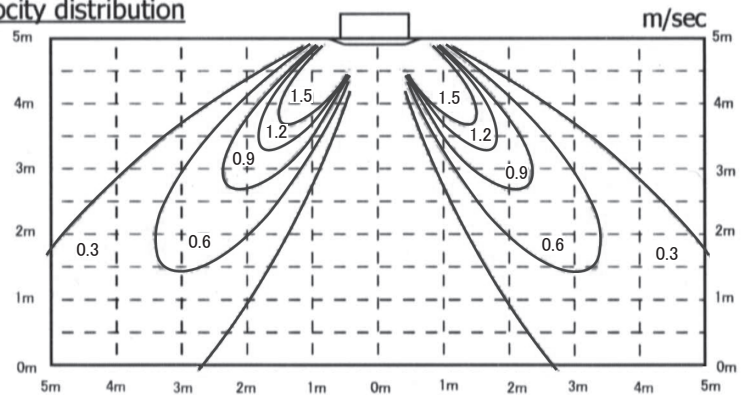
Louver position



Temperature distribution



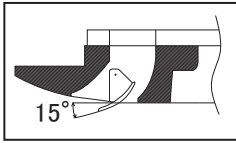
Velocity distribution



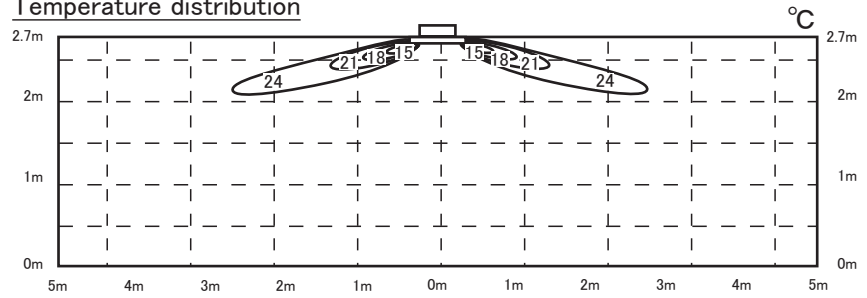
(2) Ceiling cassette-4 way compact type (FDTC)
 Model FDTC15KXE6F

Cooling Air flow: P-Hi

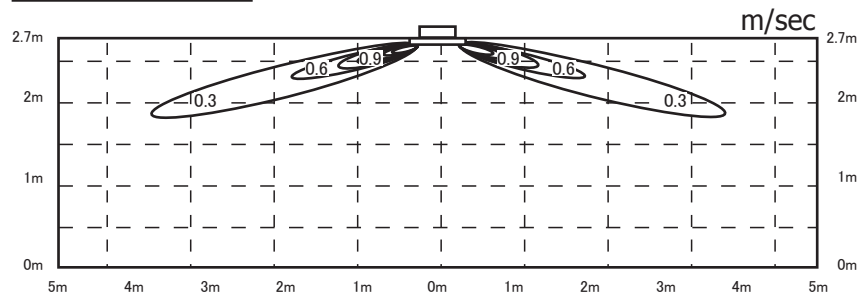
Louver position



Temperature distribution

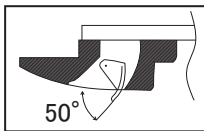


Velocity distribution

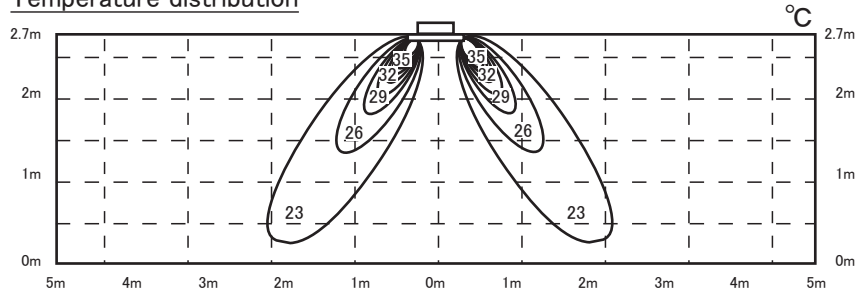


Heating Air flow: P-Hi

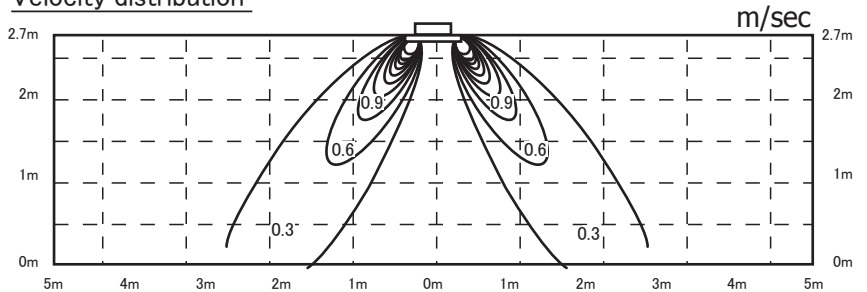
Louver position



Temperature distribution



Velocity distribution

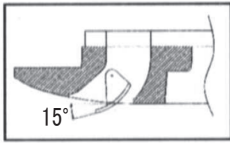


ISD12579

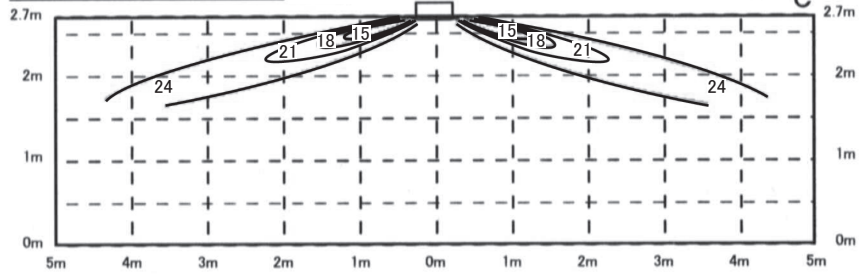
Models FDTC22, 28KXE6F

Cooling Air flow: P-Hi

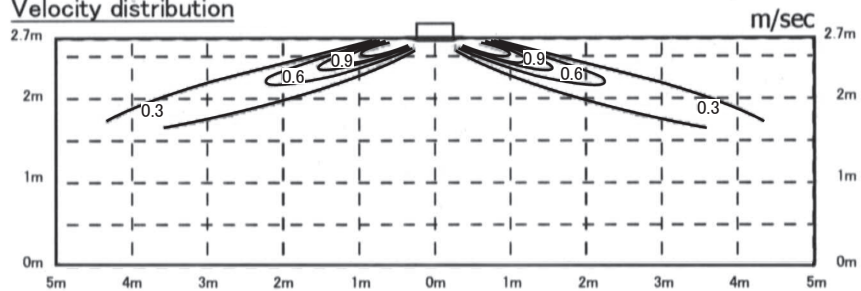
Louver position



Temperature distribution

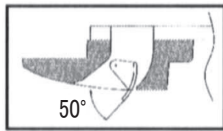


Velocity distribution

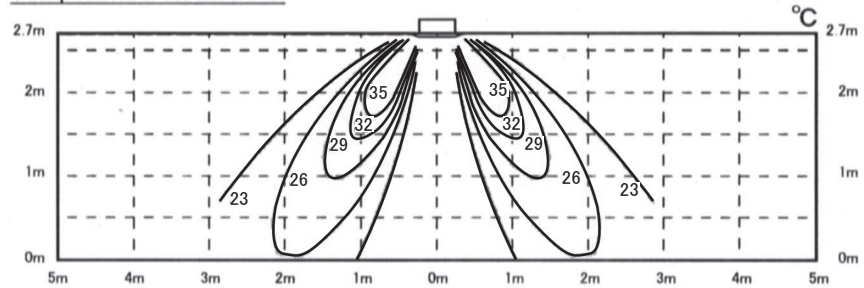


Heating Air flow: P-Hi

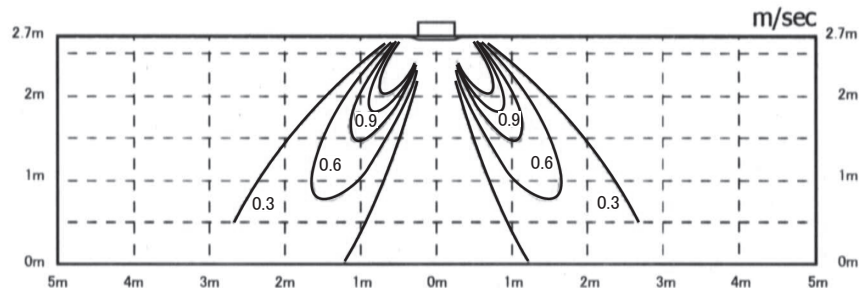
Louver position



Temperature distribution



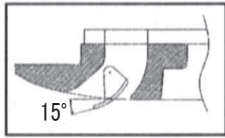
Velocity distribution



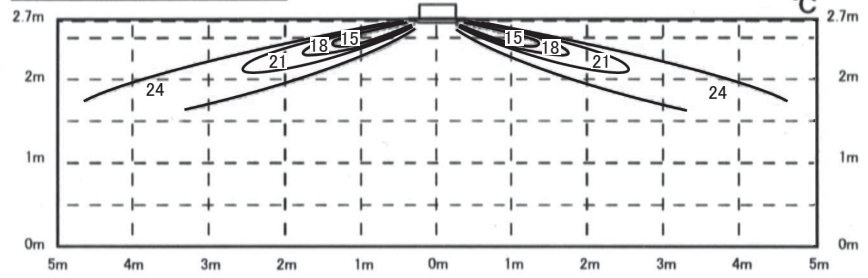
Model FDTC36KXE6F

Cooling Air flow: P-Hi

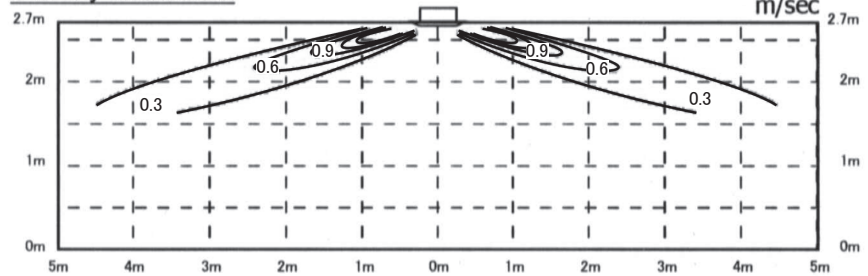
Louver position



Temperature distribution

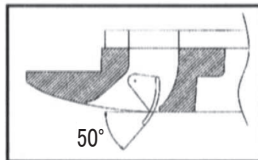


Velocity distribution

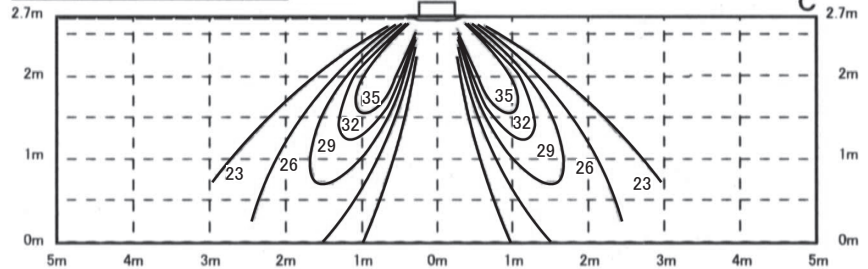


Heating Air flow: P-Hi

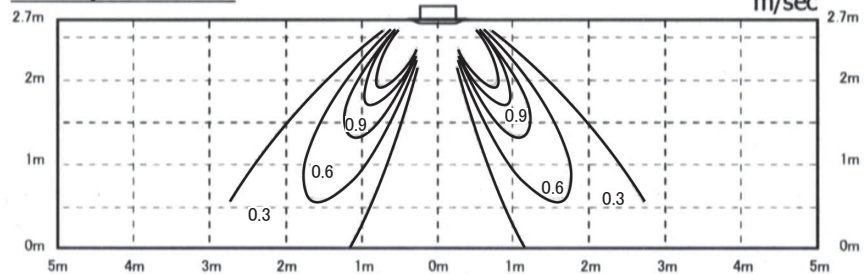
Louver position



Temperature distribution



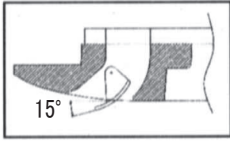
Velocity distribution



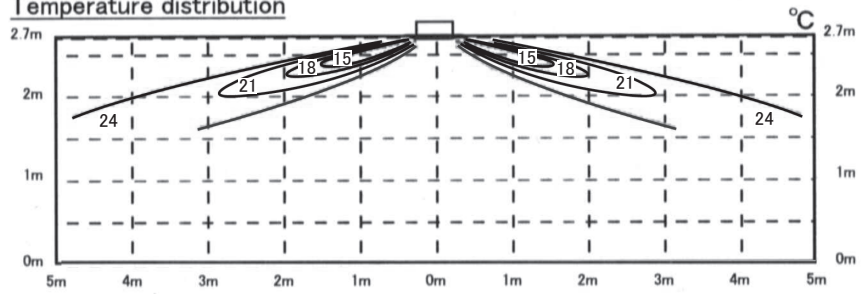
Model FDTC45KXE6F

Cooling Air flow: P-Hi

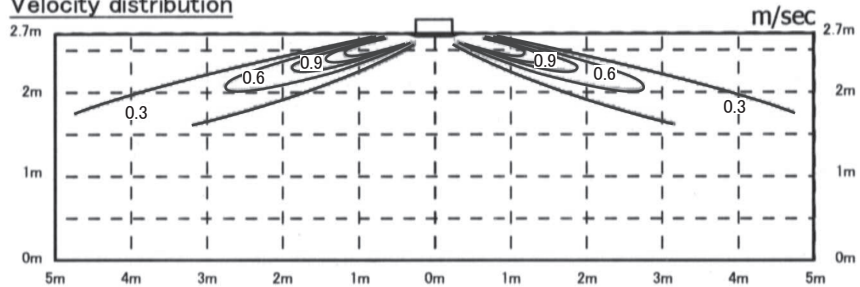
Louver position



Temperature distribution

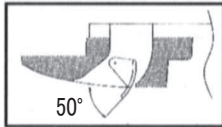


Velocity distribution

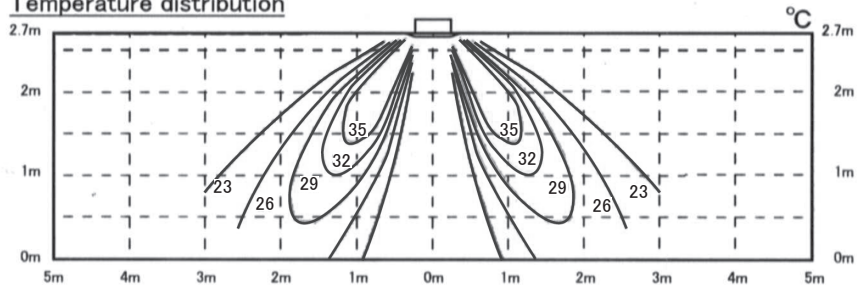


Heating Air flow: P-Hi

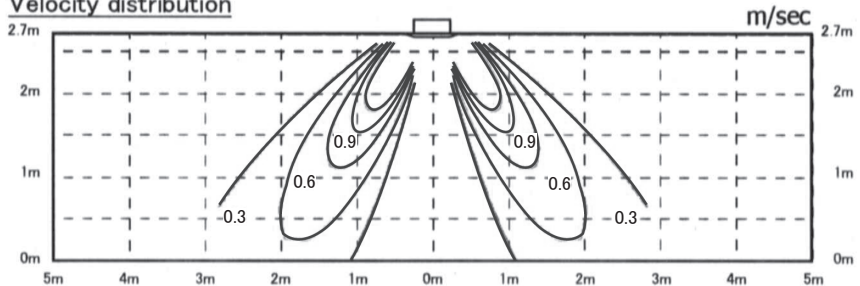
Louver position



Temperature distribution



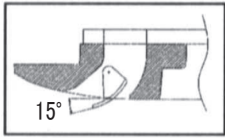
Velocity distribution



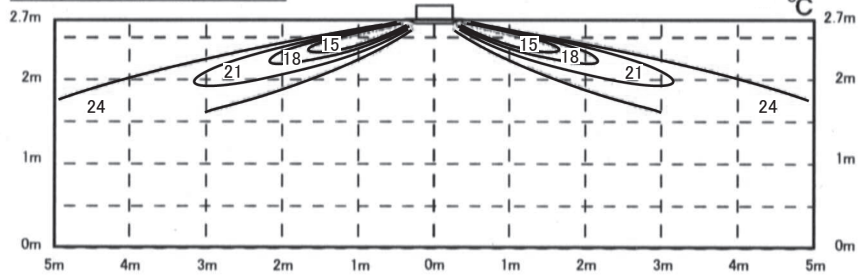
Model FDTC56KXE6F

Cooling Air flow: P-Hi

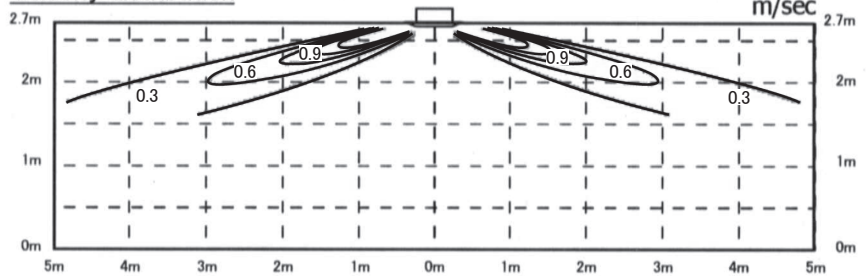
Louver position



Temperature distribution

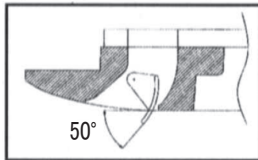


Velocity distribution

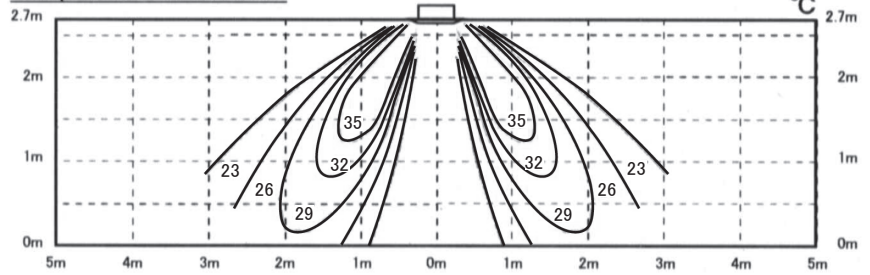


Heating Air flow: P-Hi

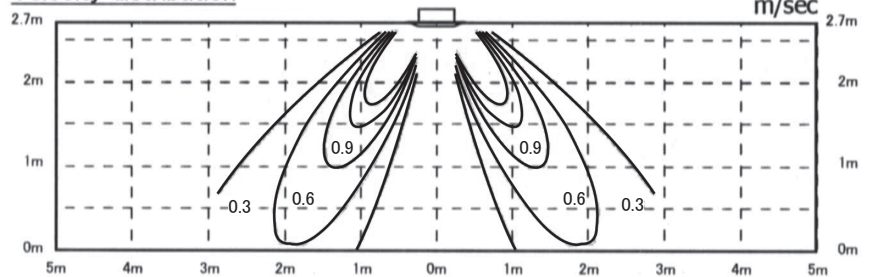
Louver position



Temperature distribution



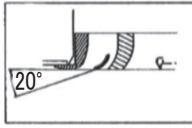
Velocity distribution



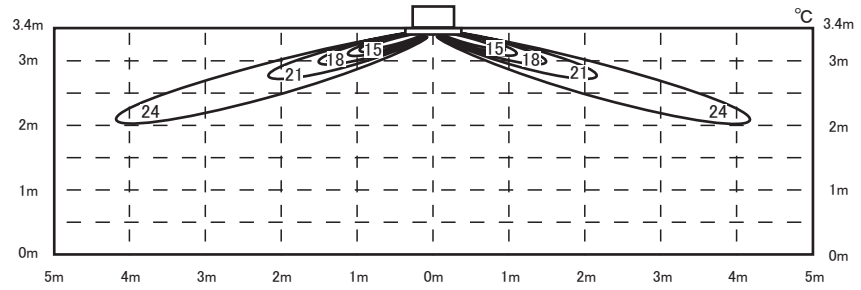
(3) Ceiling cassette-2 way type (FDTW)
Models FDTW28, 45, 56, 71KXE6F

Cooling Air flow: P-Hi

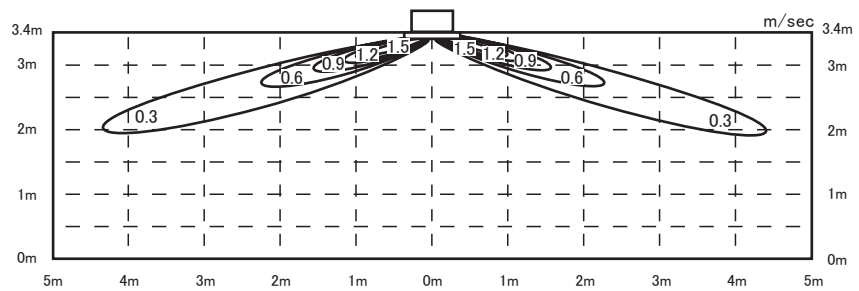
Louver position



Temperature distribution

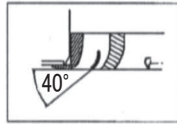


Velocity distribution

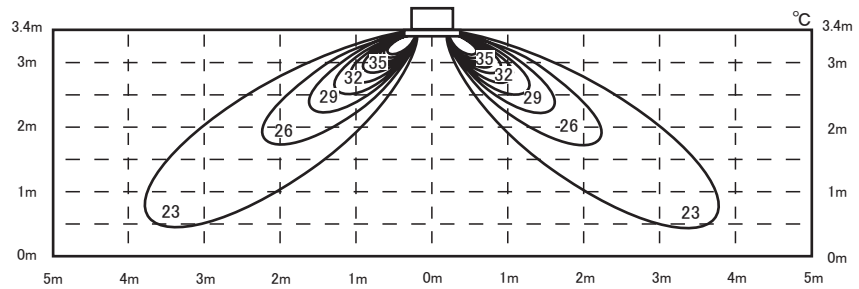


Heating Air flow: P-Hi

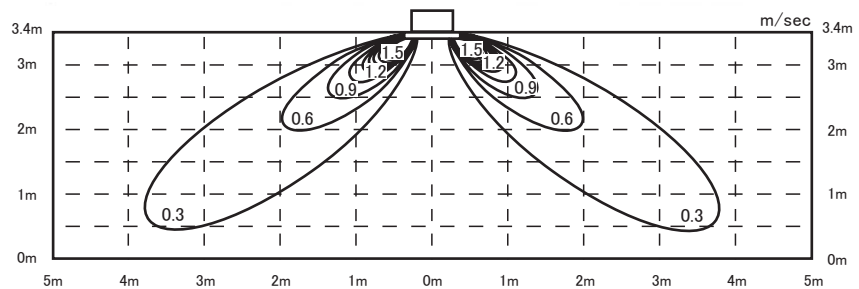
Louver position



Temperature distribution



Velocity distribution

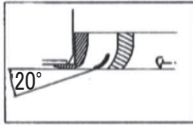


ISD11579

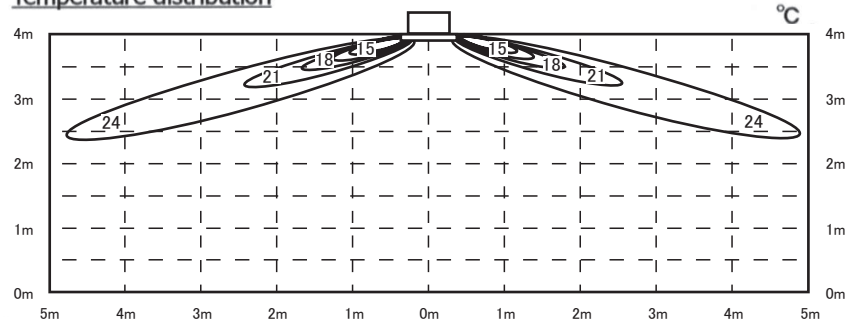
Models FDTW90, 112, 140KXE6F

Cooling Air flow: P-Hi

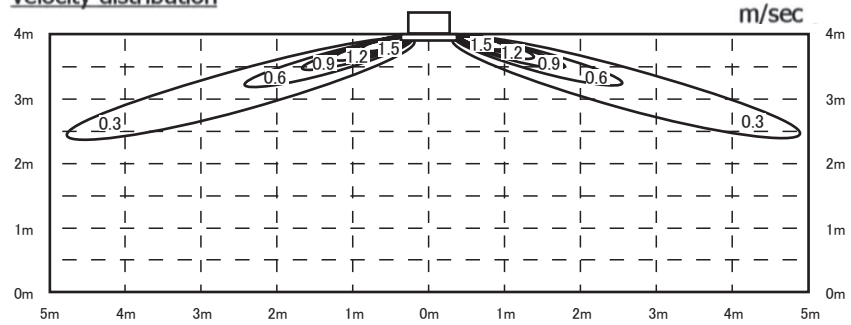
Louver position



Temperature distribution

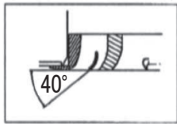


Velocity distribution

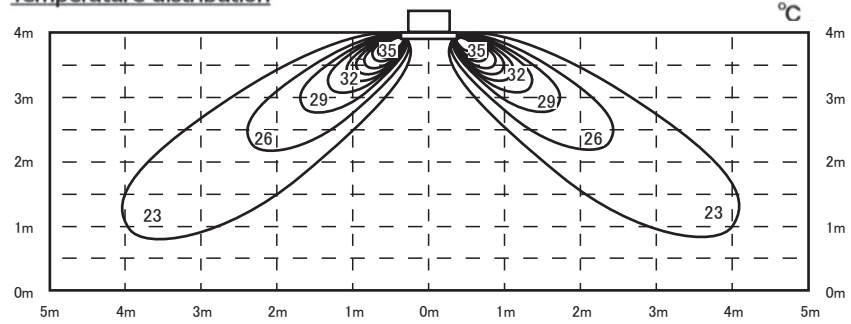


Heating Air flow: P-Hi

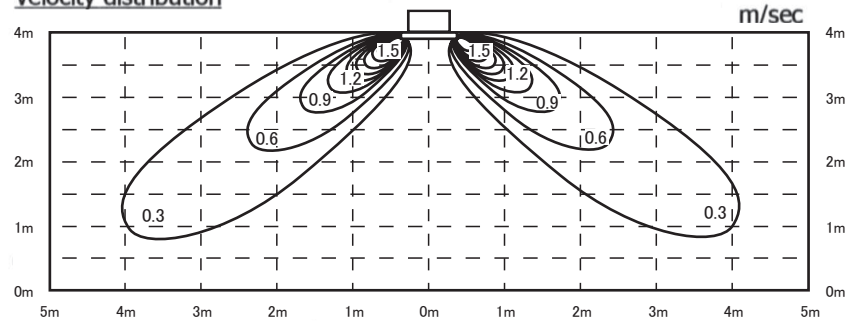
Louver position



Temperature distribution



Velocity distribution

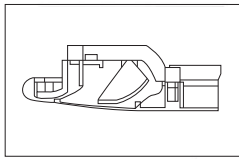


(4) Ceiling cassette-1 way compact type (FDTQ)

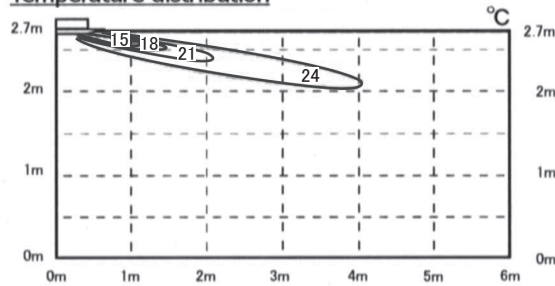
Models FDTQ22, 28, 36KXE6F

Cooling Air flow: P-Hi

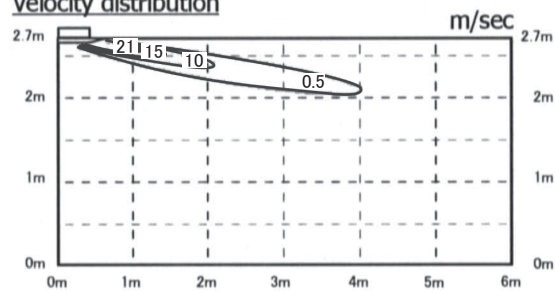
Louver position



Temperature distribution

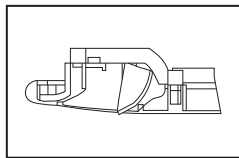


Velocity distribution

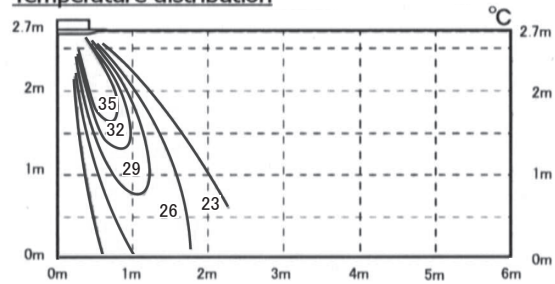


Heating Air flow: P-Hi

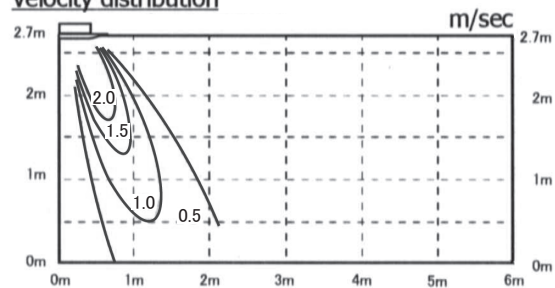
Louver position



Temperature distribution



Velocity distribution

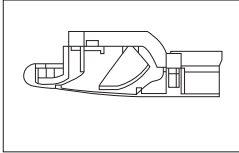


ISD09410

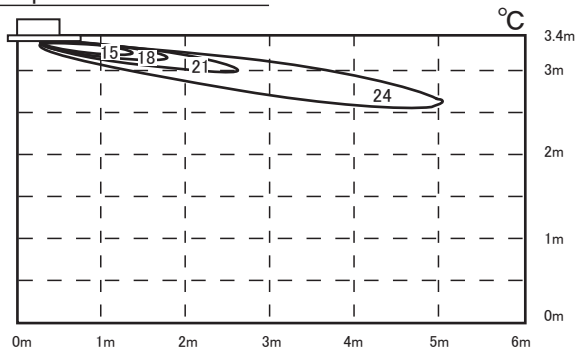
(5) Ceiling cassette-1 way type (FDTS)
Model FDTS45KXE6F

Cooling Air flow: P-Hi

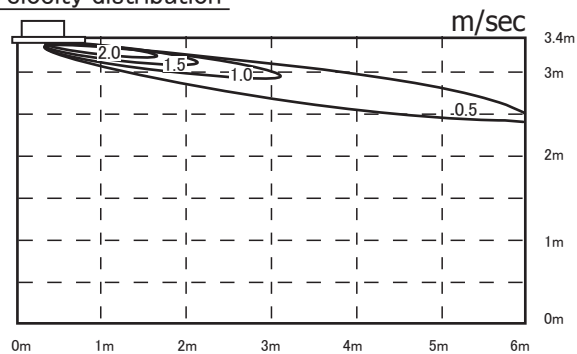
Louver position



Temperature distribution

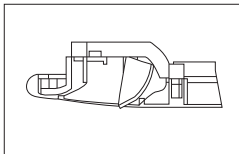


Velocity distribution

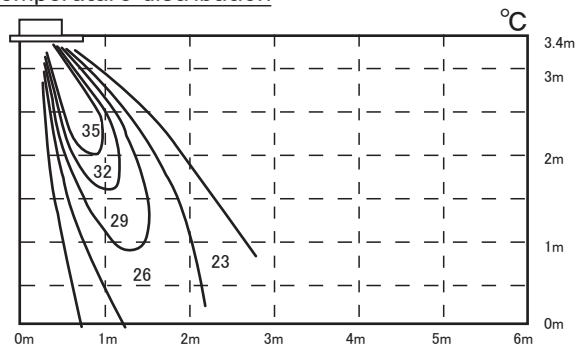


Heating Air flow: P-Hi

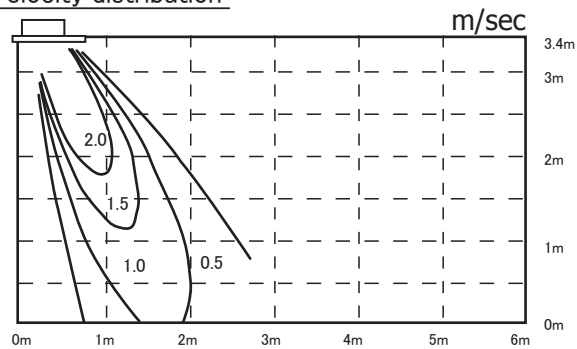
Louver position



Temperature distribution



Velocity distribution

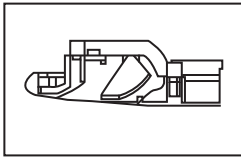


ISD12329

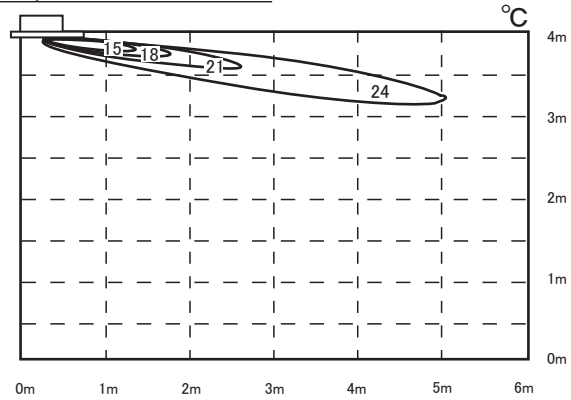
Model FDTS71KXE6F

Cooling Air flow: P-Hi

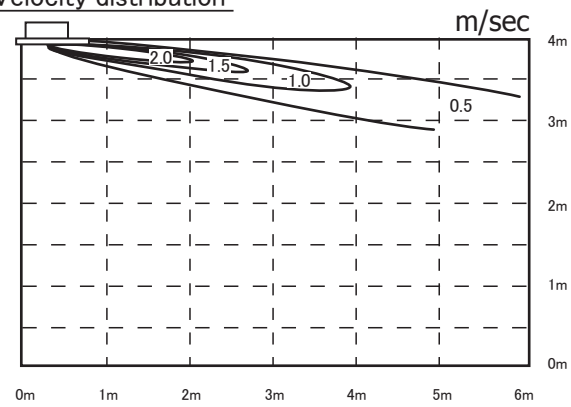
Louver position



Temperature distribution

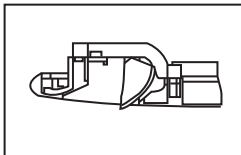


Velocity distribution

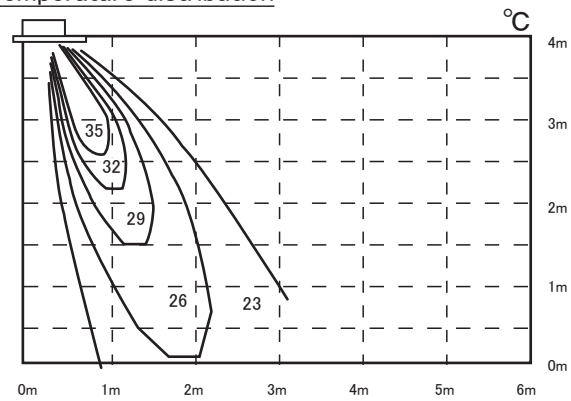


Heating Air flow: P-Hi

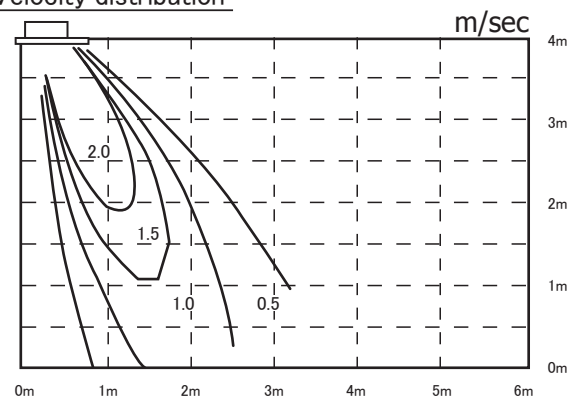
Louver position



Temperature distribution



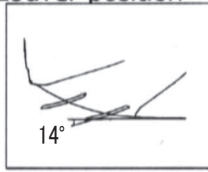
Velocity distribution



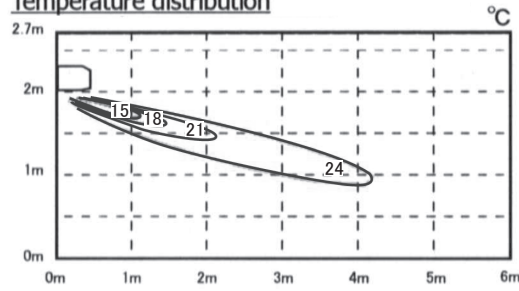
(6) Wall Mounded type (FDK)
 Models FDK22, 28KXE6F

Cooling Air flow: P-Hi

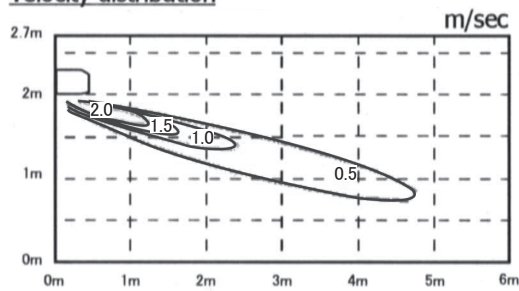
Louver position



Temperature distribution

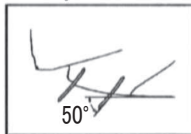


Velocity distribution

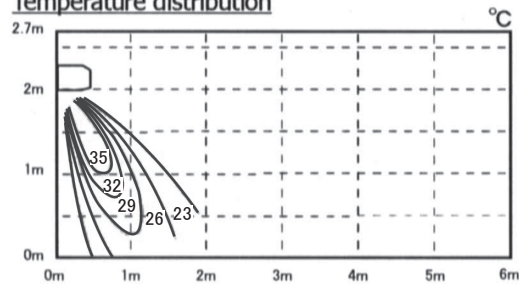


Heating Air flow: P-Hi

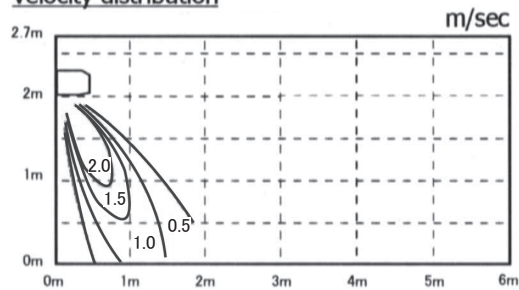
Louver position



Temperature distribution



Velocity distribution

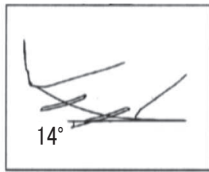


ISD09409

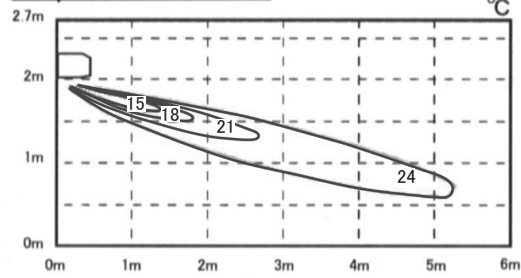
Models FDK36, 45KXE6F

Cooling Air flow: P-Hi

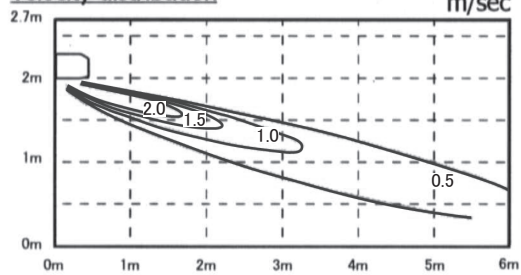
Louver position



Temperature distribution

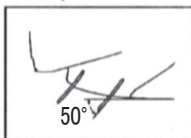


Velocity distribution

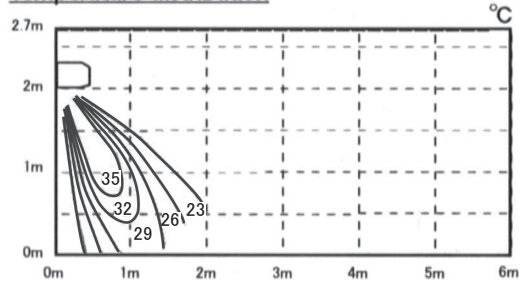


Heating Air flow: P-Hi

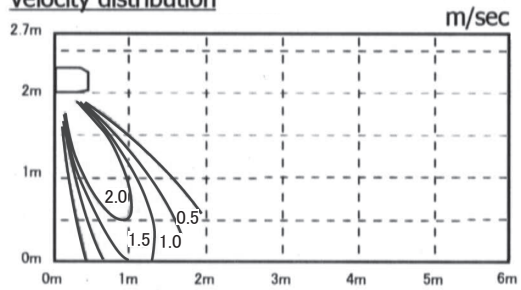
Louver position



Temperature distribution



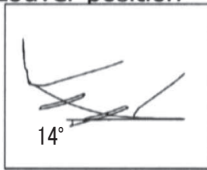
Velocity distribution



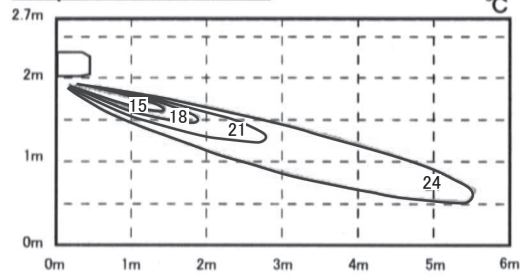
Model FDK56KXE6F

Cooling Air flow: P-Hi

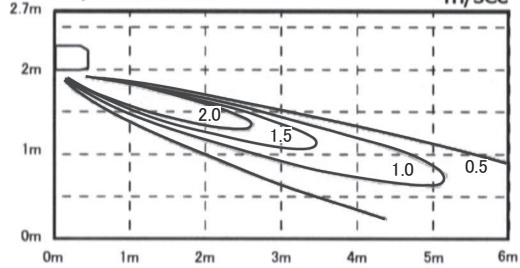
Louver position



Temperature distribution

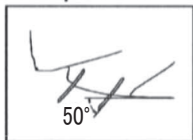


Velocity distribution

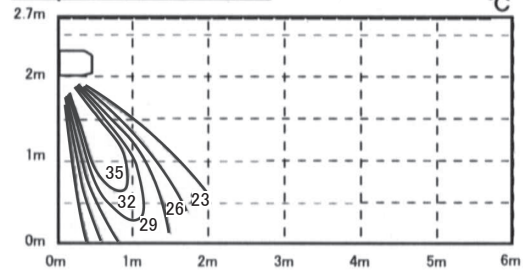


Heating Air flow: P-Hi

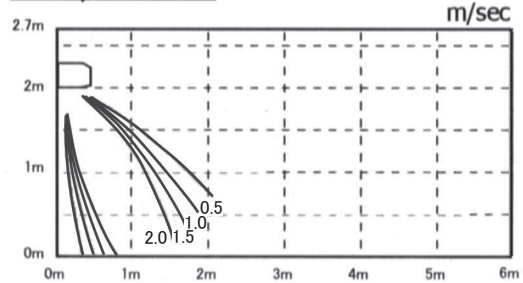
Louver position



Temperature distribution



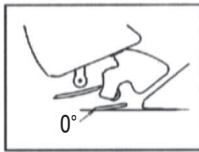
Velocity distribution



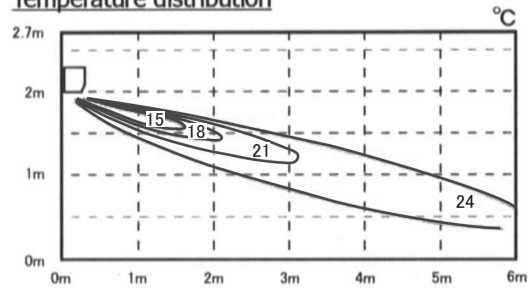
Model FDK71KXE6F

Cooling Air flow: P-Hi

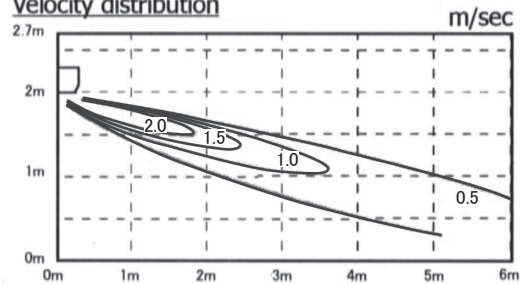
Louver position



Temperature distribution

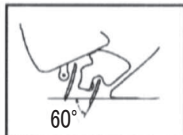


Velocity distribution

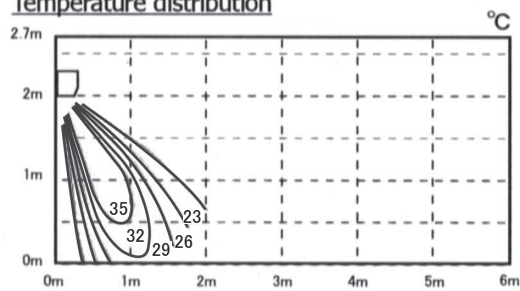


Heating Air flow: P-Hi

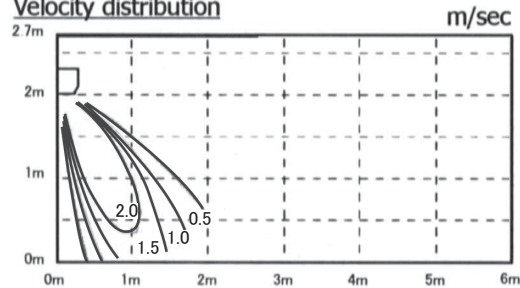
Louver position



Temperature distribution



Velocity distribution

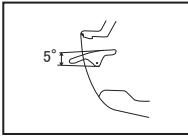


(7) Ceiling suspended type (FDE)

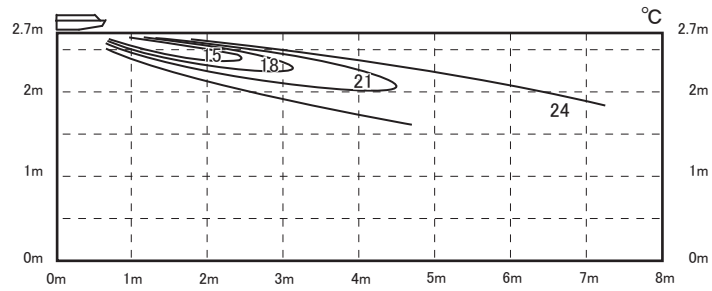
Models FDE36, 45, 56KXZE1

Cooling Air flow: P-Hi

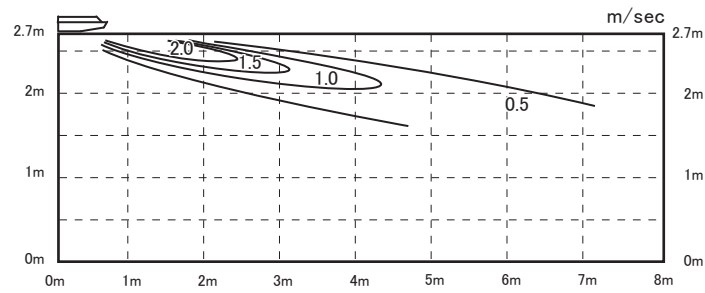
Louver position



Temperature distribution

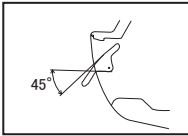


Velocity distribution

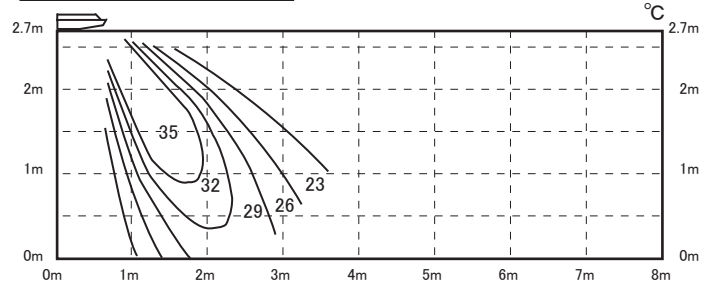


Heating Air flow: P-Hi

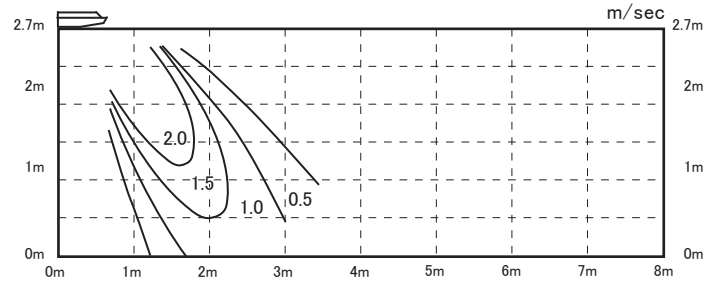
Louver position



Temperature distribution



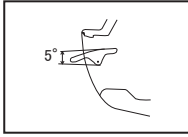
Velocity distribution



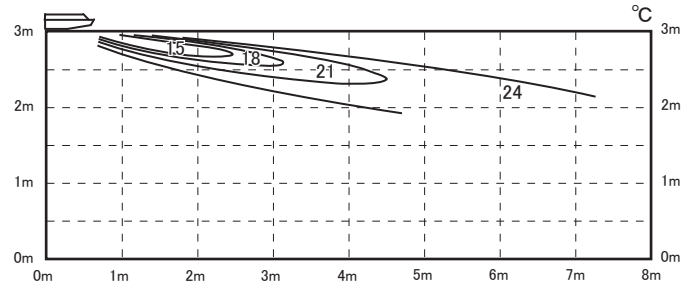
Model FDE71KXZE1

Cooling Air flow: P-Hi

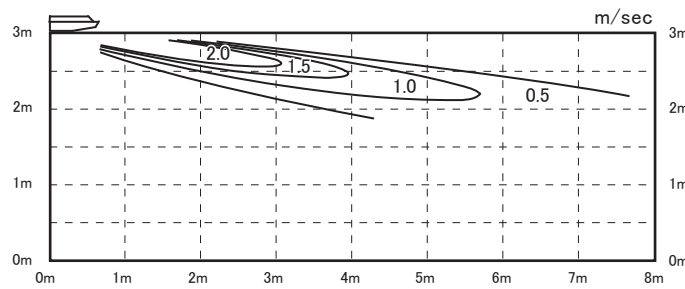
Louver position



Temperature distribution

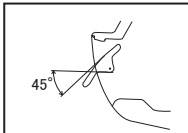


Velocity distribution

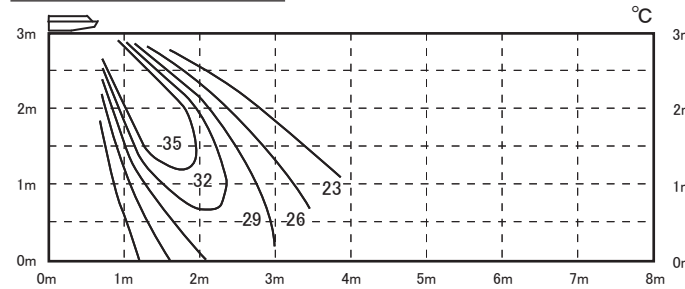


Heating Air flow: P-Hi

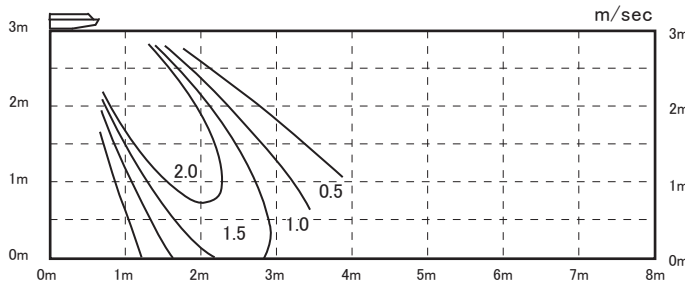
Louver position



Temperature distribution



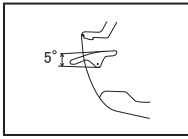
Velocity distribution



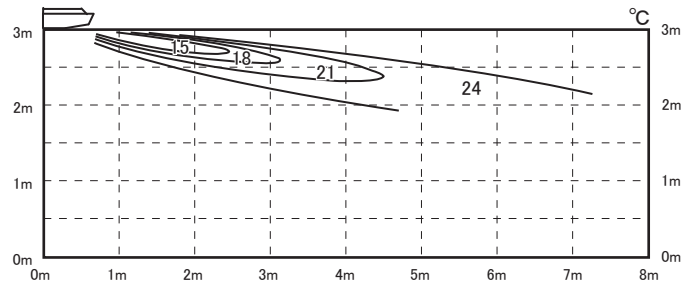
Model FDE112KXZE1

Cooling Air flow: P-Hi

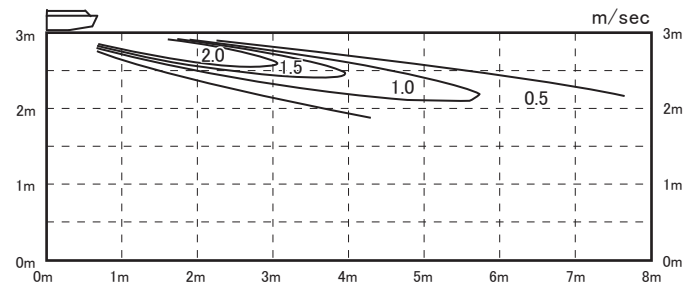
Louver position



Temperature distribution

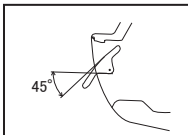


Velocity distribution

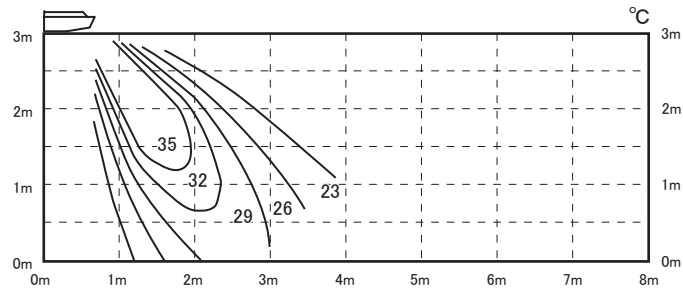


Heating Air flow: P-Hi

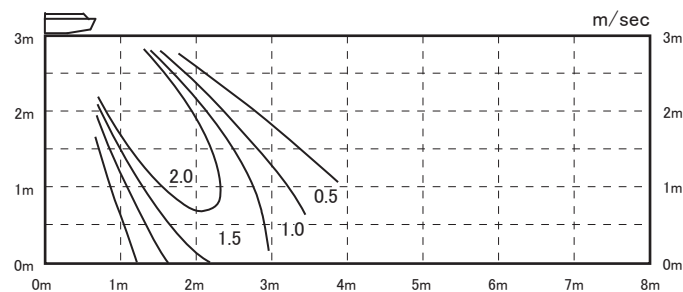
Louver position



Temperature distribution



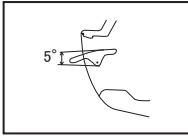
Velocity distribution



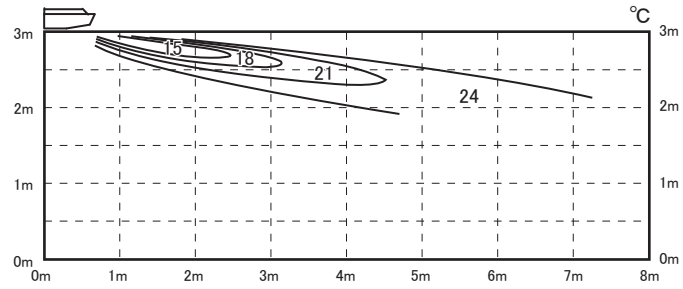
Model FDE140KXZE1

Cooling Air flow: P-Hi

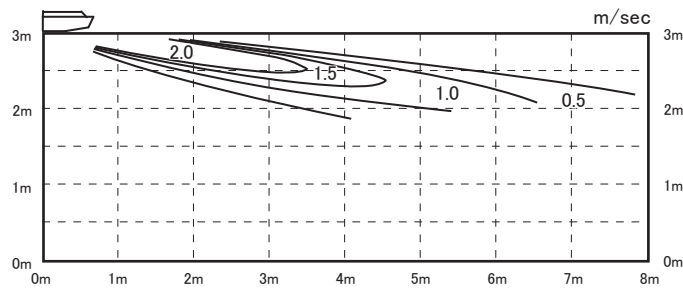
Louver position



Temperature distribution

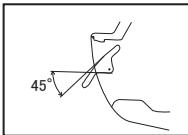


Velocity distribution

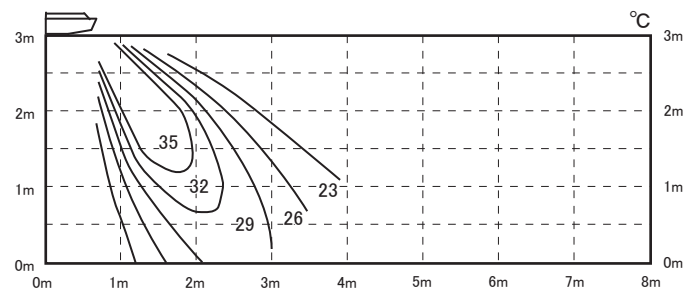


Heating Air flow: P-Hi

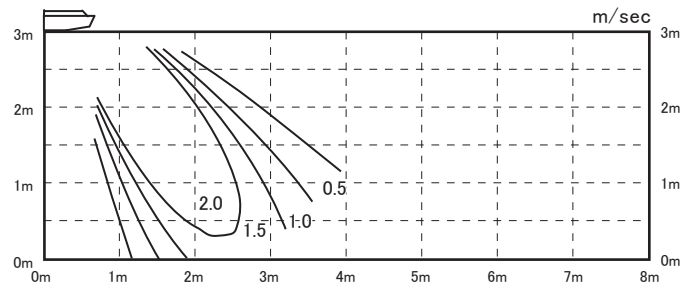
Louver position



Temperature distribution



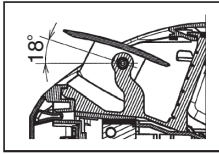
Velocity distribution



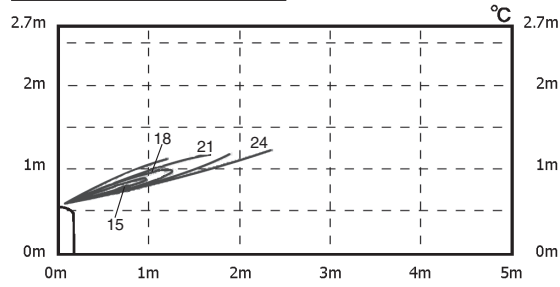
(8) Floor standing-2 way type (FDFW)
Model FDFW28KXE6F

Cooling Air flow: Hi

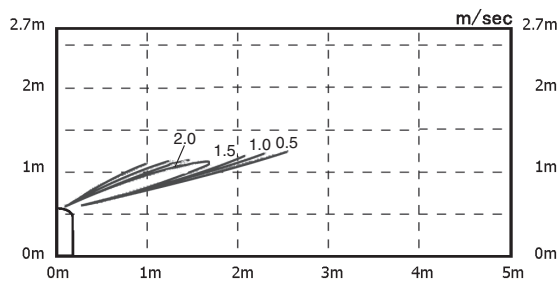
Louver position



Temperature distribution

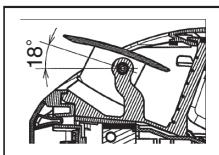


Velocity distribution

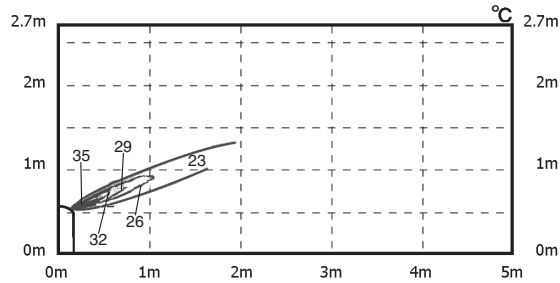


Heating Air flow: Hi

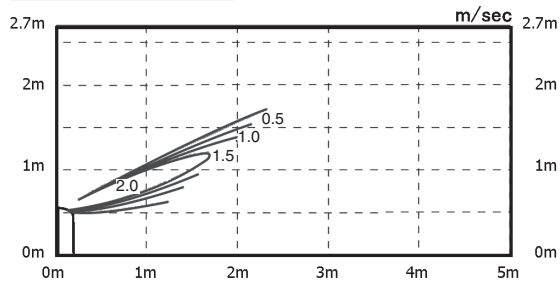
Louver position



Temperature distribution



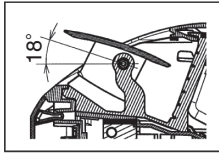
Velocity distribution



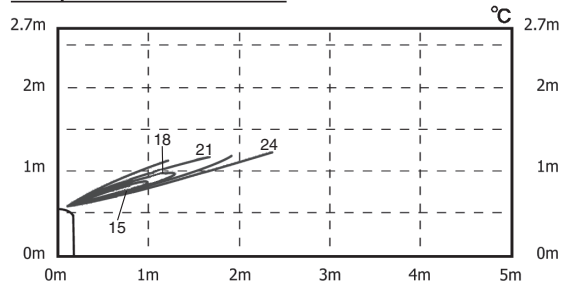
Model FDFW45KXE6F

Cooling Air flow: Hi

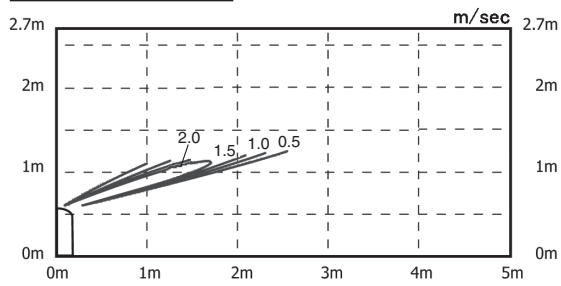
Louver position



Temperature distribution

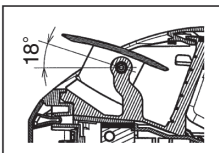


Velocity distribution

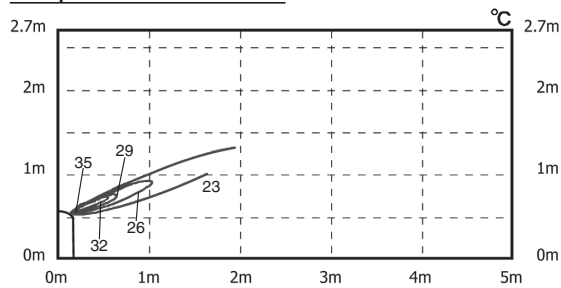


Heating Air flow: Hi

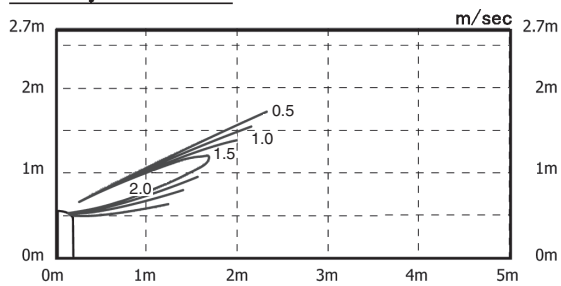
Louver position



Temperature distribution



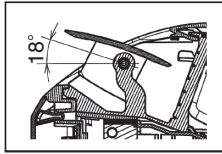
Velocity distribution



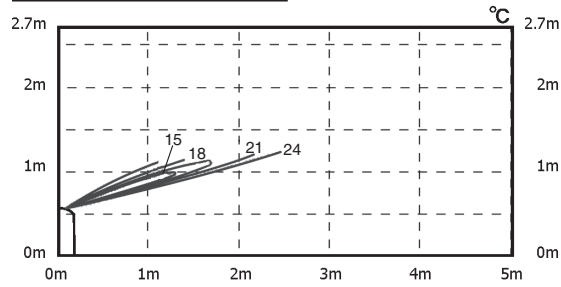
Model FDFW56KXE6F

Cooling Air flow: Hi

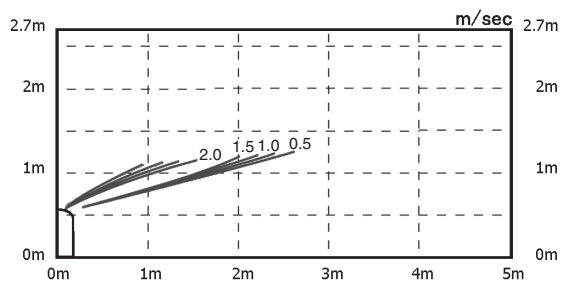
Louver position



Temperature distribution

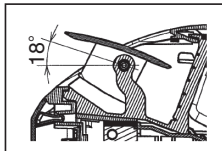


Velocity distribution

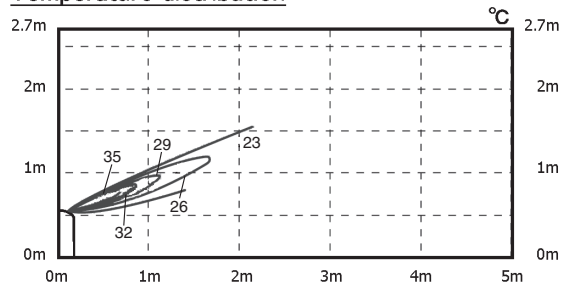


Heating Air flow: Hi

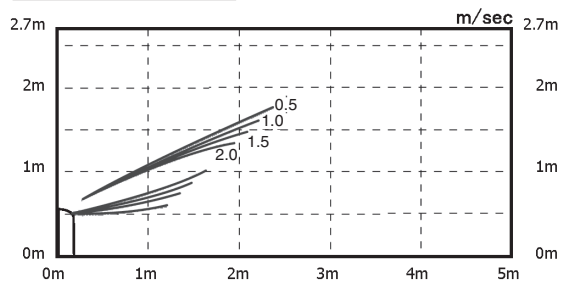
Louver position



Temperature distribution



Velocity distribution

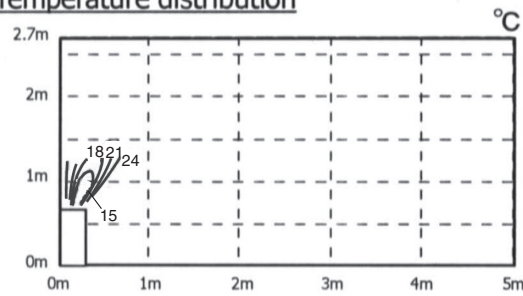


(9) Floor standing (with casing) type (FDFL)

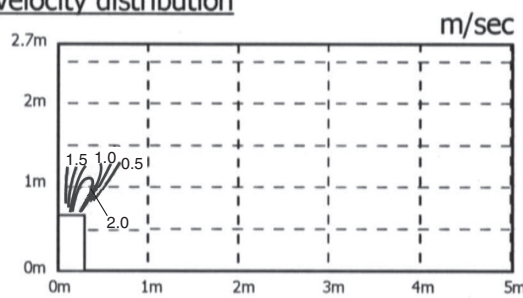
Model FDFL71KXE6F

Cooling Airflow: Hi

Temperature distribution

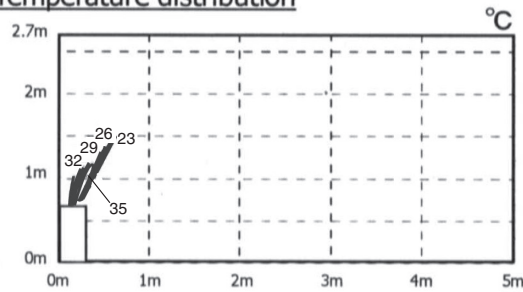


Velocity distribution

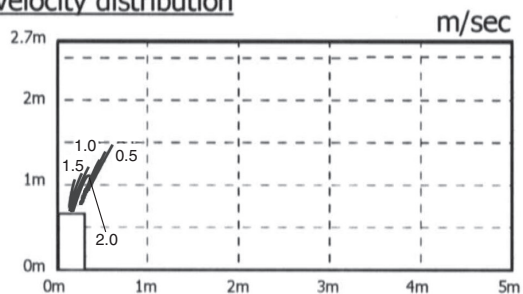


Heating Airflow: Hi

Temperature distribution



Velocity distribution



Model **FDT36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 20 (m³/min)	10			2.95	2.83	3.53	3.39	3.82	3.67	4.06	3.77	4.55	4.10	4.72	4.03
	12			2.95	2.83	3.53	3.39	3.82	3.67	4.05	3.77	4.53	4.10	4.70	4.02
	14			2.95	2.83	3.53	3.39	3.82	3.67	4.05	3.77	4.51	4.09	4.68	4.02
	16			2.95	2.83	3.53	3.39	3.82	3.67	4.04	3.76	4.50	4.09	4.66	4.01
	18			2.95	2.83	3.53	3.39	3.82	3.67	4.04	3.76	4.48	4.08	4.64	3.97
	20			2.95	2.83	3.53	3.39	3.82	3.67	4.03	3.76	4.47	4.08	4.62	3.96
	22			2.95	2.83	3.53	3.39	3.82	3.67	4.01	3.75	4.41	4.06	4.56	3.95
	24			2.94	2.82	3.52	3.38	3.82	3.67	3.99	3.75	4.35	4.01	4.49	3.93
	26			2.94	2.82	3.51	3.37	3.78	3.63	3.95	3.73	4.28	3.99	4.43	3.91
	28	2.66	2.55	2.94	2.82	3.49	3.35	3.74	3.59	3.90	3.72	4.22	3.97	4.36	3.89
	30	2.66	2.55	2.93	2.81	3.47	3.33	3.71	3.56	3.86	3.71	4.15	3.95	4.29	3.88
	32	2.66	2.55	2.92	2.80	3.44	3.30	3.67	3.52	3.81	3.66	4.09	3.93	4.23	3.86
	34	2.66	2.55	2.91	2.79	3.43	3.29	3.62	3.48	3.75	3.60	4.00	3.84	4.14	3.84
	35	2.66	2.55	2.91	2.79	3.42	3.28	3.60	3.46	3.72	3.57	3.96	3.80	4.09	3.83
36	2.66	2.55	2.91	2.79	3.39	3.25	3.58	3.44	3.68	3.53	3.89	3.73	4.02	3.81	
38	2.66	2.55	2.90	2.78	3.34	3.21	3.55	3.41	3.61	3.47	3.74	3.59	3.86	3.71	
39	2.66	2.55	2.89	2.77	3.32	3.19	3.53	3.39	3.58	3.44	3.67	3.52	3.78	3.63	
41	2.66	2.55	2.88	2.76	3.22	3.09	3.38	3.24	3.43	3.29	3.51	3.37	3.60	3.46	
43	2.66	2.55	2.87	2.76	3.12	3.00	3.24	3.11	3.28	3.15	3.35	3.22	3.42	3.28	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 20 (m³/min)	-19.8	-20	2.32	2.32	2.32	2.32
-17.8	-18		2.47	2.47	2.47	2.47	2.47	
-15.7	-16		2.62	2.62	2.62	2.62	2.62	
-13.7	-14		2.77	2.77	2.77	2.77	2.77	
-11.7	-12		2.92	2.92	2.92	2.92	2.92	
-9.6	-10		3.07	3.07	3.07	3.07	3.07	
-7.5	-8		3.25	3.25	3.25	3.25	3.25	
-5.5	-6		3.44	3.44	3.44	3.44	3.44	
-3.4	-4		3.56	3.56	3.55	3.52	3.48	
-1.3	-2		3.68	3.67	3.66	3.59	3.52	
0.8	0		3.88	3.83	3.77	3.64	3.50	
3.9	3		4.21	4.06	3.91	3.69	3.47	
7.0	6		4.60	4.30	4.00	3.72	3.44	
10.1	9		4.57	4.28	3.99	3.70	3.41	
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 18 (m³/min)	10			2.89	2.77	3.46	3.32	3.74	3.51	3.98	3.54	4.46	3.85	4.63	3.77
	12			2.89	2.77	3.46	3.32	3.74	3.51	3.98	3.54	4.44	3.85	4.61	3.77
	14			2.89	2.77	3.46	3.32	3.74	3.51	3.97	3.53	4.43	3.83	4.59	3.76
	16			2.89	2.77	3.46	3.32	3.74	3.51	3.96	3.53	4.41	3.83	4.57	3.76
	18			2.89	2.77	3.46	3.32	3.74	3.51	3.96	3.53	4.39	3.82	4.55	3.75
	20			2.89	2.77	3.46	3.32	3.74	3.51	3.95	3.53	4.38	3.82	4.53	3.71
	22			2.89	2.77	3.46	3.32	3.74	3.51	3.94	3.52	4.32	3.80	4.47	3.69
	24			2.89	2.77	3.46	3.32	3.74	3.51	3.92	3.52	4.27	3.79	4.41	3.68
	26			2.88	2.76	3.44	3.30	3.71	3.50	3.87	3.50	4.20	3.73	4.34	3.66
	28	2.61	2.51	2.88	2.76	3.42	3.28	3.67	3.48	3.83	3.49	4.13	3.71	4.27	3.64
	30	2.61	2.51	2.87	2.76	3.40	3.26	3.64	3.47	3.78	3.46	4.07	3.70	4.21	3.63
	32	2.61	2.51	2.87	2.76	3.37	3.24	3.60	3.46	3.74	3.45	4.01	3.68	4.14	3.61
	34	2.61	2.51	2.86	2.75	3.36	3.23	3.55	3.41	3.68	3.43	3.92	3.65	4.06	3.59
	35	2.61	2.51	2.85	2.74	3.35	3.22	3.53	3.39	3.65	3.42	3.88	3.64	4.02	3.58
36	2.61	2.51	2.85	2.74	3.33	3.20	3.51	3.37	3.61	3.41	3.81	3.62	3.94	3.56	
38	2.61	2.51	2.84	2.73	3.28	3.15	3.48	3.34	3.54	3.38	3.67	3.52	3.78	3.52	
39	2.61	2.51	2.84	2.73	3.25	3.12	3.46	3.32	3.51	3.37	3.60	3.46	3.70	3.49	
41	2.61	2.51	2.83	2.72	3.15	3.02	3.32	3.19	3.36	3.23	3.44	3.30	3.53	3.39	
43	2.61	2.51	2.82	2.71	3.06	2.94	3.18	3.05	3.21	3.08	3.28	3.15	3.36	3.23	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 18 (m³/min)	-19.8	-20	2.27	2.27	2.27	2.27
-17.8	-18		2.42	2.42	2.42	2.42	2.42	
-15.7	-16		2.57	2.57	2.57	2.57	2.57	
-13.7	-14		2.71	2.71	2.71	2.71	2.71	
-11.7	-12		2.86	2.86	2.86	2.86	2.86	
-9.6	-10		3.01	3.01	3.01	3.01	3.01	
-7.5	-8		3.19	3.19	3.19	3.19	3.19	
-5.5	-6		3.37	3.37	3.37	3.37	3.37	
-3.4	-4		3.49	3.48	3.48	3.44	3.41	
-1.3	-2		3.61	3.60	3.59	3.52	3.45	
0.8	0		3.80	3.75	3.69	3.56	3.43	
3.9	3		4.13	3.98	3.83	3.62	3.40	
7.0	6		4.51	4.21	3.92	3.65	3.37	
10.1	9		4.48	4.19	3.91	3.62	3.34	
13.2	12	4.45	4.17	3.88	3.60	3.31		
16.9	15.5	4.41	4.13	3.85	3.56	3.28		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 16 (m³/min)	10			2.77	2.66	3.31	3.18	3.58	3.26	3.81	3.28	4.27	3.56	4.43	3.49
	12			2.77	2.66	3.31	3.18	3.58	3.26	3.81	3.28	4.25	3.55	4.41	3.48
	14			2.77	2.66	3.31	3.18	3.58	3.26	3.80	3.27	4.24	3.55	4.40	3.48
	16			2.77	2.66	3.31	3.18	3.58	3.26	3.80	3.27	4.22	3.54	4.38	3.48
	18			2.77	2.66	3.31	3.18	3.58	3.26	3.79	3.27	4.21	3.54	4.36	3.47
	20			2.77	2.66	3.31	3.18	3.58	3.26	3.79	3.27	4.19	3.53	4.34	3.47
	22			2.77	2.66	3.31	3.18	3.58	3.26	3.77	3.26	4.14	3.52	4.28	3.45
	24			2.76	2.65	3.31	3.18	3.58	3.26	3.75	3.26	4.09	3.51	4.22	3.43
	26			2.76	2.65	3.29	3.16	3.55	3.25	3.71	3.25	4.02	3.49	4.15	3.42
	28	2.50	2.40	2.76	2.65	3.28	3.15	3.52	3.24	3.66	3.23	3.96	3.47	4.09	3.40
	30	2.50	2.40	2.75	2.64	3.25	3.12	3.48	3.22	3.62	3.22	3.90	3.45	4.03	3.38
	32	2.50	2.40	2.74	2.63	3.23	3.10	3.45	3.21	3.58	3.20	3.84	3.43	3.97	3.37
	34	2.50	2.40	2.74	2.63	3.22	3.09	3.40	3.20	3.52	3.19	3.76	3.41	3.89	3.34
	35	2.50	2.40	2.73	2.62	3.21	3.08	3.38	3.19	3.49	3.18	3.72	3.39	3.84	3.32
36	2.50	2.40	2.73	2.62	3.19	3.06	3.36	3.18	3.46	3.17	3.65	3.37	3.77	3.30	
38	2.50	2.40	2.72	2.61	3.14	3.01	3.33	3.17	3.39	3.14	3.52	3.33	3.62	3.26	
39	2.50	2.40	2.72	2.61	3.11	2.99	3.31	3.17	3.36	3.13	3.45	3.30	3.55	3.24	
41	2.50	2.40	2.71	2.60	3.02	2.90	3.18	3.05	3.22	3.08	3.30	3.17	3.38	3.18	
43	2.50	2.40	2.70	2.59	2.93	2.81	3.04	2.92	3.06	2.96	3.14	3.01	3.21	3.08	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 16 (m³/min)	-19.8	-20	2.18	2.18	2.18	2.18
-17.8	-18		2.32	2.32	2.32	2.32	2.32	
-15.7	-16		2.46	2.46	2.46	2.46	2.46	
-13.7	-14		2.60	2.60	2.60	2.60	2.60	
-11.7	-12		2.74	2.74	2.74	2.74	2.74	
-9.6	-10		2.88	2.88	2.88	2.88	2.88	
-7.5	-8		3.06	3.06	3.06	3.06	3.06	
-5.5	-6		3.23	3.23	3.23	3.23	3.23	
-3.4	-4		3.35	3.34	3.34	3.30	3.27	
-1.3	-2		3.46	3.45	3.44	3.37	3.31	
0.8	0		3.65	3.60	3.54	3.42	3.29	
3.9	3		3.96	3.82	3.68	3.47	3.26	
7.0	6		4.32	4.04	3.76	3.50	3.23	
10.1	9		4.					

Model **FDT45KXE6F**

Cooling mode

(kW)

Heating mode

(kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 20 (m³/min)	10			3.69	3.54	4.41	4.04	4.77	4.10	5.07	4.13	5.68	4.50	5.90	4.40
	12			3.69	3.54	4.41	4.04	4.77	4.10	5.07	4.13	5.66	4.49	5.88	4.39
	14			3.69	3.54	4.41	4.04	4.77	4.10	5.06	4.13	5.64	4.48	5.85	4.38
	16			3.69	3.54	4.41	4.04	4.77	4.10	5.05	4.12	5.62	4.47	5.83	4.38
	18			3.69	3.54	4.41	4.04	4.77	4.10	5.05	4.12	5.60	4.46	5.80	4.37
	20			3.69	3.54	4.41	4.04	4.77	4.10	5.04	4.12	5.58	4.45	5.78	4.36
	22			3.68	3.53	4.41	4.04	4.77	4.10	5.02	4.12	5.51	4.44	5.70	4.33
	24			3.68	3.53	4.41	4.04	4.77	4.10	4.99	4.11	5.44	4.42	5.62	4.31
	26			3.68	3.53	4.39	4.03	4.73	4.09	4.93	4.09	5.35	4.38	5.53	4.28
	28	3.33	3.20	3.67	3.52	4.37	4.03	4.68	4.07	4.88	4.07	5.27	4.35	5.44	4.25
	30	3.33	3.20	3.66	3.51	4.33	4.00	4.64	4.05	4.82	4.05	5.19	4.32	5.36	4.23
	32	3.33	3.20	3.65	3.50	4.30	3.99	4.59	4.03	4.76	4.02	5.11	4.30	5.28	4.20
	34	3.33	3.20	3.64	3.49	4.28	3.98	4.53	4.01	4.69	4.00	5.00	4.25	5.17	4.17
	35	3.33	3.20	3.64	3.49	4.28	3.98	4.50	4.00	4.65	3.99	4.95	4.24	5.12	4.16
36	3.33	3.20	3.63	3.48	4.24	3.97	4.48	4.00	4.60	3.97	4.86	4.21	5.02	4.12	
38	3.33	3.20	3.62	3.48	4.18	3.95	4.43	3.97	4.52	3.94	4.68	4.15	4.82	4.07	
39	3.33	3.20	3.62	3.48	4.15	3.94	4.41	3.96	4.47	3.92	4.59	4.12	4.72	4.03	
41	3.33	3.20	3.61	3.47	4.02	3.86	4.23	3.89	4.28	3.85	4.39	4.05	4.50	3.93	
43	3.33	3.20	3.59	3.45	3.90	3.74	4.05	3.83	4.09	3.78	4.18	3.96	4.28	3.87	

Air flow	Outdoor air temperature		Indoor air temperature						
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
P-Hi 20 (m³/min)	-19.8	-20	2.90	2.90	2.90	2.90	2.90		
	-17.8	-18	3.09	3.09	3.09	3.09	3.09		
	-15.7	-16	3.27	3.27	3.27	3.27	3.27		
	-13.7	-14	3.46	3.46	3.46	3.46	3.46		
	-11.7	-12	3.65	3.65	3.65	3.65	3.65		
	-9.6	-10	3.83	3.83	3.83	3.83	3.83		
	-7.5	-8	4.07	4.07	4.07	4.07	4.07		
	-5.5	-6	4.30	4.30	4.30	4.30	4.30		
	-3.4	-4	4.45	4.44	4.44	4.39	4.35		
	-1.3	-2	4.60	4.59	4.58	4.49	4.40		
	0.8	0	4.85	4.78	4.71	4.54	4.38		
	3.9	3	5.26	5.08	4.89	4.61	4.34		
	7.0	6	5.75	5.38	5.00	4.65	4.30		
	10.1	9	5.71	5.35	4.98	4.62	4.26		
13.2	12	5.68	5.31	4.95	4.59	4.23			
16.9	15.5	5.63	5.27	4.91	4.54	4.18			

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 18 (m³/min)	10			3.62	3.37	4.33	3.80	4.69	3.88	4.98	3.90	5.58	4.24	5.80	4.15
	12			3.62	3.37	4.33	3.80	4.69	3.88	4.98	3.90	5.56	4.23	5.77	4.14
	14			3.62	3.37	4.33	3.80	4.69	3.88	4.97	3.90	5.54	4.23	5.75	4.13
	16			3.62	3.37	4.33	3.80	4.69	3.88	4.96	3.90	5.52	4.21	5.72	4.12
	18			3.62	3.37	4.33	3.80	4.69	3.88	4.96	3.90	5.50	4.21	5.70	4.12
	20			3.62	3.37	4.33	3.80	4.69	3.88	4.95	3.89	5.48	4.20	5.67	4.10
	22			3.62	3.37	4.33	3.80	4.69	3.88	4.93	3.89	5.41	4.18	5.60	4.08
	24			3.61	3.36	4.33	3.80	4.69	3.88	4.90	3.88	5.34	4.15	5.52	4.06
	26			3.61	3.36	4.31	3.80	4.64	3.85	4.85	3.86	5.26	4.13	5.43	4.03
	28	3.27	3.14	3.61	3.36	4.29	3.79	4.60	3.84	4.79	3.84	5.18	4.09	5.35	4.00
	30	3.27	3.14	3.60	3.36	4.25	3.77	4.55	3.82	4.73	3.81	5.10	4.07	5.27	3.97
	32	3.27	3.14	3.59	3.36	4.22	3.76	4.51	3.81	4.68	3.80	5.02	4.04	5.19	3.95
	34	3.27	3.14	3.58	3.35	4.21	3.76	4.45	3.78	4.60	3.76	4.91	4.00	5.08	3.91
	35	3.27	3.14	3.57	3.35	4.20	3.75	4.42	3.77	4.57	3.75	4.86	3.99	5.03	3.90
36	3.27	3.14	3.57	3.35	4.17	3.74	4.40	3.76	4.52	3.74	4.77	3.95	4.93	3.87	
38	3.27	3.14	3.56	3.35	4.10	3.71	4.35	3.75	4.43	3.71	4.60	3.89	4.73	3.81	
39	3.27	3.14	3.55	3.34	4.07	3.70	4.33	3.74	4.39	3.69	4.51	3.87	4.64	3.77	
41	3.27	3.14	3.54	3.34	3.95	3.65	4.15	3.67	4.21	3.62	4.31	3.80	4.42	3.68	
43	3.27	3.14	3.53	3.33	3.83	3.61	3.98	3.60	4.02	3.56	4.11	3.71	4.20	3.62	

Air flow	Outdoor air temperature		Indoor air temperature						
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
Hi 18 (m³/min)	-19.8	-20	2.86	2.86	2.86	2.86	2.86		
	-17.8	-18	3.04	3.04	3.04	3.04	3.04		
	-15.7	-16	3.23	3.23	3.23	3.23	3.23		
	-13.7	-14	3.41	3.41	3.41	3.41	3.41		
	-11.7	-12	3.60	3.60	3.60	3.60	3.60		
	-9.6	-10	3.78	3.78	3.78	3.78	3.78		
	-7.5	-8	4.01	4.01	4.01	4.01	4.01		
	-5.5	-6	4.24	4.24	4.24	4.24	4.24		
	-3.4	-4	4.39	4.38	4.38	4.33	4.29		
	-1.3	-2	4.54	4.52	4.51	4.42	4.34		
	0.8	0	4.78	4.71	4.65	4.48	4.31		
	3.9	3	5.19	5.00	4.82	4.55	4.28		
	7.0	6	5.67	5.30	4.93	4.58	4.24		
	10.1	9	5.63	5.27	4.91	4.56	4.20		
13.2	12	5.60	5.24	4.88	4.52	4.17			
16.9	15.5	5.55	5.19	4.84	4.48	4.12			

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 16 (m³/min)	10			3.51	3.14	4.19	3.54	4.54	3.61	4.83	3.65	5.41	3.94	5.61	3.86
	12			3.51	3.14	4.19	3.54	4.54	3.61	4.82	3.64	5.39	3.94	5.59	3.85
	14			3.51	3.14	4.19	3.54	4.54	3.61	4.81	3.64	5.37	3.93	5.57	3.85
	16			3.51	3.14	4.19	3.54	4.54	3.61	4.80	3.64	5.35	3.93	5.54	3.84
	18			3.51	3.14	4.19	3.54	4.54	3.61	4.80	3.64	5.33	3.92	5.52	3.84
	20			3.51	3.14	4.19	3.54	4.54	3.61	4.79	3.63	5.31	3.91	5.49	3.83
	22			3.50	3.13	4.19	3.54	4.54	3.61	4.77	3.63	5.24	3.89	5.42	3.80
	24			3.50	3.13	4.19	3.54	4.54	3.61	4.75	3.62	5.17	3.86	5.34	3.78
	26			3.50	3.13	4.17	3.54	4.49	3.59	4.69	3.60	5.09	3.84	5.26	3.75
	28	3.17	3.04	3.49	3.13	4.15	3.52	4.45	3.58	4.64	3.58	5.01	3.81	5.18	3.71
	30	3.17	3.04	3.48	3.13	4.12	3.51	4.41	3.57	4.58	3.56	4.94	3.79	5.10	3.69
	32	3.17	3.04	3.48	3.13	4.09	3.50	4.37	3.54	4.53	3.54	4.86	3.76	5.02	3.67
	34	3.17	3.04	3.46	3.12	4.07	3.50	4.31	3.52	4.46	3.51	4.76	3.73	4.92	3.64
	35	3.17	3.04	3.46	3.12	4.07	3.50	4.28	3.51	4.42	3.50	4.70	3.70	4.87	3.62
36	3.17	3.04	3.45	3.11	4.04	3.48	4.26	3.51	4.38	3.48	4.62	3.68	4.77	3.59	
38	3.17	3.04	3.45	3.11	3.97	3.45	4.22	3.48	4.29	3.45	4.45	3.62	4.58	3.53	
39	3.17	3.04	3.44	3.11	3.94	3.44	4.19	3.48	4.25	3.43	4.37	3.58	4.49	3.50	
41	3.17	3.04	3.43	3.11	3.83	3.39	4.02	3.41	4.07	3.37	4.17	3.52	4.28	3.41	
43	3.17	3.04	3.42	3.10	3.71	3.35	3.85	3.34	3.89	3.30	3.98	3.43	4.07	3.35	

Air flow	Outdoor air temperature		Indoor air temperature						
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
Me 16 (m³/min)	-19.8	-20	2.76	2.76	2.76	2.76	2.76		
	-17.8	-18	2.93	2.93	2.93	2.93	2.93		
	-15.7	-16	3.11	3.11	3.11	3.11	3.11		
	-13.7	-14	3.29	3.29	3.29	3.29	3.29		
	-11.7	-12	3.46	3.46	3.46	3.46	3.46		
	-9.6	-10	3.64	3.64	3.64	3.64	3.64		
	-7.5	-8	3.86	3.86	3.86	3.86	3.86		
	-5.5	-6	4.09	4.09	4.09	4.09	4.09		
	-3.4	-4	4.23	4.22	4.22	4.17	4.13		
	-1.3	-2	4.37	4.36	4.35	4.26	4.18		
	0.8	0	4.61	4.54	4.48	4.32	4.16		
	3.9	3	5.00	4.82	4				

Model **FDT56KXE6F** Cooling mode (kW) Heating mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 20 (m³/min)	10			4.59	4.26	5.49	4.81	5.94	4.92	6.32	4.96	7.07	5.34	7.35	5.23
	12			4.59	4.26	5.49	4.81	5.94	4.92	6.31	4.95	7.05	5.34	7.31	5.22
	14			4.59	4.26	5.49	4.81	5.94	4.92	6.30	4.95	7.02	5.33	7.28	5.21
	16			4.59	4.26	5.49	4.81	5.94	4.92	6.29	4.95	7.00	5.32	7.25	5.20
	18			4.59	4.26	5.49	4.81	5.94	4.92	6.28	4.94	6.97	5.31	7.22	5.19
	20			4.59	4.26	5.49	4.81	5.94	4.92	6.27	4.94	6.95	5.30	7.19	5.18
	22			4.58	4.25	5.49	4.81	5.94	4.92	6.24	4.93	6.86	5.27	7.09	5.15
	24			4.58	4.25	5.48	4.80	5.94	4.92	6.21	4.92	6.77	5.25	6.99	5.12
	26			4.57	4.25	5.46	4.80	5.88	4.88	6.14	4.89	6.66	5.21	6.88	5.09
	28	4.14	3.97	4.57	4.25	5.43	4.79	5.82	4.84	6.07	4.87	6.56	5.18	6.78	5.06
	30	4.14	3.97	4.56	4.24	5.39	4.77	5.77	4.82	6.00	4.81	6.46	5.15	6.67	5.03
	32	4.14	3.97	4.55	4.24	5.35	4.76	5.71	4.80	5.93	4.79	6.36	5.12	6.57	5.00
	34	4.14	3.97	4.53	4.23	5.33	4.75	5.64	4.78	5.83	4.76	6.22	5.07	6.44	4.97
	35	4.14	3.97	4.52	4.23	5.32	4.74	5.60	4.76	5.79	4.74	6.16	5.05	6.37	4.94
36	4.14	3.97	4.52	4.23	5.28	4.73	5.57	4.75	5.73	4.72	6.05	5.02	6.25	4.90	
38	4.14	3.97	4.51	4.22	5.20	4.70	5.52	4.73	5.62	4.68	5.82	4.93	6.00	4.83	
39	4.14	3.97	4.50	4.22	5.16	4.69	5.49	4.72	5.56	4.66	5.71	4.90	5.87	4.79	
41	4.14	3.97	4.49	4.22	5.00	4.63	5.26	4.64	5.33	4.59	5.46	4.81	5.60	4.70	
43	4.14	3.97	4.47	4.21	4.85	4.57	5.04	4.56	5.10	4.51	5.21	4.73	5.32	4.62	

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB
P-Hi 20 (m³/min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	
	-3.4	-4	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	
	-1.3	-2	5.80	5.78	5.78	5.76	5.76	5.65	5.54	5.54	5.54	5.54	5.54	5.54	
	0.8	0	6.11	6.02	5.94	5.73	5.73	5.67	5.51	5.51	5.51	5.51	5.51	5.51	
	3.9	3	6.63	6.39	6.16	5.81	5.81	5.67	5.51	5.51	5.51	5.51	5.51	5.51	
	7.0	6	7.25	6.77	6.30	5.86	5.86	5.69	5.54	5.54	5.54	5.54	5.54	5.54	
	10.1	9	7.20	6.74	6.28	5.82	5.82	5.62	5.47	5.47	5.47	5.47	5.47	5.47	
13.2	12	7.15	6.69	6.24	5.78	5.78	5.56	5.41	5.41	5.41	5.41	5.41	5.41		
16.9	15.5	7.10	6.64	6.18	5.73	5.73	5.50	5.35	5.35	5.35	5.35	5.35	5.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 18 (m³/min)	10			4.51	4.03	5.39	4.55	5.83	4.62	6.20	4.67	6.95	5.08	7.21	4.93
	12			4.51	4.03	5.39	4.55	5.83	4.62	6.19	4.66	6.92	5.04	7.18	4.92
	14			4.51	4.03	5.39	4.55	5.83	4.62	6.19	4.66	6.90	5.03	7.15	4.91
	16			4.51	4.03	5.39	4.55	5.83	4.62	6.18	4.66	6.87	5.02	7.12	4.91
	18			4.51	4.03	5.39	4.55	5.83	4.62	6.17	4.66	6.85	5.02	7.09	4.90
	20			4.51	4.03	5.39	4.55	5.83	4.62	6.16	4.65	6.82	5.01	7.06	4.89
	22			4.50	4.02	5.39	4.55	5.83	4.62	6.13	4.64	6.74	4.98	6.96	4.86
	24			4.50	4.02	5.39	4.55	5.83	4.62	6.10	4.63	6.65	4.95	6.87	4.83
	26			4.49	4.02	5.36	4.54	5.78	4.61	6.03	4.61	6.54	4.91	6.76	4.80
	28	4.07	3.91	4.49	4.02	5.34	4.53	5.72	4.58	5.96	4.58	6.44	4.88	6.65	4.76
	30	4.07	3.91	4.48	4.02	5.29	4.51	5.67	4.57	5.89	4.56	6.34	4.85	6.56	4.74
	32	4.07	3.91	4.47	4.01	5.25	4.49	5.61	4.54	5.82	4.53	6.24	4.82	6.46	4.71
	34	4.07	3.91	4.45	4.00	5.23	4.49	5.54	4.52	5.73	4.50	6.11	4.77	6.32	4.67
	35	4.07	3.91	4.44	4.00	5.23	4.49	5.50	4.50	5.68	4.48	6.05	4.75	6.26	4.64
36	4.07	3.91	4.44	4.00	5.19	4.47	5.47	4.49	5.63	4.47	5.94	4.71	6.13	4.60	
38	4.07	3.91	4.43	3.99	5.11	4.43	5.42	4.47	5.52	4.43	5.72	4.64	5.89	4.52	
39	4.07	3.91	4.42	3.99	5.07	4.42	5.39	4.46	5.46	4.41	5.61	4.60	5.77	4.49	
41	4.07	3.91	4.41	3.99	4.92	4.36	5.17	4.37	5.23	4.32	5.36	4.52	5.50	4.41	
43	4.07	3.91	4.39	3.96	4.76	4.30	4.95	4.30	5.00	4.24	5.11	4.43	5.23	4.32	

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB
Hi 18 (m³/min)	-19.8	-20	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	
	-17.8	-18	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	
	-15.7	-16	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	
	-13.7	-14	4.26	4.26	4.26	4.26	4.26	4.26	4.26	4.26	4.26	4.26	4.26	4.26	
	-11.7	-12	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	
	-9.6	-10	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72	
	-7.5	-8	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	
	-5.5	-6	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	
	-3.4	-4	5.48	5.47	5.47	5.41	5.41	5.36	5.36	5.36	5.36	5.36	5.36	5.36	
	-1.3	-2	5.67	5.65	5.65	5.64	5.64	5.53	5.53	5.53	5.53	5.53	5.53	5.53	
	0.8	0	5.98	5.89	5.81	5.60	5.60	5.39	5.39	5.39	5.39	5.39	5.39	5.39	
	3.9	3	6.48	6.25	6.02	5.68	5.68	5.34	5.34	5.34	5.34	5.34	5.34	5.34	
	7.0	6	7.08	6.62	6.16	5.73	5.73	5.30	5.30	5.30	5.30	5.30	5.30	5.30	
	10.1	9	7.04	6.59	6.14	5.69	5.69	5.25	5.25	5.25	5.25	5.25	5.25	5.25	
13.2	12	6.99	6.55	6.10	5.65	5.65	5.21	5.21	5.21	5.21	5.21	5.21	5.21		
16.9	15.5	6.94	6.49	6.04	5.60	5.60	5.15	5.15	5.15	5.15	5.15	5.15	5.15		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 16 (m³/min)	10			4.31	3.74	5.15	4.22	5.58	4.31	5.93	4.35	6.64	4.69	6.90	4.58
	12			4.31	3.74	5.15	4.22	5.58	4.31	5.92	4.34	6.62	4.68	6.87	4.57
	14			4.31	3.74	5.15	4.22	5.58	4.31	5.92	4.34	6.60	4.67	6.84	4.56
	16			4.31	3.74	5.15	4.22	5.58	4.31	5.91	4.34	6.57	4.66	6.81	4.55
	18			4.31	3.74	5.15	4.22	5.58	4.31	5.90	4.34	6.55	4.66	6.78	4.54
	20			4.31	3.74	5.15	4.22	5.58	4.31	5.89	4.33	6.52	4.65	6.75	4.53
	22			4.31	3.74	5.15	4.22	5.58	4.31	5.86	4.32	6.44	4.62	6.66	4.50
	24			4.30	3.73	5.15	4.22	5.58	4.31	5.84	4.31	6.36	4.59	6.57	4.48
	26			4.30	3.73	5.13	4.21	5.52	4.28	5.77	4.29	6.26	4.56	6.47	4.45
	28	3.89	3.69	4.29	3.73	5.10	4.20	5.47	4.26	5.70	4.26	6.16	4.52	6.36	4.41
	30	3.89	3.69	4.28											

Model **FDT71KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 28 (m³/min)	10			5.82	5.47	6.96	6.17	7.53	6.29	8.01	6.34	8.97	6.87	9.31	6.68
	12			5.82	5.47	6.96	6.17	7.53	6.29	8.00	6.33	8.94	6.86	9.27	6.67
	14			5.82	5.47	6.96	6.17	7.53	6.29	7.99	6.33	8.90	6.85	9.23	6.65
	16			5.82	5.47	6.96	6.17	7.53	6.29	7.97	6.32	8.87	6.84	9.19	6.64
	18			5.82	5.47	6.96	6.17	7.53	6.29	7.96	6.32	8.84	6.83	9.15	6.63
	20			5.82	5.47	6.96	6.17	7.53	6.29	7.95	6.32	8.81	6.82	9.11	6.62
	22			5.81	5.47	6.95	6.16	7.53	6.29	7.92	6.31	8.70	6.74	8.99	6.59
	24			5.80	5.46	6.95	6.16	7.53	6.29	7.88	6.29	8.58	6.71	8.86	6.55
	26			5.80	5.46	6.92	6.15	7.46	6.25	7.79	6.26	8.45	6.67	8.73	6.52
	28	5.25	5.04	5.79	5.46	6.89	6.14	7.38	6.22	7.69	6.23	8.31	6.62	8.59	6.48
	30	5.25	5.04	5.78	5.46	6.83	6.12	7.31	6.20	7.60	6.19	8.19	6.59	8.46	6.44
	32	5.25	5.04	5.77	5.45	6.78	6.10	7.24	6.17	7.51	6.16	8.06	6.55	8.33	6.41
	34	5.25	5.04	5.75	5.44	6.76	6.10	7.15	6.13	7.39	6.12	7.89	6.50	8.16	6.36
	35	5.25	5.04	5.74	5.44	6.75	6.09	7.10	6.11	7.33	6.08	7.80	6.47	8.08	6.33
36	5.25	5.04	5.73	5.44	6.69	6.07	7.06	6.10	7.26	6.06	7.66	6.41	7.92	6.28	
38	5.25	5.04	5.72	5.43	6.59	6.02	6.99	6.07	7.12	6.01	7.38	6.33	7.61	6.18	
39	5.25	5.04	5.71	5.43	6.54	6.00	6.96	6.06	7.05	5.99	7.24	6.27	7.45	6.14	
41	5.25	5.04	5.69	5.42	6.35	5.94	6.67	5.95	6.76	5.88	6.92	6.16	7.10	6.03	
43	5.25	5.04	5.67	5.41	6.15	5.85	6.39	5.84	6.46	5.77	6.60	6.07	6.75	5.91	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
P-Hi 28 (m³/min)	-19.8	-20	4.64	4.64	4.64	4.64	4.64
	-17.8	-18	4.94	4.94	4.94	4.94	4.94
	-15.7	-16	5.24	5.24	5.24	5.24	5.24
	-13.7	-14	5.54	5.54	5.54	5.54	5.54
	-11.7	-12	5.83	5.83	5.83	5.83	5.83
	-9.6	-10	6.13	6.13	6.13	6.13	6.13
	-7.5	-8	6.51	6.51	6.51	6.51	6.51
	-5.5	-6	6.88	6.88	6.88	6.88	6.88
	-3.4	-4	7.12	7.11	7.10	7.03	6.96
	-1.3	-2	7.36	7.34	7.32	7.18	7.04
	0.8	0	7.76	7.65	7.54	7.27	7.00
	3.9	3	8.42	8.12	7.82	7.38	6.94
	7.0	6	9.20	8.60	8.00	7.44	6.88
	10.1	9	9.14	8.56	7.97	7.40	6.82
13.2	12	9.08	8.50	7.92	7.34	6.76	
16.9	15.5	9.01	8.43	7.85	7.27	6.69	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 18 (m³/min)	10			5.66	4.36	6.76	4.94	7.31	5.06	7.78	5.14	8.72	5.55	9.05	5.39
	12			5.66	4.36	6.76	4.94	7.31	5.06	7.77	5.14	8.68	5.54	9.01	5.38
	14			5.66	4.36	6.76	4.94	7.31	5.06	7.76	5.14	8.65	5.52	8.97	5.37
	16			5.66	4.36	6.76	4.94	7.31	5.06	7.75	5.13	8.62	5.51	8.93	5.33
	18			5.66	4.36	6.76	4.94	7.31	5.06	7.74	5.12	8.59	5.50	8.89	5.32
	20			5.66	4.36	6.76	4.94	7.31	5.06	7.73	5.12	8.56	5.48	8.86	5.31
	22			5.65	4.35	6.76	4.94	7.31	5.06	7.69	5.10	8.45	5.42	8.73	5.27
	24			5.64	4.35	6.76	4.94	7.31	5.06	7.66	5.09	8.34	5.38	8.61	5.24
	26			5.64	4.35	6.72	4.92	7.25	5.04	7.57	5.05	8.21	5.34	8.48	5.19
	28	5.11	4.29	5.63	4.35	6.69	4.90	7.18	5.00	7.48	5.01	8.08	5.29	8.35	5.14
	30	5.11	4.29	5.62	4.34	6.64	4.87	7.11	4.98	7.39	4.97	7.96	5.24	8.22	5.09
	32	5.11	4.29	5.60	4.33	6.59	4.85	7.04	4.95	7.30	4.94	7.83	5.19	8.10	5.05
	34	5.11	4.29	5.58	4.32	6.57	4.84	6.95	4.90	7.19	4.89	7.67	5.13	7.93	4.98
	35	5.11	4.29	5.58	4.32	6.56	4.84	6.90	4.89	7.13	4.86	7.58	5.09	7.85	4.96
36	5.11	4.29	5.57	4.32	6.51	4.82	6.87	4.87	7.06	4.84	7.45	5.04	7.70	4.91	
38	5.11	4.29	5.55	4.31	6.41	4.78	6.80	4.82	6.92	4.76	7.18	4.92	7.39	4.79	
39	5.11	4.29	5.55	4.31	6.36	4.76	6.76	4.81	6.85	4.74	7.04	4.88	7.24	4.75	
41	5.11	4.29	5.53	4.31	6.17	4.67	6.49	4.71	6.57	4.63	6.73	4.77	6.90	4.63	
43	5.11	4.29	5.51	4.29	5.98	4.59	6.21	4.59	6.28	4.52	6.41	4.65	6.56	4.51	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Hi 18 (m³/min)	-19.8	-20	4.52	4.52	4.52	4.52	4.52
	-17.8	-18	4.82	4.82	4.82	4.82	4.82
	-15.7	-16	5.11	5.11	5.11	5.11	5.11
	-13.7	-14	5.40	5.40	5.40	5.40	5.40
	-11.7	-12	5.69	5.69	5.69	5.69	5.69
	-9.6	-10	5.98	5.98	5.98	5.98	5.98
	-7.5	-8	6.34	6.34	6.34	6.34	6.34
	-5.5	-6	6.71	6.71	6.71	6.71	6.71
	-3.4	-4	6.94	6.93	6.92	6.85	6.79
	-1.3	-2	7.18	7.16	7.14	7.00	6.86
	0.8	0	7.57	7.46	7.35	7.09	6.83
	3.9	3	8.21	7.92	7.62	7.20	6.77
	7.0	6	8.97	8.39	7.80	7.25	6.71
	10.1	9	8.91	8.34	7.77	7.21	6.65
13.2	12	8.85	8.29	7.72	7.16	6.59	
16.9	15.5	8.78	8.22	7.65	7.09	6.52	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 16 (m³/min)	10			5.47	4.12	6.54	4.67	7.07	4.80	7.52	4.87	8.43	5.25	8.75	5.11
	12			5.47	4.12	6.54	4.67	7.07	4.80	7.51	4.87	8.40	5.24	8.71	5.09
	14			5.47	4.12	6.54	4.67	7.07	4.80	7.50	4.86	8.37	5.23	8.67	5.08
	16			5.47	4.12	6.54	4.67	7.07	4.80	7.49	4.86	8.33	5.21	8.64	5.07
	18			5.47	4.12	6.54	4.67	7.07	4.80	7.48	4.85	8.30	5.20	8.60	5.03
	20			5.47	4.12	6.54	4.67	7.07	4.80	7.47	4.85	8.27	5.18	8.56	5.02
	22			5.46	4.11	6.53	4.66	7.07	4.80	7.44	4.84	8.17	5.14	8.44	4.98
	24			5.45	4.11	6.53	4.66	7.07	4.80	7.40	4.82	8.06	5.09	8.33	4.95
	26			5.45	4.11	6.50	4.65	7.00	4.76	7.31	4.78	7.94	5.05	8.20	4.89
	28	4.94	4.05	5.44	4.10	6.47	4.64	6.94	4.74	7.23	4.75	7.81	5.00	8.07	4.85
	30	4.94	4.05	5.43	4.10	6.42	4.61	6.87	4.69	7.14	4.71	7.69	4.95	7.95	4.80
	32	4.94	4.05	5.42	4.10	6.37	4.59	6.80	4.66	7.06	4.65	7.57	4.90	7.83	4.76
	34	4.94	4.05	5.40	4.09	6.35	4.59	6.71	4.63	6.95	4.61	7.41	4.83	7.67	4.70
	35	4.94	4.05	5.39	4.08	6.34	4.58	6.67	4.62	6.89	4.59	7.33	4.80	7.59	4.67
36	4.94	4.05	5.38	4.08	6.29	4.56	6.64	4.60	6.82	4.57	7.20	4.75	7.44	4.60	
38	4.94	4.05	5.37	4.07	6.19	4.51	6.57	4.57	6.69	4.51	6.94	4.64	7.14	4.51	
39	4.94	4.05	5.36	4.07	6.15	4.49	6.54	4.56	6.63	4.48	6.81	4.60	7.00	4.46	
41	4.94	4.05	5.34	4.06	5.96	4.41	6.27	4.44	6.35	4.37	6.50	4.48	6.67	4.35	
43	4.94	4.05	5.32	4.05	5.78	4.33	6.00	4.33	6.07	4.26	6.20	4.37	6.34	4.24	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Me 16 (m³/min)	-19.8	-20	4.36	4.36	4.36	4.36	4.36
	-17.8	-18	4.64	4.64	4.64	4.64	4.64
	-15.7	-16	4.92	4.92	4.92	4.92	4.92
	-13.7	-14	5.20	5.20	5.20	5.20	5.20
	-11.7	-12	5.48	5.48	5.48	5.48	5.48
	-9.6	-10	5.77	5.77	5.77	5.77	5.77
	-7.5	-8	6.12	6.12	6.12	6.12	6.12
	-5.5	-6	6.47	6.47	6.47	6.47	6.47
	-3.4	-4	6.69	6.68	6.67	6.61	6.54
	-1.3	-2	6.92	6.90	6.88	6.75	6.62
	0.8	0	7.29	7.19	7.09	6.83	6.58
	3.9	3	7.91	7.63	7.35	6.94	6.52
	7.0	6	8.65	8.08	7.52	6.99	6.47
	10.1	9	8.				

Model **FDT90KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 37 (m³/min)	10			7.38	7.08	8.82	8.02	9.54	8.15	10.15	8.21	11.37	8.87	11.80	8.69
	12			7.38	7.08	8.82	8.02	9.54	8.15	10.14	8.21	11.33	8.86	11.75	8.67
	14			7.38	7.08	8.82	8.02	9.54	8.15	10.12	8.20	11.29	8.84	11.70	8.66
	16			7.38	7.08	8.82	8.02	9.54	8.15	10.11	8.20	11.25	8.83	11.65	8.65
	18			7.38	7.08	8.82	8.02	9.54	8.15	10.09	8.19	11.20	8.82	11.60	8.63
	20			7.38	7.08	8.82	8.02	9.54	8.15	10.08	8.19	11.16	8.81	11.55	8.62
	22			7.37	7.08	8.82	8.02	9.54	8.15	10.03	8.17	11.02	8.77	11.39	8.57
	24			7.36	7.07	8.81	8.01	9.54	8.15	9.99	8.16	10.88	8.72	11.24	8.53
	26			7.35	7.06	8.77	7.98	9.45	8.10	9.87	8.12	10.71	8.67	11.06	8.49
	28	6.66	6.39	7.34	7.05	8.73	7.97	9.36	8.07	9.75	8.08	10.54	8.62	10.89	8.44
	30	6.66	6.39	7.33	7.04	8.66	7.94	9.27	8.04	9.64	8.02	10.38	8.57	10.73	8.37
	32	6.66	6.39	7.31	7.02	8.60	7.92	9.18	8.01	9.53	7.99	10.22	8.53	10.56	8.33
	34	6.66	6.39	7.28	6.99	8.57	7.91	9.06	7.97	9.37	7.93	10.00	8.44	10.35	8.27
	35	6.66	6.39	7.27	6.98	8.55	7.90	9.00	7.92	9.30	7.91	9.89	8.41	10.24	8.24
36	6.66	6.39	7.26	6.97	8.49	7.88	8.96	7.91	9.21	7.86	9.72	8.36	10.04	8.16	
38	6.66	6.39	7.25	6.96	8.36	7.83	8.87	7.88	9.03	7.80	9.36	8.23	9.64	8.03	
39	6.66	6.39	7.24	6.95	8.29	7.79	8.82	7.86	8.94	7.78	9.18	8.17	9.44	7.98	
41	6.66	6.39	7.21	6.92	8.04	7.70	8.46	7.72	8.56	7.63	8.77	8.03	9.00	7.84	
43	6.66	6.39	7.19	6.90	7.80	7.49	8.10	7.60	8.19	7.51	8.37	7.89	8.56	7.72	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 37 (m³/min)	-19.8	-20	5.80	5.80	5.80	5.80
-17.8	-18		6.17	6.17	6.17	6.17	6.17	
-15.7	-16		6.55	6.55	6.55	6.55	6.55	
-13.7	-14		6.92	6.92	6.92	6.92	6.92	
-11.7	-12		7.29	7.29	7.29	7.29	7.29	
-9.6	-10		7.67	7.67	7.67	7.67	7.67	
-7.5	-8		8.13	8.13	8.13	8.13	8.13	
-5.5	-6		8.60	8.60	8.60	8.60	8.60	
-3.4	-4		9.00	8.99	8.88	8.79	8.70	
-1.3	-2		9.20	9.18	9.15	8.98	8.80	
0.8	0		9.70	9.56	9.43	9.09	8.75	
3.9	3		10.53	10.15	9.78	9.23	8.68	
7.0	6		11.50	10.75	10.00	9.30	8.60	
10.1	9		11.43	10.69	9.96	9.24	8.53	
13.2	12	11.35	10.63	9.90	9.18	8.45		
16.9	15.5	11.26	10.54	9.81	9.09	8.36		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 27 (m³/min)	10			7.15	5.94	8.54	6.70	9.24	6.85	9.83	6.94	11.02	7.50	11.44	7.28
	12			7.15	5.94	8.54	6.70	9.24	6.85	9.82	6.94	10.98	7.49	11.39	7.27
	14			7.15	5.94	8.54	6.70	9.24	6.85	9.81	6.94	10.94	7.48	11.34	7.25
	16			7.15	5.94	8.54	6.70	9.24	6.85	9.79	6.93	10.90	7.46	11.29	7.24
	18			7.15	5.94	8.54	6.70	9.24	6.85	9.78	6.93	10.86	7.41	11.24	7.23
	20			7.15	5.94	8.54	6.70	9.24	6.85	9.77	6.92	10.82	7.40	11.19	7.21
	22			7.14	5.93	8.54	6.70	9.24	6.85	9.72	6.89	10.68	7.35	11.04	7.17
	24			7.13	5.93	8.54	6.70	9.24	6.85	9.68	6.88	10.54	7.31	10.89	7.13
	26			7.12	5.93	8.50	6.69	9.16	6.82	9.56	6.84	10.38	7.26	10.72	7.06
	28	6.45	5.85	7.12	5.93	8.46	6.68	9.07	6.79	9.45	6.79	10.21	7.19	10.55	7.00
	30	6.45	5.85	7.10	5.92	8.39	6.64	8.98	6.75	9.34	6.75	10.05	7.14	10.39	6.96
	32	6.45	5.85	7.08	5.91	8.33	6.61	8.89	6.71	9.23	6.70	9.90	7.08	10.24	6.90
	34	6.45	5.85	7.06	5.90	8.30	6.60	8.78	6.66	9.08	6.65	9.69	7.00	10.02	6.82
	35	6.45	5.85	7.05	5.89	8.28	6.60	8.72	6.64	9.01	6.61	9.59	6.97	9.92	6.79
36	6.45	5.85	7.04	5.88	8.22	6.57	8.68	6.63	8.92	6.58	9.41	6.90	9.73	6.73	
38	6.45	5.85	7.02	5.87	8.10	6.52	8.59	6.58	8.75	6.51	9.07	6.78	9.34	6.60	
39	6.45	5.85	7.01	5.87	8.03	6.49	8.55	6.57	8.66	6.48	8.90	6.71	9.15	6.54	
41	6.45	5.85	6.99	5.86	7.79	6.36	8.20	6.43	8.30	6.34	8.50	6.58	8.72	6.37	
43	6.45	5.85	6.96	5.85	7.55	6.28	7.85	6.27	7.93	6.18	8.11	6.42	8.29	6.25	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 27 (m³/min)	-19.8	-20	5.60	5.60	5.60	5.60
-17.8	-18		5.96	5.96	5.96	5.96	5.96	
-15.7	-16		6.32	6.32	6.32	6.32	6.32	
-13.7	-14		6.68	6.68	6.68	6.68	6.68	
-11.7	-12		7.05	7.05	7.05	7.05	7.05	
-9.6	-10		7.41	7.41	7.41	7.41	7.41	
-7.5	-8		7.86	7.86	7.86	7.86	7.86	
-5.5	-6		8.31	8.31	8.31	8.31	8.31	
-3.4	-4		8.60	8.59	8.57	8.49	8.40	
-1.3	-2		8.89	8.86	8.84	8.67	8.50	
0.8	0		9.37	9.24	9.10	8.78	8.45	
3.9	3		10.17	9.80	9.44	8.91	8.38	
7.0	6		11.11	10.38	9.66	8.98	8.31	
10.1	9		11.04	10.33	9.62	8.93	8.24	
13.2	12	10.96	10.26	9.56	8.86	8.16		
16.9	15.5	10.88	10.18	9.48	8.78	8.08		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 24 (m³/min)	10			6.93	5.62	8.29	6.36	8.97	6.49	9.54	6.60	10.69	7.12	11.10	6.94
	12			6.93	5.62	8.29	6.36	8.97	6.49	9.53	6.59	10.65	7.11	11.05	6.92
	14			6.93	5.62	8.29	6.36	8.97	6.49	9.52	6.59	10.61	7.10	11.00	6.91
	16			6.93	5.62	8.29	6.36	8.97	6.49	9.50	6.58	10.57	7.07	10.95	6.88
	18			6.93	5.62	8.29	6.36	8.97	6.49	9.49	6.57	10.53	7.06	10.91	6.87
	20			6.93	5.62	8.29	6.36	8.97	6.49	9.48	6.56	10.49	7.04	10.86	6.85
	22			6.92	5.61	8.29	6.36	8.97	6.49	9.43	6.52	10.36	6.99	10.71	6.80
	24			6.92	5.61	8.28	6.36	8.97	6.49	9.39	6.51	10.23	6.95	10.56	6.75
	26			6.91	5.61	8.24	6.34	8.88	6.46	9.26	6.47	10.07	6.88	10.40	6.69
	28	6.26	5.54	6.90	5.60	8.21	6.33	8.80	6.43	9.17	6.43	9.91	6.82	10.24	6.63
	30	6.26	5.54	6.89	5.60	8.14	6.29	8.71	6.40	9.06	6.39	9.75	6.75	10.08	6.59
	32	6.26	5.54	6.87	5.59	8.08	6.27	8.63	6.37	8.95	6.35	9.60	6.71	9.93	6.53
	34	6.26	5.54	6.85	5.58	8.05	6.26	8.52	6.32	8.81	6.29	9.40	6.63	9.72	6.46
	35	6.26	5.54	6.84	5.58	8.04	6.26	8.46	6.30	8.74	6.27	9.30	6.60	9.62	6.43
36	6.26	5.54	6.83	5.58	7.98	6.23	8.42	6.28	8.66	6.24	9.13	6.53	9.44	6.33	
38	6.26	5.54	6.81	5.57	7.86	6.18	8.33	6.24	8.49	6.17	8.80	6.39	9.06	6.22	
39	6.26	5.54	6.80	5.56	7.79	6.15	8.29	6.22	8.40	6.14	8.63	6.33	8.88	6.17	
41	6.26	5.54	6.78	5.55	7.56	6.05	7.95	6.09	8.05	5.99	8.25	6.21	8.46	6.04	
43	6.26	5.54	6.75	5.54	7.33	5.95	7.61	5.94	7.70	5.86	7.86	6.07	8.04	5.89	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 24 (m³/min)	-19.8	-20	5.45	5.45	5.45	5.45
-17.8	-18		5.80	5.80	5.80	5.80	5.80	
-15.7	-16		6.15	6.15	6.15	6.15	6.15	
-13.7	-14		6.50	6.50	6.50	6.50	6.50	
-11.7	-12		6.86	6.86	6.86	6.86	6.86	
-9.6	-10		7.21	7.21	7.21	7.21	7.21	
-7.5	-8		7.65	7.65	7.65	7.65	7.65	
-5.5	-6		8.08	8.08	8.08	8.08	8.08	
-3.4	-4		8.37	8.35	8.34	8.26	8.18	
-1.3	-2		8.65	8.62	8.60	8.44	8.27	
0.8	0		9.12	8.99	8.86	8.54	8.23	
3.9	3		9.89	9.54	9.19	8.67</		

Model **FDT112KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature												
	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	
P-Hi 37 (m³/min)	10		9.18	7.92	10.97	8.94	11.87	9.09	12.63	9.23	14.15	9.99	14.69	9.74	
	12		9.18	7.92	10.97	8.94	11.87	9.09	12.61	9.22	14.10	9.95	14.63	9.73	
	14		9.18	7.92	10.97	8.94	11.87	9.09	12.60	9.22	14.05	9.93	14.56	9.69	
	16		9.18	7.92	10.97	8.94	11.87	9.09	12.58	9.21	14.00	9.92	14.50	9.67	
	18		9.18	7.92	10.97	8.94	11.87	9.09	12.56	9.20	13.94	9.90	14.44	9.65	
	20		9.18	7.92	10.97	8.94	11.87	9.09	12.55	9.20	13.89	9.89	14.37	9.63	
	22		9.17	7.92	10.97	8.94	11.87	9.09	12.49	9.18	13.72	9.81	14.18	9.56	
	24		9.15	7.89	10.97	8.94	11.87	9.09	12.43	9.14	13.54	9.76	13.98	9.50	
	26		9.15	7.89	10.92	8.92	11.76	9.05	12.28	9.05	13.33	9.67	13.77	9.42	
	28	8.29	7.81	9.14	7.89	10.86	8.90	11.65	9.01	12.14	9.00	13.11	9.60	13.55	9.36
	30	8.29	7.81	9.12	7.88	10.78	8.85	11.54	8.97	12.00	8.95	12.91	9.52	13.35	9.28
	32	8.29	7.81	9.09	7.87	10.70	8.82	11.42	8.93	11.85	9.20	12.71	9.46	13.15	9.23
	34	8.29	7.81	9.06	7.86	10.66	8.80	11.27	8.87	11.66	8.84	12.45	9.36	12.87	9.08
	35	8.29	7.81	9.05	7.85	10.64	8.80	11.20	8.85	11.57	8.81	12.31	9.25	12.74	9.04
36	8.29	7.81	9.04	7.85	10.56	8.77	11.14	8.83	11.46	8.77	12.09	9.19	12.49	8.97	
38	8.29	7.81	9.02	7.84	10.40	8.71	11.03	8.77	11.24	8.68	11.65	9.05	12.00	8.84	
39	8.29	7.81	9.00	7.83	10.32	8.66	10.98	8.75	11.13	8.64	11.43	8.98	11.75	8.77	
41	8.29	7.81	8.97	7.82	10.01	8.55	10.53	8.58	10.66	8.47	10.92	8.81	11.20	8.60	
43	8.29	7.81	8.94	7.81	9.70	8.42	10.08	8.40	10.19	8.29	10.41	8.64	10.65	8.43	

Heating mode (kW)

Air flow	Outdoor air temperature		Indoor air temperature							
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB			
P-Hi 37 (m³/min)	-19.8	-20	7.25	7.25	7.25	7.25	7.25	7.25	7.25	
	-17.8	-18	7.72	7.72	7.72	7.72	7.72	7.72	7.72	
	-15.7	-16	8.18	8.18	8.18	8.18	8.18	8.18	8.18	
	-13.7	-14	8.65	8.65	8.65	8.65	8.65	8.65	8.65	
	-11.7	-12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	
	-9.6	-10	9.58	9.58	9.58	9.58	9.58	9.58	9.58	
	-7.5	-8	10.17	10.17	10.17	10.17	10.17	10.17	10.17	
	-5.5	-6	10.75	10.75	10.75	10.75	10.75	10.75	10.75	
	-3.4	-4	11.13	11.11	11.09	10.98	10.88			
	-1.3	-2	11.50	11.47	11.44	11.22	11.00			
	0.8	0	12.13	11.95	11.78	11.36	10.94			
	3.9	3	13.16	12.69	12.22	11.53	10.84			
	7.0	6	14.38	13.44	12.50	11.63	10.75			
	10.1	9	14.28	13.37	12.45	11.55	10.66			
13.2	12	14.19	13.28	12.38	11.47	10.56				
16.9	15.5	14.08	13.17	12.27	11.36	10.45				

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature												
	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	
Hi 27 (m³/min)	10		8.89	6.76	10.63	7.64	11.50	7.86	12.24	7.99	13.71	8.62	14.23	8.38	
	12		8.89	6.76	10.63	7.64	11.50	7.86	12.22	7.98	13.66	8.59	14.17	8.36	
	14		8.89	6.76	10.63	7.64	11.50	7.86	12.20	7.98	13.61	8.58	14.11	8.33	
	16		8.89	6.76	10.63	7.64	11.50	7.86	12.19	7.97	13.56	8.56	14.05	8.31	
	18		8.89	6.76	10.63	7.64	11.50	7.86	12.17	7.97	13.51	8.53	13.99	8.29	
	20		8.89	6.76	10.63	7.64	11.50	7.86	12.15	7.96	13.46	8.51	13.92	8.23	
	22		8.88	6.75	10.63	7.64	11.50	7.86	12.10	7.93	13.29	8.44	13.73	8.17	
	24		8.87	6.75	10.62	7.63	11.50	7.86	12.04	7.91	13.12	8.35	13.54	8.12	
	26		8.86	6.75	10.57	7.62	11.39	7.82	11.90	7.84	12.91	8.28	13.34	8.04	
	28	8.03	6.64	8.85	6.74	10.52	7.60	11.28	7.77	11.76	7.78	12.70	8.20	13.13	7.97
	30	8.03	6.64	8.83	6.73	10.44	7.56	11.18	7.73	11.62	7.73	12.51	8.12	12.93	7.89
	32	8.03	6.64	8.81	6.73	10.36	7.53	11.07	7.68	11.48	7.67	12.32	8.05	12.74	7.82
	34	8.03	6.64	8.78	6.71	10.33	7.52	10.92	7.61	11.30	7.59	12.06	7.95	12.47	7.72
	35	8.03	6.64	8.77	6.71	10.31	7.51	10.85	7.55	11.21	7.54	11.93	7.89	12.34	7.68
36	8.03	6.64	8.76	6.70	10.23	7.48	10.80	7.54	11.10	7.48	11.71	7.81	12.10	7.60	
38	8.03	6.64	8.73	6.68	10.07	7.41	10.69	7.49	10.89	7.41	11.28	7.62	11.62	7.41	
39	8.03	6.64	8.72	6.68	10.00	7.38	10.63	7.47	10.78	7.37	11.07	7.55	11.38	7.33	
41	8.03	6.64	8.69	6.66	9.70	7.24	10.20	7.29	10.33	7.18	10.58	7.38	10.85	7.15	
43	8.03	6.64	8.66	6.65	9.40	7.12	9.77	7.11	9.87	7.00	10.09	7.20	10.32	6.97	

Air flow	Outdoor air temperature		Indoor air temperature							
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB			
Hi 27 (m³/min)	-19.8	-20	7.02	7.02	7.02	7.02	7.02	7.02	7.02	
	-17.8	-18	7.47	7.47	7.47	7.47	7.47	7.47	7.47	
	-15.7	-16	7.92	7.92	7.92	7.92	7.92	7.92	7.92	
	-13.7	-14	8.37	8.37	8.37	8.37	8.37	8.37	8.37	
	-11.7	-12	8.82	8.82	8.82	8.82	8.82	8.82	8.82	
	-9.6	-10	9.28	9.28	9.28	9.28	9.28	9.28	9.28	
	-7.5	-8	9.84	9.84	9.84	9.84	9.84	9.84	9.84	
	-5.5	-6	10.41	10.41	10.41	10.41	10.41	10.41	10.41	
	-3.4	-4	10.77	10.75	10.74	10.63	10.53			
	-1.3	-2	11.13	11.10	11.07	10.86	10.65			
	0.8	0	11.74	11.57	11.40	11.00	10.59			
	3.9	3	12.74	12.28	11.83	11.16	10.50			
	7.0	6	13.92	13.01	12.10	11.25	10.41			
	10.1	9	13.82	12.94	12.05	11.18	10.32			
13.2	12	13.73	12.86	11.98	11.10	10.22				
16.9	15.5	13.63	12.75	11.87	11.00	10.12				

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature												
	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	
Me 24 (m³/min)	10		8.54	6.34	10.21	7.19	11.05	7.40	11.75	7.52	13.16	8.10	13.67	7.87	
	12		8.54	6.34	10.21	7.19	11.05	7.40	11.74	7.52	13.12	8.09	13.61	7.85	
	14		8.54	6.34	10.21	7.19	11.05	7.40	11.72	7.51	13.07	8.06	13.55	7.83	
	16		8.54	6.34	10.21	7.19	11.05	7.40	11.70	7.50	13.02	8.04	13.49	7.80	
	18		8.54	6.34	10.21	7.19	11.05	7.40	11.69	7.50	12.97	8.03	13.43	7.78	
	20		8.54	6.34	10.21	7.19	11.05	7.40	11.67	7.48	12.93	8.00	13.37	7.75	
	22		8.53	6.33	10.21	7.19	11.05	7.40	11.62	7.46	12.76	7.93	13.19	7.69	
	24		8.52	6.33	10.20	7.19	11.05	7.40	11.56	7.44	12.60	7.87	13.01	7.62	
	26		8.51	6.32	10.15	7.17	10.94	7.34	11.43	7.38	12.40	7.77	12.81	7.52	
	28	7.71	6.22	8.50	6.32	10.11	7.14	10.84	7.30	11.29	7.32	12.20	7.67	12.61	7.46
	30	7.71	6.22	8.48	6.29	10.03	7.09	10.73	7.25	11.16	7.26	12.01	7.61	12.42	7.39
	32	7.71	6.22	8.46	6.28	9.95	7.06	10.63	7.20	11.03	7.20	11.83	7.55	12.23	7.32
	34	7.71	6.22	8.43	6.27	9.92	7.05	10.49	7.14	10.85	7.12	11.58	7.44	11.98	7.23
	35	7.71	6.22	8.42	6.26	9.90	7.04	10.42	7.11	10.76	7.08	11.45	7.39	11.85	7.18
36	7.71	6.22	8.41	6.26	9.82	7.01	10.37	7.08	10.66	7.04	11.25	7.31	11.62	7.09	
38	7.71	6.22	8.39	6.25	9.68	6.95	10.26	7.02	10.45	6.93	10.84	7.15	11.16	6.90	
39	7.71	6.22	8.38	6.25	9.60	6.91	10.21	7.00	10.35	6.90	10.63	7.03	10.93	6.83	
41	7.71	6.22	8.35	6.23	9.31	6.77	9.79	6.83	9.92	6.72	10.16	6.88	10.42	6.66	
43	7.71	6.22	8.32	6.22	9.02	6.65	9.38	6.66	9.48	6.54	9.69	6.71	9.91	6.48	

Air flow	Outdoor air temperature		Indoor air temperature							
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB			
						</				

Model **FDT140KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 37 (m³/min)	10			11.48	9.15	13.72	10.34	14.84	10.62	15.79	10.76	17.69	11.61	18.36	11.30
	12			11.48	9.15	13.72	10.34	14.84	10.62	15.77	10.75	17.62	11.59	18.28	11.27
	14			11.48	9.15	13.72	10.34	14.84	10.62	15.75	10.74	17.56	11.56	18.20	11.25
	16			11.48	9.15	13.72	10.34	14.84	10.62	15.72	10.73	17.49	11.54	18.13	11.23
	18			11.48	9.15	13.72	10.34	14.84	10.62	15.70	10.72	17.43	11.50	18.05	11.18
	20			11.48	9.15	13.72	10.34	14.84	10.62	15.68	10.71	17.37	11.48	17.97	11.16
	22			11.46	9.14	13.71	10.33	14.84	10.62	15.61	10.69	17.15	11.40	17.72	11.08
	24			11.44	9.13	13.71	10.33	14.84	10.62	15.54	10.64	16.93	11.31	17.48	10.94
	26			11.43	9.13	13.64	10.31	14.70	10.54	15.35	10.58	16.66	11.16	17.21	10.86
	28	10.36	9.02	11.42	9.13	13.58	10.28	14.56	10.49	15.17	10.49	16.39	11.07	16.94	10.78
	30	10.36	9.02	11.40	9.12	13.48	10.24	14.42	10.42	14.99	10.42	16.14	10.99	16.69	10.71
	32	10.36	9.02	11.37	9.11	13.37	10.20	14.28	10.33	14.82	10.36	15.89	10.90	16.43	10.63
	34	10.36	9.02	11.33	9.09	13.32	10.18	14.09	10.26	14.58	10.22	15.56	10.80	16.09	10.51
	35	10.36	9.02	11.31	9.08	13.30	10.17	14.00	10.23	14.46	10.18	15.39	10.72	15.92	10.43
36	10.36	9.02	11.30	9.08	13.20	10.13	13.93	10.20	14.32	10.13	15.11	10.63	15.61	10.34	
38	10.36	9.02	11.27	9.06	13.00	10.06	13.79	10.15	14.05	10.03	14.56	10.41	15.00	10.14	
39	10.36	9.02	11.26	9.06	12.90	10.02	13.72	10.12	13.91	9.98	14.28	10.32	14.69	10.03	
41	10.36	9.02	11.22	9.04	12.51	9.85	13.16	9.91	13.32	9.75	13.65	10.09	14.00	9.80	
43	10.36	9.02	11.18	9.03	12.13	9.68	12.60	9.67	12.74	9.53	13.02	9.85	13.31	9.58	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 37 (m³/min)	-19.8	-20	9.28	9.28	9.28	9.28	9.28	
	-17.8	-18	9.88	9.88	9.88	9.88	9.88	
	-15.7	-16	10.47	10.47	10.47	10.47	10.47	
	-13.7	-14	11.07	11.07	11.07	11.07	11.07	
	-11.7	-12	11.67	11.67	11.67	11.67	11.67	
	-9.6	-10	12.27	12.27	12.27	12.27	12.27	
	-7.5	-8	13.01	13.01	13.01	13.01	13.01	
	-5.5	-6	13.76	13.76	13.76	13.76	13.76	
	-3.4	-4	14.24	14.22	14.20	14.06	13.92	
	-1.3	-2	14.72	14.68	14.64	14.36	14.08	
	0.8	0	15.52	15.30	15.08	14.54	14.00	
	3.9	3	16.84	16.24	15.64	14.76	13.88	
	7.0	6	18.40	17.20	16.00	14.88	13.76	
	10.1	9	19.28	17.11	15.94	14.79	13.64	
13.2	12	18.16	17.00	15.84	14.68	13.52		
16.9	15.5	18.02	16.86	15.70	14.54	13.38		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		21 °CDB 16 °CWB		23 °CDB 18 °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
Hi 30 (m³/min)	10			11.07	8.26	13.23	9.39	14.31	9.65	15.22	9.80	17.05	10.56	17.71	10.25
	12			11.07	8.26	13.23	9.39	14.31	9.65	15.20	9.79	16.99	10.51	17.63	10.22
	14			11.07	8.26	13.23	9.39	14.31	9.65	15.18	9.79	16.93	10.49	17.55	10.20
	16			11.07	8.26	13.23	9.39	14.31	9.65	15.16	9.78	16.87	10.47	17.48	10.17
	18			11.07	8.26	13.23	9.39	14.31	9.65	15.14	9.77	16.81	10.44	17.40	10.15
	20			11.07	8.26	13.23	9.39	14.31	9.65	15.12	9.76	16.75	10.42	17.33	10.13
	22			11.05	8.25	13.22	9.39	14.31	9.65	15.05	9.72	16.53	10.34	17.09	10.03
	24			11.03	8.24	13.22	9.39	14.31	9.65	14.98	9.69	16.32	10.25	16.85	9.94
	26			11.03	8.24	13.16	9.36	14.18	9.58	14.80	9.61	16.06	10.14	16.59	9.84
	28	9.99	8.12	11.02	8.24	13.10	9.32	14.04	9.53	14.63	9.55	15.81	10.04	16.33	9.74
	30	9.99	8.12	10.99	8.23	12.99	9.28	13.91	9.46	14.46	9.47	15.57	9.94	16.09	9.64
	32	9.99	8.12	10.96	8.21	12.89	9.23	13.77	9.40	14.29	9.38	15.33	9.86	15.85	9.55
	34	9.99	8.12	10.93	8.20	12.85	9.22	13.59	9.32	14.06	9.30	15.00	9.71	15.52	9.43
	35	9.99	8.12	10.91	8.19	12.83	9.21	13.50	9.28	13.95	9.24	14.84	9.65	15.35	9.38
36	9.99	8.12	10.89	8.18	12.73	9.16	13.43	9.26	13.81	9.19	14.57	9.55	15.06	9.24	
38	9.99	8.12	10.87	8.17	12.53	9.06	13.30	9.19	13.55	9.08	14.04	9.32	14.46	9.05	
39	9.99	8.12	10.85	8.17	12.44	9.02	13.23	9.16	13.41	9.01	13.77	9.22	14.16	8.94	
41	9.99	8.12	10.82	8.15	12.07	8.85	12.69	8.89	12.85	8.76	13.16	9.00	13.50	8.72	
43	9.99	8.12	10.78	8.14	11.69	8.69	12.15	8.68	12.28	8.54	12.55	8.77	12.83	8.49	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 30 (m³/min)	-19.8	-20	8.99	8.99	8.99	8.99	8.99	
	-17.8	-18	9.57	9.57	9.57	9.57	9.57	
	-15.7	-16	10.15	10.15	10.15	10.15	10.15	
	-13.7	-14	10.73	10.73	10.73	10.73	10.73	
	-11.7	-12	11.30	11.30	11.30	11.30	11.30	
	-9.6	-10	11.88	11.88	11.88	11.88	11.88	
	-7.5	-8	12.61	12.61	12.61	12.61	12.61	
	-5.5	-6	13.33	13.33	13.33	13.33	13.33	
	-3.4	-4	13.80	13.78	13.76	13.62	13.49	
	-1.3	-2	14.26	14.22	14.18	13.91	13.64	
	0.8	0	15.04	14.82	14.61	14.09	13.56	
	3.9	3	16.31	15.73	15.15	14.30	13.65	
	7.0	6	17.83	16.66	15.50	14.42	13.33	
	10.1	9	17.71	16.58	15.44	14.33	13.21	
13.2	12	17.59	16.47	15.35	14.22	13.10		
16.9	15.5	17.46	16.33	15.21	14.09	12.96		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 27 (m³/min)	10			10.56	7.73	12.62	8.78	13.65	9.02	14.53	9.20	16.27	9.91	16.89	9.62
	12			10.56	7.73	12.62	8.78	13.65	9.02	14.51	9.19	16.21	9.89	16.82	9.59
	14			10.56	7.73	12.62	8.78	13.65	9.02	14.49	9.18	16.15	9.85	16.75	9.56
	16			10.56	7.73	12.62	8.78	13.65	9.02	14.47	9.18	16.09	9.83	16.68	9.54
	18			10.56	7.73	12.62	8.78	13.65	9.02	14.45	9.16	16.04	9.81	16.60	9.50
	20			10.56	7.73	12.62	8.78	13.65	9.02	14.43	9.15	15.98	9.78	16.53	9.47
	22			10.54	7.72	12.62	8.78	13.65	9.02	14.36	9.12	15.77	9.69	16.30	9.38
	24			10.53	7.72	12.61	8.78	13.65	9.02	14.29	9.09	15.57	9.60	16.08	9.27
	26			10.52	7.71	12.55	8.75	13.52	8.97	14.12	8.99	15.33	9.50	15.83	9.19
	28	9.53	7.57	10.51	7.71	12.49	8.72	13.40	8.92	13.96	8.92	15.08	9.38	15.58	9.11
	30	9.53	7.57	10.48	7.70	12.40	8.68	13.27	8.85	13.79	8.86	14.85	9.30	15.35	9.02
	32	9.53	7.57	10.46	7.69	12.30	8.64	13.14	8.80	13.63	8.80	14.62	9.20	15.12	8.93
	34	9.53	7.57	10.42	7.67	12.26	8.61	12.97	8.72	13.41	8.70	14.31	9.08	14.81	8.82
	35	9.53	7.57	10.41	7.67	12.24	8.60	12.88	8.68	13.31	8.65	14.16	9.01	14.65	8.75
36	9.53	7.57	10.39	7.66	12.14	8.56	12.82	8.66	13.18	8.59	13.90	8.91	14.37	8.65	
38	9.53	7.57	10.37	7.65	11.96	8.47	12.69	8.60	12.92	8.48	13.40	8.70	13.80	8.44	
39	9.53	7.57	10.36	7.64	11.87	8.44	12.62	8.57	12.80	8.42	13.14	8.60	13.51	8.30	
41	9.53	7.57	10.32	7.63	11.51	8.26	12.11	8.34	12.26	8.19	12.56	8.36	12.88	8.10	
43	9.53	7.57	10.28	7.60	11.16	8.11	11.59	8.11	11.72	7.94	11.97	8.14	12.25	7.88	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 27 (m³/min)	-19.8	-20	8.54	8.54	8.54	8.54	8.54	
	-17.8	-18	9.09	9.09	9.09	9.09	9.09	
	-15.7	-16	9.64	9.64	9.64	9.64	9.64	
	-13.7	-14	10.19	10.19	10.19	10.19	10.19	

Model **FDT160KXE6F**

Cooling mode

(kW)

Heating mode

(kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi	10			13.12	9.91	15.68	11.24	16.96	11.54	18.04	11.69	20.21	12.63	20.99	12.25
	12			13.12	9.91	15.68	11.24	16.96	11.54	18.02	11.68	20.14	12.61	20.90	12.22
	14			13.12	9.91	15.68	11.24	16.96	11.54	18.00	11.67	20.07	12.58	20.81	12.19
	16			13.12	9.91	15.68	11.24	16.96	11.54	17.97	11.66	19.99	12.54	20.72	12.16
	18			13.12	9.91	15.68	11.24	16.96	11.54	17.95	11.66	19.92	12.48	20.62	12.13
	20			13.12	9.91	15.68	11.24	16.96	11.54	17.92	11.64	19.85	12.45	20.53	12.10
	22			13.10	9.90	15.67	11.24	16.96	11.54	17.84	11.61	19.60	12.36	20.25	12.01
	24			13.08	9.89	15.67	11.24	16.96	11.54	17.75	11.58	19.34	12.27	19.97	11.90
	26			13.07	9.89	15.59	11.20	16.80	11.46	17.55	11.50	19.04	12.15	19.67	11.79
	28	11.84	9.73	13.06	9.88	15.52	11.16	16.64	11.40	17.34	11.42	18.73	12.02	19.36	11.67
	30	11.84	9.73	13.02	9.87	15.40	11.11	16.48	11.32	17.14	11.33	18.45	11.91	19.07	11.56
	32	11.84	9.73	12.99	9.85	15.28	11.06	16.32	11.26	16.93	11.23	18.16	11.81	18.78	11.45
	34	11.84	9.73	12.95	9.84	15.23	11.04	16.11	11.16	16.66	11.13	17.78	11.64	18.39	11.31
	35	11.84	9.73	12.93	9.83	15.20	11.01	16.00	11.12	16.53	11.06	17.59	11.57	18.20	11.25
36	11.84	9.73	12.91	9.82	15.09	10.97	15.92	11.08	16.37	11.00	17.27	11.45	17.85	11.12	
38	11.84	9.73	12.88	9.81	14.86	10.88	15.76	11.00	16.05	10.87	16.64	11.15	17.14	10.84	
39	11.84	9.73	12.86	9.80	14.74	10.81	15.68	10.97	15.89	10.79	16.32	11.05	16.79	10.74	
41	11.84	9.73	12.82	9.78	14.30	10.62	15.04	10.69	15.23	10.53	15.60	10.81	16.00	10.48	
43	11.84	9.73	12.77	9.76	13.86	10.39	14.40	10.41	14.56	10.21	14.87	10.53	15.21	10.20	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi	-19.8	-20	10.44	10.44	10.44	10.44	10.44	
	-17.8	-18	11.11	11.11	11.11	11.11	11.11	
	-15.7	-16	11.78	11.78	11.78	11.78	11.78	
	-13.7	-14	12.46	12.46	12.46	12.46	12.46	
	-11.7	-12	13.13	13.13	13.13	13.13	13.13	
	-9.6	-10	13.80	13.80	13.80	13.80	13.80	
	-7.5	-8	14.64	14.64	14.64	14.64	14.64	
	-5.5	-6	15.48	15.48	15.48	15.48	15.48	
	-3.4	-4	16.02	16.00	15.98	15.82	15.66	
	-1.3	-2	16.56	16.52	16.47	16.16	15.84	
	0.8	0	17.46	17.21	16.97	16.36	15.75	
	3.9	3	18.95	18.27	17.60	16.61	15.62	
	7.0	6	20.70	19.35	18.00	16.74	15.48	
	10.1	9	22.57	19.25	17.93	16.64	15.35	
13.2	12	20.43	19.13	17.82	16.52	15.21		
16.9	15.5	20.27	18.97	17.66	16.36	15.05		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			12.79	9.08	15.29	10.34	16.54	10.67	17.59	10.87	19.71	11.71	20.46	11.36
	12			12.79	9.08	15.29	10.34	16.54	10.67	17.57	10.86	19.64	11.68	20.37	11.31
	14			12.79	9.08	15.29	10.34	16.54	10.67	17.55	10.85	19.56	11.65	20.29	11.28
	16			12.79	9.08	15.29	10.34	16.54	10.67	17.52	10.84	19.49	11.61	20.20	11.24
	18			12.79	9.08	15.29	10.34	16.54	10.67	17.50	10.83	19.42	11.58	20.11	11.21
	20			12.79	9.08	15.29	10.34	16.54	10.67	17.47	10.82	19.35	11.54	20.02	11.16
	22			12.77	9.07	15.28	10.34	16.54	10.67	17.39	10.77	19.11	11.44	19.75	11.06
	24			12.75	9.06	15.27	10.33	16.54	10.67	17.31	10.74	18.88	11.33	19.47	10.93
	26			12.74	9.06	15.20	10.30	16.38	10.57	17.11	10.64	18.56	11.19	19.18	10.79
	28	11.54	8.88	12.73	9.06	15.13	10.26	16.22	10.50	16.90	10.55	18.27	11.06	18.88	10.69
	30	11.54	8.88	12.70	9.04	15.02	10.21	16.07	10.44	16.71	10.43	17.99	10.92	18.59	10.58
	32	11.54	8.88	12.67	9.03	14.90	10.15	15.91	10.36	16.51	10.35	17.71	10.82	18.31	10.47
	34	11.54	8.88	12.63	8.99	14.85	10.12	15.70	10.26	16.25	10.23	17.34	10.66	17.93	10.32
	35	11.54	8.88	12.60	8.97	14.82	10.11	15.60	10.21	16.12	10.18	17.15	10.57	17.74	10.24
36	11.54	8.88	12.59	8.97	14.71	10.05	15.52	10.17	15.96	10.11	16.84	10.44	17.40	10.12	
38	11.54	8.88	12.56	8.95	14.48	9.94	15.37	10.11	15.65	9.96	16.22	10.19	16.71	9.83	
39	11.54	8.88	12.54	8.95	14.37	9.89	15.29	10.06	15.50	9.90	15.92	10.03	16.37	9.72	
41	11.54	8.88	12.50	8.93	13.94	9.66	14.66	9.78	14.85	9.61	15.21	9.76	15.60	9.43	
43	11.54	8.88	12.45	8.90	13.51	9.48	14.04	9.48	14.19	9.31	14.50	9.48	14.83	9.14	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi	-19.8	-20	10.15	10.15	10.15	10.15	10.15	
	-17.8	-18	10.80	10.80	10.80	10.80	10.80	
	-15.7	-16	11.46	11.46	11.46	11.46	11.46	
	-13.7	-14	12.11	12.11	12.11	12.11	12.11	
	-11.7	-12	12.76	12.76	12.76	12.76	12.76	
	-9.6	-10	13.42	13.42	13.42	13.42	13.42	
	-7.5	-8	14.23	14.23	14.23	14.23	14.23	
	-5.5	-6	15.05	15.05	15.05	15.05	15.05	
	-3.4	-4	15.58	15.55	15.53	15.38	15.23	
	-1.3	-2	16.10	16.06	16.01	15.71	15.40	
	0.8	0	16.98	16.73	16.49	15.90	15.31	
	3.9	3	18.42	17.76	17.11	16.14	15.18	
	7.0	6	20.13	18.81	17.50	16.28	15.05	
	10.1	9	19.99	18.71	17.43	16.18	14.92	
13.2	12	19.86	18.59	17.33	16.06	14.79		
16.9	15.5	19.71	18.44	17.17	15.90	14.63		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			12.07	8.54	14.42	9.72	15.60	10.02	16.60	10.22	18.60	11.02	19.31	10.68
	12			12.07	8.54	14.42	9.72	15.60	10.02	16.58	10.21	18.53	10.98	19.22	10.64
	14			12.07	8.54	14.42	9.72	15.60	10.02	16.56	10.20	18.46	10.95	19.14	10.60
	16			12.07	8.54	14.42	9.72	15.60	10.02	16.53	10.19	18.39	10.93	19.06	10.57
	18			12.07	8.54	14.42	9.72	15.60	10.02	16.51	10.18	18.33	10.89	18.97	10.54
	20			12.07	8.54	14.42	9.72	15.60	10.02	16.49	10.17	18.26	10.86	18.89	10.50
	22			12.05	8.53	14.42	9.72	15.60	10.02	16.41	10.14	18.03	10.76	18.63	10.39
	24			12.03	8.52	14.41	9.70	15.60	10.02	16.33	10.09	17.80	10.66	18.38	10.29
	26			12.02	8.51	14.35	9.68	15.46	9.96	16.14	9.99	17.52	10.52	18.09	10.16
	28	10.89	8.35	12.01	8.51	14.28	9.65	15.31	9.88	15.95	9.91	17.24	10.40	17.81	10.04
	30	10.89	8.35	11.98	8.49	14.17	9.59	15.16	9.81	15.77	9.83	16.97	10.26	17.54	9.94
	32	10.89	8.35	11.95	8.48	14.06	9.54	15.01	9.74	15.58	9.74	16.71	10.16	17.28	9.84
	34	10.89	8.35	11.91	8.46	14.01	9.51	14.82	9.65	15.33	9.63	16.36	10.01	16.92	9.70
	35	10.89	8.35	11.89	8.45	13.98	9.50	14.72	9.59	15.21	9.56	16.18	9.93	16.74	9.62
36	10.89	8.35	11.88	8.45	13.88	9.45	14.65	9.56	15.06	9.49	15.89	9.81	16.42	9.50	
38	10.89	8.35	11.85	8.42	13.67	9.34	14.50	9.50	14.77	9.36	15.31	9.56	15.77	9.24	
39	10.89	8.35	11.83	8.41	13.56	9.29	14.43	9.46	14.62	9.30	15.02	9.45	15.44	9.09	
41	10.89	8.35	11.79	8.40	13.16	9.08	13.84	9.18	14.01	9.02	14.35	9.15	14.72	8.85	
43	10.89	8.35	11.75	8.38	12.75	8.91	13.25	8.90	13.39	8.74	13.68	8.89	13.99	8.58	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	9.60	9.60	9.60	9.60	9.60	

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

Model		FDTC15KXE6F		Cooling mode																(kW)					
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																Air flow	Outdoor air temperature	Indoor air temperature					
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB		°CDB	°CWB			16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC										SHC
P-Hi	10			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.89	1.40	1.97	1.37			-19.8	-20	0.99	0.99	0.99	0.99	0.99	
	12			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.89	1.40	1.96	1.37			-17.8	-18	1.05	1.05	1.05	1.05	1.05	
	14			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.88	1.40	1.95	1.36			-15.7	-16	1.11	1.11	1.11	1.11	1.11	
	16			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.87	1.39	1.94	1.36			-13.7	-14	1.18	1.18	1.18	1.18	1.18	
	18			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.87	1.39	1.93	1.36			-11.7	-12	1.24	1.24	1.24	1.24	1.24	
	20			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.86	1.39	1.93	1.36			-9.6	-10	1.30	1.30	1.30	1.30	1.30	
	22			1.23	1.12	1.47	1.26	1.59	1.28	1.67	1.29	1.84	1.38	1.90	1.35			-7.5	-8	1.38	1.38	1.38	1.38	1.38	
	24			1.23	1.12	1.47	1.26	1.59	1.28	1.66	1.28	1.81	1.38	1.87	1.34			-5.5	-6	1.46	1.46	1.46	1.46	1.46	
	26			1.23	1.12	1.46	1.25	1.58	1.28	1.64	1.28	1.78	1.36	1.84	1.33			-3.4	-4	1.51	1.51	1.51	1.49	1.48	
	28	1.11	1.07	1.22	1.11	1.46	1.25	1.56	1.27	1.63	1.27	1.76	1.35	1.81	1.32			-1.3	-2	1.56	1.56	1.56	1.53	1.50	
	30	1.11	1.07	1.22	1.11	1.44	1.24	1.55	1.27	1.61	1.27	1.73	1.35	1.79	1.30			0.8	0	1.65	1.63	1.60	1.54	1.49	
	32	1.11	1.07	1.22	1.11	1.43	1.24	1.53	1.26	1.59	1.26	1.70	1.34	1.76	1.30			3.9	3	1.79	1.73	1.66	1.57	1.47	
	34	1.11	1.07	1.21	1.10	1.43	1.24	1.51	1.25	1.56	1.25	1.67	1.31	1.72	1.29			7.0	6	1.96	1.83	1.70	1.58	1.46	
	35	1.11	1.07	1.21	1.10	1.43	1.24	1.50	1.25	1.55	1.24	1.65	1.31	1.71	1.28			10.1	9	1.94	1.82	1.69	1.57	1.45	
	36	1.11	1.07	1.21	1.10	1.41	1.24	1.49	1.24	1.53	1.24	1.62	1.30	1.67	1.28			13.2	12	1.93	1.81	1.68	1.56	1.44	
	38	1.11	1.07	1.21	1.10	1.39	1.23	1.48	1.24	1.51	1.23	1.56	1.29	1.61	1.26			16.9	15.5	1.91	1.79	1.67	1.54	1.42	
39	1.11	1.07	1.21	1.10	1.38	1.22	1.47	1.23	1.49	1.22	1.53	1.28	1.57	1.24											
41	1.11	1.07	1.20	1.10	1.34	1.20	1.41	1.21	1.43	1.19	1.46	1.25	1.50	1.22											
43	1.11	1.07	1.20	1.10	1.30	1.19	1.35	1.18	1.36	1.17	1.39	1.23	1.43	1.20											

Model		FDTC15KXE6F		Heating mode																(kW)					
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																Air flow	Outdoor air temperature	Indoor air temperature					
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB		°CDB	°CWB			16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC										SHC
P-Hi	10			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.89	1.40	1.97	1.37			-19.8	-20	0.99	0.99	0.99	0.99	0.99	
	12			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.89	1.40	1.96	1.37			-17.8	-18	1.05	1.05	1.05	1.05	1.05	
	14			1.23	1.12	1.47	1.26	1.59	1.28	1.69	1.30	1.88	1.40	1.95	1.36			-15.7	-16	1.11	1.11	1.11	1.11	1.11	
	16			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.87	1.39	1.94	1.36			-13.7	-14	1.18	1.18	1.18	1.18	1.18	
	18			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.87	1.39	1.93	1.36			-11.7	-12	1.24	1.24	1.24	1.24	1.24	
	20			1.23	1.12	1.47	1.26	1.59	1.28	1.68	1.29	1.86	1.39	1.93	1.36			-9.6	-10	1.30	1.30	1.30	1.30	1.30	
	22			1.23	1.12	1.47	1.26	1.59	1.28	1.67	1.29	1.84	1.38	1.90	1.35			-7.5	-8	1.38	1.38	1.38	1.38	1.38	
	24			1.23	1.12	1.47	1.26	1.59	1.28	1.66	1.28	1.81	1.38	1.87	1.34			-5.5	-6	1.46	1.46	1.46	1.46	1.46	
	26			1.23	1.12	1.46	1.25	1.58	1.28	1.64	1.28	1.78	1.36	1.84	1.33			-3.4	-4	1.51	1.51	1.51	1.49	1.48	
	28	1.11	1.07	1.22	1.11	1.46	1.25	1.56	1.27	1.63	1.27	1.76	1.35	1.81	1.32			-1.3	-2	1.56	1.56	1.56	1.53	1.50	
	30	1.11	1.07	1.22	1.11	1.44	1.24	1.55	1.27	1.61	1.27	1.73	1.35	1.79	1.30			0.8	0	1.65	1.63	1.60	1.54	1.49	
	32	1.11	1.07	1.22	1.11	1.43	1.24	1.53	1.26	1.59	1.26	1.70	1.34	1.76	1.30			3.9	3	1.79	1.73	1.66	1.57	1.47	
	34	1.11	1.07	1.21	1.10	1.43	1.24	1.51	1.25	1.56	1.25	1.67	1.31	1.72	1.29			7.0	6	1.96	1.83	1.70	1.58	1.46	
	35	1.11	1.07	1.21	1.10	1.43	1.24	1.50	1.25	1.55	1.24	1.65	1.31	1.71	1.28			10.1	9	1.94	1.82	1.69	1.57	1.45	
	36	1.11	1.07	1.21	1.10	1.41	1.24	1.49	1.24	1.53	1.24	1.62	1.30	1.67	1.28			13.2	12	1.93	1.81	1.68	1.56	1.44	
	38	1.11	1.07	1.21	1.10	1.39	1.23	1.48	1.24	1.51	1.23	1.56	1.29	1.61	1.26			16.9	15.5	1.91	1.79	1.67	1.54	1.42	
39	1.11	1.07	1.21	1.10	1.38	1.22	1.47	1.23	1.49	1.22	1.53	1.28	1.57	1.24											
41	1.11	1.07	1.20	1.10	1.34	1.20	1.41	1.21	1.43	1.19	1.46	1.25	1.50	1.22											
43	1.11	1.07	1.20	1.10	1.30	1.19	1.35	1.18	1.36	1.17	1.39	1.23	1.43	1.20											

Model		FDTC15KXE6F		Cooling mode																(kW)					
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																Air flow	Outdoor air temperature	Indoor air temperature					
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB		°CDB	°CWB			16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC										SHC
Hi	10			1.13	1.01	1.36	1.15	1.47	1.17	1.56	1.17	1.75	1.28	1.82	1.24			-19.8	-20	0.90	0.90	0.90	0.90	0.90	
	12			1.13	1.01	1.36	1.15	1.47	1.17	1.56	1.17	1.74	1.28	1.81	1.24			-17.8	-18	0.96	0.96	0.96	0.96	0.96	
	14			1.13	1.01	1.36	1.15	1.47	1.17	1.56	1.17	1.73	1.28	1.80	1.24			-15.7	-16	1.01	1.01	1.01	1.01	1.01	
	16			1.13	1.01	1.36	1.15	1.47	1.17	1.56	1.17	1.73	1.26	1.79	1.24			-13.7	-14	1.07	1.07	1.07	1.07	1.07	
	18			1.13	1.01	1.36	1.15	1.47	1.17	1.55	1.17	1.72	1.26	1.78	1.23			-11.7	-12	1.13	1.13	1.13	1.13	1.13	
	20			1.13	1.01	1.36	1.15	1.47	1.17	1.55	1.17	1.72	1.26	1.78	1.23			-9.6	-10	1.19	1.19	1.19	1.19	1.19	
	22			1.13	1.01	1.36	1.15	1.47	1.17	1.54	1.17	1.70	1.25	1.75	1.23			-7.5	-8	1.26	1.26	1.26	1.26	1.26	
	24			1.13	1.01	1.36	1.15	1.47	1.17	1.54	1.17	1.67	1.25	1.73	1.22			-5.5	-6	1.33	1.33	1.33	1.33	1.33	
	26			1.13	1.01	1.35	1.14	1.45	1.16	1.52	1.16	1.65	1.24	1.70	1.21			-3.4	-4	1.38	1.38	1.38	1.36	1.35	
	28	1.02	0.98	1.13	1.01	1.34	1.14	1.44	1.16	1.50	1.15	1.62	1.23	1.68	1.20			-1.3	-2	1.43	1.42	1.42	1.39	1.36	
	30	1.02	0.98	1.13	1.01	1.33	1.14	1.43	1.15	1.48	1.15	1.60	1.23	1.65	1.20			0.8	0	1.50	1.48	1.46	1.41	1.36	
	32	1.02	0.98	1.12	1.01	1.32	1.13	1.41	1.15	1.47	1.15	1.57	1.22	1.63	1.19			3.9	3	1.63	1.57	1.52	1.43	1.34	
	34	1.02	0.98	1.12	1.01	1.32	1.13	1.39	1.14	1.44	1.14	1.54	1.20	1.59	1.18			7.0	6	1.78	1.67	1.55	1.44	1.33	
	35	1.02	0.98	1.12	1.01	1.32	1.13	1.38	1.13	1.43	1.13	1.52	1.20	1.57	1.17			10.1	9	1.77	1.66	1.54	1.43	1.32	
	36	1.02	0.98	1.12	1.01	1.31	1.13	1.38	1.13	1.42	1.13	1.49	1.19	1.54	1.16			13.2	12	1.76	1.65	1.53	1.42	1.31	
	38	1.02	0.98	1.11	1.00	1.29	1.12	1.36	1.13	1.39	1.12	1.44	1.17	1.48	1.14			16.9	15.5	1.75	1.63	1.52	1.41	1.30	
39	1.02	0.98	1.11	1.00</																					

Model **FDTC22KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 12 (m³/min)	10			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.26	2.77	2.46	2.89	2.42
	12			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.26	2.77	2.46	2.87	2.41
	14			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.26	2.76	2.45	2.86	2.41
	16			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.26	2.75	2.45	2.85	2.41
	18			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.26	2.74	2.45	2.84	2.40
	20			1.80	1.73	2.16	2.07	2.33	2.24	2.46	2.25	2.73	2.44	2.82	2.40
	22			1.80	1.73	2.15	2.06	2.33	2.24	2.45	2.25	2.69	2.43	2.78	2.38
	24			1.80	1.73	2.15	2.06	2.33	2.24	2.44	2.25	2.66	2.42	2.75	2.37
	26			1.80	1.73	2.14	2.05	2.31	2.22	2.41	2.24	2.62	2.41	2.70	2.36
	28	1.63	1.56	1.80	1.73	2.13	2.04	2.29	2.20	2.38	2.22	2.58	2.39	2.66	2.35
	30	1.63	1.56	1.79	1.72	2.12	2.04	2.27	2.18	2.36	2.22	2.54	2.38	2.62	2.33
	32	1.63	1.56	1.79	1.72	2.10	2.02	2.24	2.15	2.33	2.21	2.50	2.36	2.58	2.32
34	1.63	1.56	1.78	1.71	2.09	2.01	2.21	2.12	2.29	2.20	2.44	2.34	2.53	2.28	
35	1.63	1.56	1.78	1.71	2.09	2.01	2.20	2.11	2.27	2.18	2.42	2.32	2.50	2.28	
36	1.63	1.56	1.78	1.71	2.07	1.99	2.19	2.10	2.25	2.16	2.37	2.28	2.45	2.26	
38	1.63	1.56	1.77	1.70	2.04	1.96	2.17	2.08	2.21	2.12	2.29	2.20	2.36	2.24	
39	1.63	1.56	1.77	1.70	2.03	1.95	2.16	2.07	2.19	2.10	2.24	2.15	2.31	2.22	
41	1.63	1.56	1.76	1.69	1.97	1.89	2.07	1.99	2.09	2.01	2.14	2.05	2.20	2.11	
43	1.63	1.56	1.76	1.69	1.91	1.83	1.98	1.90	2.00	1.92	2.05	1.97	2.09	2.01	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 12 (m³/min)	-19.8	-20	1.45	1.45	1.45	1.45
-17.8	-18		1.54	1.54	1.54	1.54	1.54	
-15.7	-16		1.64	1.64	1.64	1.64	1.64	
-13.7	-14		1.73	1.73	1.73	1.73	1.73	
-11.7	-12		1.82	1.82	1.82	1.82	1.82	
-9.6	-10		1.92	1.92	1.92	1.92	1.92	
-7.5	-8		2.03	2.03	2.03	2.03	2.03	
-5.5	-6		2.15	2.15	2.15	2.15	2.15	
-3.4	-4		2.23	2.22	2.22	2.20	2.18	
-1.3	-2		2.30	2.29	2.29	2.24	2.20	
0.8	0		2.43	2.39	2.36	2.27	2.19	
3.9	3		2.63	2.54	2.44	2.31	2.17	
7.0	6	2.88	2.69	2.50	2.33	2.15		
10.1	9	2.86	2.67	2.49	2.31	2.13		
13.2	12	2.84	2.66	2.48	2.29	2.11		
16.9	15.5	2.82	2.63	2.45	2.27	2.09		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 9.5 (m³/min)	10			1.74	1.67	2.08	1.94	2.25	1.97	2.39	1.99	2.68	2.16	2.78	2.12
	12			1.74	1.67	2.08	1.94	2.25	1.97	2.39	1.99	2.67	2.16	2.77	2.11
	14			1.74	1.67	2.08	1.94	2.25	1.97	2.38	1.98	2.66	2.15	2.76	2.10
	16			1.74	1.67	2.08	1.94	2.25	1.97	2.38	1.98	2.65	2.15	2.74	2.10
	18			1.74	1.67	2.08	1.94	2.25	1.97	2.38	1.98	2.64	2.15	2.73	2.10
	20			1.74	1.67	2.08	1.94	2.25	1.97	2.37	1.98	2.63	2.14	2.72	2.09
	22			1.74	1.67	2.08	1.94	2.25	1.97	2.36	1.98	2.60	2.13	2.68	2.08
	24			1.73	1.66	2.08	1.94	2.25	1.97	2.35	1.97	2.56	2.12	2.65	2.07
	26			1.73	1.66	2.07	1.93	2.23	1.96	2.32	1.96	2.52	2.11	2.61	2.06
	28	1.57	1.51	1.73	1.66	2.06	1.93	2.20	1.95	2.30	1.96	2.48	2.09	2.57	2.03
	30	1.57	1.51	1.73	1.66	2.04	1.92	2.18	1.95	2.27	1.94	2.44	2.08	2.53	2.02
	32	1.57	1.51	1.72	1.65	2.02	1.92	2.16	1.94	2.24	1.93	2.41	2.05	2.49	2.01
34	1.57	1.51	1.72	1.65	2.02	1.92	2.13	1.93	2.21	1.92	2.36	2.04	2.44	2.00	
35	1.57	1.51	1.71	1.64	2.01	1.91	2.12	1.92	2.19	1.92	2.33	2.03	2.41	1.99	
36	1.57	1.51	1.71	1.64	2.00	1.91	2.11	1.92	2.17	1.90	2.29	2.02	2.36	1.98	
38	1.57	1.51	1.71	1.64	1.97	1.89	2.09	1.91	2.13	1.89	2.20	1.99	2.27	1.95	
39	1.57	1.51	1.70	1.63	1.95	1.87	2.08	1.91	2.11	1.89	2.16	1.98	2.22	1.94	
41	1.57	1.51	1.70	1.63	1.89	1.81	1.99	1.86	2.02	1.84	2.07	1.95	2.12	1.91	
43	1.57	1.51	1.69	1.62	1.84	1.77	1.91	1.83	1.93	1.81	1.97	1.89	2.02	1.88	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 9.5 (m³/min)	-19.8	-20	1.39	1.39	1.39	1.39
-17.8	-18		1.48	1.48	1.48	1.48	1.48	
-15.7	-16		1.57	1.57	1.57	1.57	1.57	
-13.7	-14		1.66	1.66	1.66	1.66	1.66	
-11.7	-12		1.75	1.75	1.75	1.75	1.75	
-9.6	-10		1.84	1.84	1.84	1.84	1.84	
-7.5	-8		1.95	1.95	1.95	1.95	1.95	
-5.5	-6		2.06	2.06	2.06	2.06	2.06	
-3.4	-4		2.14	2.13	2.13	2.11	2.09	
-1.3	-2		2.21	2.20	2.20	2.15	2.11	
0.8	0		2.33	2.30	2.26	2.18	2.10	
3.9	3		2.53	2.44	2.35	2.21	2.08	
7.0	6	2.76	2.58	2.40	2.23	2.06		
10.1	9	2.74	2.57	2.39	2.22	2.05		
13.2	12	2.72	2.55	2.38	2.20	2.03		
16.9	15.5	2.70	2.53	2.36	2.18	2.01		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 8.5 (m³/min)	10			1.70	1.60	2.03	1.82	2.19	1.85	2.33	1.86	2.61	2.02	2.72	1.98
	12			1.70	1.60	2.03	1.82	2.19	1.85	2.33	1.86	2.61	2.02	2.70	1.97
	14			1.70	1.60	2.03	1.82	2.19	1.85	2.32	1.86	2.60	2.02	2.69	1.97
	16			1.70	1.60	2.03	1.82	2.19	1.85	2.32	1.86	2.59	2.01	2.68	1.97
	18			1.70	1.60	2.03	1.82	2.19	1.85	2.32	1.86	2.58	2.01	2.67	1.96
	20			1.70	1.60	2.03	1.82	2.19	1.85	2.32	1.86	2.57	2.00	2.66	1.96
	22			1.69	1.60	2.03	1.82	2.19	1.85	2.31	1.86	2.54	1.99	2.62	1.95
	24			1.69	1.60	2.03	1.82	2.19	1.85	2.30	1.85	2.50	1.98	2.58	1.94
	26			1.69	1.60	2.02	1.81	2.17	1.84	2.27	1.84	2.46	1.97	2.54	1.92
	28	1.53	1.47	1.69	1.60	2.01	1.81	2.15	1.83	2.24	1.83	2.42	1.96	2.50	1.91
	30	1.53	1.47	1.68	1.60	1.99	1.79	2.13	1.82	2.22	1.82	2.39	1.94	2.47	1.88
	32	1.53	1.47	1.68	1.60	1.98	1.79	2.11	1.81	2.19	1.81	2.35	1.93	2.43	1.87
34	1.53	1.47	1.68	1.60	1.97	1.78	2.08	1.80	2.16	1.80	2.30	1.90	2.38	1.86	
35	1.53	1.47	1.67	1.59	1.97	1.78	2.07	1.80	2.14	1.79	2.28	1.89	2.35	1.85	
36	1.53	1.47	1.67	1.59	1.95	1.78	2.06	1.80	2.12	1.79	2.23	1.88	2.31	1.84	
38	1.53	1.47	1.67	1.59	1.92	1.76	2.04	1.78	2.08	1.76	2.15	1.86	2.22	1.82	
39	1.53	1.47	1.66	1.59	1.91	1.76	2.03	1.77	2.06	1.75	2.11	1.84	2.17	1.80	
41	1.53	1.47	1.66	1.59	1.85	1.74	1.95	1.75	1.97	1.72	2.02	1.82	2.07	1.77	
43	1.53	1.47	1.65	1.58	1.79	1.72	1.86	1.72	1.88	1.70	1.92	1.78	1.97	1.75	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 8.5 (m³/min)	-19.8	-20	1.35	1.35	1.35	1.35
-17.8	-18		1.43	1.43	1.43	1.43	1.43	
-15.7	-16		1.52	1.52	1.52	1.52	1.52	
-13.7	-14		1.61	1.61	1.61	1.61	1.61	
-11.7	-12		1.69	1.69	1.69	1.69	1.69	
-9.6	-10		1.78	1.78	1.78	1.78	1.78	
-7.5	-8		1.89	1.89	1.89	1.89	1.89	
-5.5	-6		2.00	2.00	2.00	2.00	2.00	
-3.4	-4		2.06	2.06	2.06	2.04	2.02	
-1.3	-2		2.13	2.12	2.12	2.08	2.04	
0.8	0		2.25	2.22	2.19	2.11	2.03	
3.9	3		2.44	2.35	2.27	2.14	2.01	
7.0	6	2.67	2.49	2.32	2.16	2.00		
10.1	9							

Model **FDTC28KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 12 (m³/min)	10			2.30	2.16	2.74	2.43	2.97	2.49	3.16	2.51	3.54	2.71	3.67	2.65
	12			2.30	2.16	2.74	2.43	2.97	2.49	3.15	2.51	3.52	2.70	3.66	2.65
	14			2.30	2.16	2.74	2.43	2.97	2.49	3.15	2.51	3.51	2.70	3.64	2.65
	16			2.30	2.16	2.74	2.43	2.97	2.49	3.14	2.51	3.50	2.70	3.63	2.64
	18			2.30	2.16	2.74	2.43	2.97	2.49	3.14	2.51	3.49	2.70	3.61	2.64
	20			2.30	2.16	2.74	2.43	2.97	2.49	3.14	2.51	3.47	2.69	3.59	2.63
	22			2.29	2.16	2.74	2.43	2.97	2.49	3.12	2.49	3.43	2.68	3.54	2.62
	24			2.29	2.16	2.74	2.43	2.97	2.49	3.11	2.49	3.39	2.67	3.50	2.61
	26			2.29	2.16	2.73	2.43	2.94	2.47	3.07	2.48	3.33	2.65	3.44	2.59
	28	2.07	1.99	2.28	2.16	2.72	2.42	2.91	2.46	3.03	2.47	3.28	2.63	3.39	2.57
	30	2.07	1.99	2.28	2.16	2.70	2.41	2.88	2.45	3.00	2.45	3.23	2.61	3.34	2.55
	32	2.07	1.99	2.27	2.15	2.67	2.40	2.86	2.45	2.96	2.44	3.18	2.59	3.29	2.54
34	2.07	1.99	2.27	2.15	2.66	2.40	2.82	2.41	2.92	2.40	3.11	2.57	3.22	2.52	
35	2.07	1.99	2.26	2.15	2.66	2.40	2.80	2.41	2.89	2.40	3.08	2.56	3.18	2.51	
36	2.07	1.99	2.26	2.15	2.64	2.39	2.79	2.40	2.86	2.39	3.02	2.54	3.12	2.49	
38	2.07	1.99	2.25	2.15	2.60	2.38	2.76	2.39	2.81	2.37	2.91	2.50	3.00	2.45	
39	2.07	1.99	2.25	2.15	2.58	2.37	2.74	2.39	2.78	2.36	2.86	2.49	2.94	2.43	
41	2.07	1.99	2.24	2.14	2.50	2.35	2.63	2.35	2.66	2.32	2.73	2.44	2.80	2.38	
43	2.07	1.99	2.24	2.14	2.43	2.32	2.52	2.32	2.55	2.29	2.60	2.40	2.66	2.35	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 12 (m³/min)	-19.8	-20	1.86	1.86	1.86	1.86	1.86	
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	
	-15.7	-16	2.09	2.09	2.09	2.09	2.09	
	-13.7	-14	2.21	2.21	2.21	2.21	2.21	
	-11.7	-12	2.33	2.33	2.33	2.33	2.33	
	-9.6	-10	2.45	2.45	2.45	2.45	2.45	
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	
	-3.4	-4	2.85	2.84	2.84	2.81	2.78	
	-1.3	-2	2.94	2.94	2.93	2.87	2.82	
	0.8	0	3.10	3.06	3.02	2.91	2.80	
	3.9	3	3.37	3.25	3.13	2.95	2.78	
7.0	6	3.68	3.44	3.20	2.98	2.75		
10.1	9	3.66	3.42	3.19	2.96	2.73		
13.2	12	3.63	3.40	3.17	2.94	2.70		
16.9	15.5	3.60	3.37	3.14	2.91	2.68		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 9.5 (m³/min)	10			2.21	1.92	2.65	2.17	2.86	2.20	3.04	2.24	3.41	2.42	3.54	2.36
	12			2.21	1.92	2.65	2.17	2.86	2.20	3.04	2.24	3.40	2.42	3.53	2.36
	14			2.21	1.92	2.65	2.17	2.86	2.20	3.04	2.24	3.39	2.42	3.51	2.34
	16			2.21	1.92	2.65	2.17	2.86	2.20	3.03	2.23	3.37	2.40	3.50	2.34
	18			2.21	1.92	2.65	2.17	2.86	2.20	3.03	2.23	3.36	2.40	3.48	2.33
	20			2.21	1.92	2.65	2.17	2.86	2.20	3.02	2.23	3.35	2.40	3.47	2.33
	22			2.21	1.92	2.64	2.17	2.86	2.20	3.01	2.23	3.31	2.37	3.42	2.31
	24			2.21	1.92	2.64	2.17	2.86	2.20	3.00	2.21	3.26	2.36	3.37	2.30
	26			2.21	1.92	2.63	2.16	2.84	2.20	2.96	2.20	3.21	2.34	3.32	2.29
	28	2.00	1.90	2.20	1.92	2.62	2.16	2.81	2.19	2.93	2.19	3.16	2.33	3.27	2.28
	30	2.00	1.90	2.20	1.92	2.60	2.15	2.78	2.18	2.89	2.17	3.11	2.31	3.22	2.26
	32	2.00	1.90	2.19	1.91	2.58	2.14	2.75	2.17	2.86	2.16	3.07	2.29	3.17	2.24
34	2.00	1.90	2.19	1.91	2.57	2.14	2.72	2.16	2.81	2.15	3.00	2.27	3.10	2.22	
35	2.00	1.90	2.18	1.90	2.57	2.14	2.70	2.15	2.79	2.14	2.97	2.26	3.07	2.20	
36	2.00	1.90	2.18	1.90	2.55	2.13	2.69	2.14	2.76	2.13	2.91	2.24	3.01	2.19	
38	2.00	1.90	2.17	1.90	2.51	2.11	2.66	2.13	2.71	2.11	2.81	2.20	2.89	2.15	
39	2.00	1.90	2.17	1.90	2.49	2.11	2.65	2.13	2.68	2.09	2.75	2.18	2.83	2.13	
41	2.00	1.90	2.16	1.90	2.41	2.07	2.54	2.09	2.57	2.05	2.63	2.14	2.70	2.09	
43	2.00	1.90	2.16	1.90	2.34	2.04	2.43	2.04	2.46	2.01	2.51	2.10	2.57	2.03	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 9.5 (m³/min)	-19.8	-20	1.77	1.77	1.77	1.77	1.77	
	-17.8	-18	1.89	1.89	1.89	1.89	1.89	
	-15.7	-16	2.00	2.00	2.00	2.00	2.00	
	-13.7	-14	2.12	2.12	2.12	2.12	2.12	
	-11.7	-12	2.23	2.23	2.23	2.23	2.23	
	-9.6	-10	2.35	2.35	2.35	2.35	2.35	
	-7.5	-8	2.49	2.49	2.49	2.49	2.49	
	-5.5	-6	2.63	2.63	2.63	2.63	2.63	
	-3.4	-4	2.72	2.72	2.72	2.69	2.66	
	-1.3	-2	2.82	2.81	2.80	2.75	2.69	
	0.8	0	2.97	2.93	2.88	2.78	2.68	
	3.9	3	3.22	3.11	2.99	2.82	2.65	
7.0	6	3.52	3.29	3.06	2.85	2.63		
10.1	9	3.50	3.27	3.05	2.83	2.61		
13.2	12	3.47	3.25	3.03	2.81	2.59		
16.9	15.5	3.45	3.22	3.00	2.78	2.56		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 8.5 (m³/min)	10			2.16	1.81	2.59	2.05	2.80	2.08	2.98	2.12	3.34	2.29	3.46	2.23
	12			2.16	1.81	2.59	2.05	2.80	2.08	2.97	2.11	3.32	2.28	3.45	2.23
	14			2.16	1.81	2.59	2.05	2.80	2.08	2.97	2.11	3.31	2.28	3.43	2.22
	16			2.16	1.81	2.59	2.05	2.80	2.08	2.97	2.11	3.30	2.27	3.42	2.21
	18			2.16	1.81	2.59	2.05	2.80	2.08	2.96	2.11	3.29	2.27	3.40	2.21
	20			2.16	1.81	2.59	2.05	2.80	2.08	2.96	2.11	3.27	2.26	3.39	2.20
	22			2.16	1.81	2.59	2.05	2.80	2.08	2.94	2.10	3.23	2.24	3.34	2.19
	24			2.16	1.81	2.58	2.04	2.80	2.08	2.93	2.10	3.19	2.23	3.30	2.16
	26			2.16	1.81	2.57	2.04	2.77	2.07	2.90	2.09	3.14	2.21	3.25	2.15
	28	1.95	1.78	2.15	1.80	2.56	2.03	2.75	2.06	2.86	2.06	3.09	2.18	3.19	2.13
	30	1.95	1.78	2.15	1.80	2.54	2.02	2.72	2.05	2.83	2.05	3.04	2.17	3.15	2.12
	32	1.95	1.78	2.14	1.80	2.52	2.02	2.69	2.04	2.79	2.04	3.00	2.16	3.10	2.11
34	1.95	1.78	2.14	1.80	2.51	2.01	2.66	2.03	2.75	2.02	2.93	2.14	3.03	2.08	
35	1.95	1.78	2.13	1.79	2.51	2.01	2.64	2.03	2.73	2.02	2.90	2.12	3.00	2.07	
36	1.95	1.78	2.13	1.79	2.49	2.00	2.63	2.02	2.70	2.01	2.85	2.11	2.94	2.05	
38	1.95	1.78	2.13	1.79	2.45	1.99	2.60	2.01	2.65	1.99	2.75	2.07	2.83	2.02	
39	1.95	1.78	2.12	1.79	2.43	1.98	2.59	2.00	2.62	1.97	2.69	2.05	2.77	2.00	
41	1.95	1.78	2.12	1.79	2.36	1.95	2.48	1.96	2.51	1.93	2.57	2.00	2.64	1.95	
43	1.95	1.78	2.11	1.79	2.29	1.92	2.38	1.92	2.40	1.89	2.45	1.96	2.51	1.91	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 8.5 (m³/min)	-19.8	-20	1.72	1.72	1.72	1.72	1.72	
	-17.8	-18	1.83	1.83	1.83	1.83	1.83	
	-15.7	-16	1.94	1.94	1.94	1.94	1.94	
	-13.7	-14	2.06	2.06	2.06	2.06	2.06	
	-11.7	-12	2.17	2.17	2.17	2.17	2.17	
	-9.6	-10	2.28	2.28	2.28	2.28	2.28	
	-7.5	-8	2.42	2.42	2.42	2.42	2.42	
	-5.5	-6	2.55	2.55	2.55	2.55	2.55	
	-3.4	-4	2.64	2.64	2.64	2.61	2.58	
	-1.3	-2	2.73	2.72	2.72	2.67	2.61	
	0.8	0	2.88	2.84	2.80	2.70	2.60	
	3.9	3	3.13	3.01	2.90	2.74	2.58	
7.0	6	3.42	3.19	2.97	2.76	2.55		
10.1	9							

Model **FDTC36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 13 (m³/min)	10			2.95	2.83	3.53	3.24	3.82	3.29	4.06	3.32	4.55	3.59	4.72	3.51
	12			2.95	2.83	3.53	3.24	3.82	3.29	4.05	3.32	4.53	3.59	4.70	3.51
	14			2.95	2.83	3.53	3.24	3.82	3.29	4.05	3.32	4.51	3.58	4.68	3.50
	16			2.95	2.83	3.53	3.24	3.82	3.29	4.04	3.31	4.50	3.58	4.66	3.50
	18			2.95	2.83	3.53	3.24	3.82	3.29	4.04	3.31	4.48	3.57	4.64	3.49
	20			2.95	2.83	3.53	3.24	3.82	3.29	4.03	3.31	4.47	3.56	4.62	3.48
	22			2.95	2.83	3.53	3.24	3.82	3.29	4.01	3.30	4.41	3.54	4.56	3.46
	24			2.94	2.82	3.52	3.23	3.82	3.29	3.99	3.30	4.35	3.53	4.49	3.44
	26			2.94	2.82	3.51	3.23	3.78	3.27	3.95	3.28	4.28	3.50	4.43	3.43
	28	2.66	2.55	2.94	2.82	3.49	3.22	3.74	3.26	3.90	3.26	4.22	3.48	4.36	3.41
	30	2.66	2.55	2.93	2.81	3.47	3.21	3.71	3.25	3.86	3.24	4.15	3.46	4.29	3.38
	32	2.66	2.55	2.92	2.80	3.44	3.20	3.67	3.23	3.81	3.23	4.09	3.44	4.23	3.37
	34	2.66	2.55	2.91	2.79	3.43	3.20	3.62	3.21	3.75	3.20	4.00	3.41	4.14	3.34
35	2.66	2.55	2.91	2.79	3.42	3.20	3.60	3.21	3.72	3.19	3.96	3.40	4.09	3.32	
36	2.66	2.55	2.91	2.79	3.39	3.18	3.58	3.20	3.68	3.18	3.89	3.38	4.02	3.30	
38	2.66	2.55	2.90	2.78	3.34	3.16	3.55	3.19	3.61	3.15	3.74	3.33	3.86	3.26	
39	2.66	2.55	2.89	2.77	3.32	3.16	3.53	3.18	3.58	3.14	3.67	3.30	3.78	3.23	
41	2.66	2.55	2.88	2.76	3.22	3.09	3.38	3.13	3.43	3.09	3.51	3.25	3.60	3.17	
43	2.66	2.55	2.87	2.76	3.12	3.00	3.24	3.07	3.28	3.03	3.35	3.20	3.42	3.12	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 13 (m³/min)	-19.8	-20	2.32	2.32	2.32	2.32
-17.8	-18		2.47	2.47	2.47	2.47	2.47	
-15.7	-16		2.62	2.62	2.62	2.62	2.62	
-13.7	-14		2.77	2.77	2.77	2.77	2.77	
-11.7	-12		2.92	2.92	2.92	2.92	2.92	
-9.6	-10		3.07	3.07	3.07	3.07	3.07	
-7.5	-8		3.25	3.25	3.25	3.25	3.25	
-5.5	-6		3.44	3.44	3.44	3.44	3.44	
-3.4	-4		3.56	3.56	3.55	3.52	3.48	
-1.3	-2		3.68	3.67	3.66	3.59	3.52	
0.8	0		3.88	3.83	3.77	3.64	3.50	
3.9	3		4.21	4.06	3.91	3.69	3.47	
7.0	6		4.60	4.30	4.00	3.72	3.44	
10.1	9	4.57	4.28	3.99	3.70	3.41		
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m³/min)	10			2.85	2.47	3.41	2.79	3.69	2.84	3.92	2.87	4.40	3.10	4.56	3.02
	12			2.85	2.47	3.41	2.79	3.69	2.84	3.92	2.87	4.38	3.09	4.54	3.02
	14			2.85	2.47	3.41	2.79	3.69	2.84	3.91	2.87	4.36	3.08	4.53	3.01
	16			2.85	2.47	3.41	2.79	3.69	2.84	3.91	2.87	4.35	3.08	4.51	3.01
	18			2.85	2.47	3.41	2.79	3.69	2.84	3.90	2.86	4.33	3.07	4.49	3.00
	20			2.85	2.47	3.41	2.79	3.69	2.84	3.90	2.86	4.32	3.07	4.47	2.99
	22			2.85	2.47	3.41	2.79	3.69	2.84	3.88	2.86	4.26	3.05	4.41	2.97
	24			2.84	2.46	3.41	2.79	3.69	2.84	3.86	2.85	4.21	3.03	4.34	2.95
	26			2.84	2.46	3.39	2.78	3.65	2.83	3.82	2.83	4.14	3.01	4.28	2.93
	28	2.58	2.44	2.84	2.46	3.38	2.77	3.62	2.81	3.77	2.82	4.07	2.98	4.21	2.91
	30	2.58	2.44	2.83	2.46	3.35	2.76	3.58	2.80	3.73	2.80	4.01	2.96	4.15	2.89
	32	2.58	2.44	2.83	2.46	3.32	2.75	3.55	2.78	3.68	2.78	3.95	2.94	4.08	2.87
	34	2.58	2.44	2.82	2.45	3.31	2.74	3.50	2.77	3.62	2.75	3.87	2.91	4.00	2.84
35	2.58	2.44	2.81	2.45	3.31	2.74	3.48	2.76	3.60	2.75	3.83	2.90	3.96	2.83	
36	2.58	2.44	2.81	2.45	3.28	2.73	3.46	2.75	3.56	2.73	3.76	2.88	3.88	2.81	
38	2.58	2.44	2.80	2.44	3.23	2.71	3.43	2.74	3.49	2.71	3.62	2.83	3.73	2.76	
39	2.58	2.44	2.80	2.44	3.21	2.71	3.41	2.73	3.46	2.70	3.55	2.81	3.65	2.74	
41	2.58	2.44	2.79	2.44	3.11	2.66	3.27	2.68	3.31	2.64	3.39	2.75	3.48	2.68	
43	2.58	2.44	2.78	2.44	3.01	2.62	3.13	2.62	3.17	2.58	3.24	2.70	3.31	2.63	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 10 (m³/min)	-19.8	-20	2.22	2.22	2.22	2.22
-17.8	-18		2.36	2.36	2.36	2.36	2.36	
-15.7	-16		2.50	2.50	2.50	2.50	2.50	
-13.7	-14		2.64	2.64	2.64	2.64	2.64	
-11.7	-12		2.79	2.79	2.79	2.79	2.79	
-9.6	-10		2.93	2.93	2.93	2.93	2.93	
-7.5	-8		3.11	3.11	3.11	3.11	3.11	
-5.5	-6		3.29	3.29	3.29	3.29	3.29	
-3.4	-4		3.40	3.40	3.39	3.36	3.32	
-1.3	-2		3.51	3.50	3.50	3.43	3.36	
0.8	0		3.71	3.65	3.60	3.47	3.34	
3.9	3		4.02	3.88	3.73	3.52	3.31	
7.0	6		4.39	4.11	3.82	3.55	3.29	
10.1	9	4.36	4.09	3.81	3.53	3.26		
13.2	12	4.34	4.06	3.78	3.50	3.23		
16.9	15.5	4.30	4.03	3.75	3.47	3.19		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m³/min)	10			2.74	2.31	3.27	2.60	3.54	2.66	3.77	2.70	4.22	2.91	4.38	2.84
	12			2.74	2.31	3.27	2.60	3.54	2.66	3.76	2.69	4.20	2.90	4.36	2.83
	14			2.74	2.31	3.27	2.60	3.54	2.66	3.76	2.69	4.19	2.90	4.34	2.82
	16			2.74	2.31	3.27	2.60	3.54	2.66	3.75	2.69	4.17	2.89	4.32	2.82
	18			2.74	2.31	3.27	2.60	3.54	2.66	3.75	2.69	4.16	2.89	4.31	2.81
	20			2.74	2.31	3.27	2.60	3.54	2.66	3.74	2.68	4.14	2.88	4.29	2.81
	22			2.73	2.30	3.27	2.60	3.54	2.66	3.72	2.68	4.09	2.86	4.23	2.79
	24			2.73	2.30	3.27	2.60	3.54	2.66	3.71	2.67	4.04	2.84	4.17	2.77
	26			2.73	2.30	3.26	2.60	3.51	2.65	3.66	2.65	3.97	2.82	4.11	2.75
	28	2.47	2.27	2.73	2.30	3.24	2.59	3.47	2.63	3.62	2.63	3.91	2.80	4.04	2.72
	30	2.47	2.27	2.72	2.30	3.21	2.58	3.44	2.62	3.58	2.62	3.85	2.77	3.98	2.70
	32	2.47	2.27	2.71	2.30	3.19	2.57	3.41	2.61	3.54	2.60	3.79	2.75	3.92	2.68
	34	2.47	2.27	2.70	2.29	3.18	2.56	3.36	2.59	3.48	2.58	3.71	2.72	3.84	2.65
35	2.47	2.27	2.70	2.29	3.17	2.56	3.34	2.58	3.45	2.57	3.67	2.71	3.80	2.64	
36	2.47	2.27	2.70	2.29	3.15	2.55	3.32	2.57	3.42	2.56	3.61	2.69	3.73	2.62	
38	2.47	2.27	2.69	2.28	3.10	2.53	3.29	2.56	3.35	2.53	3.47	2.64	3.58	2.57	
39	2.47	2.27	2.68	2.28	3.08	2.52	3.27	2.55	3.32	2.51	3.41	2.61	3.50	2.54	
41	2.47	2.27	2.68	2.28	2.99	2.48	3.14	2.49	3.18	2.45	3.26	2.56	3.34	2.49	
43	2.47	2.27	2.67	2.27	2.89	2.44	3.01	2.44	3.04	2.40	3.11	2.51	3.18	2.44	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 9 (m³/min)	-19.8	-20	2.13	2.13	2.13	2.13
-17.8	-18		2.27	2.27	2.27	2.27	2.27	
-15.7	-16		2.40	2.40	2.40	2.40	2.40	
-13.7	-14		2.54	2.54	2.54	2.54	2.54	
-11.7	-12		2.68	2.68	2.68	2.68	2.68	
-9.6	-10		2.81	2.81	2.81	2.81	2.81	
-7.5	-8		2.98	2.98	2.98	2.98	2.98	
-5.5	-6		3.16	3.16	3.16	3.16	3.16	
-3.4	-4		3.27	3.26	3.25	3.23	3.19	
-1.3	-2		3.38	3.37	3.36	3.29	3.23	
0.8	0		3.56	3.51	3.46	3.34	3.21	
3.9	3		3.86	3.73	3.59	3.39	3.18	
7.0	6		4.22	3.				

Model **FDTC56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 16 (m³/min)	10			4.59	3.91	5.49	4.42	5.94	4.50	6.32	4.57	7.07	4.94	7.35	4.82
	12			4.59	3.91	5.49	4.42	5.94	4.50	6.31	4.56	7.05	4.93	7.31	4.80
	14			4.59	3.91	5.49	4.42	5.94	4.50	6.30	4.56	7.02	4.92	7.28	4.80
	16			4.59	3.91	5.49	4.42	5.94	4.50	6.29	4.56	7.00	4.91	7.25	4.79
	18			4.59	3.91	5.49	4.42	5.94	4.50	6.28	4.55	6.97	4.90	7.22	4.78
	20			4.59	3.91	5.49	4.42	5.94	4.50	6.27	4.55	6.95	4.89	7.19	4.77
	22			4.58	3.91	5.49	4.42	5.94	4.50	6.24	4.52	6.86	4.86	7.09	4.74
	24			4.58	3.91	5.48	4.41	5.94	4.50	6.21	4.51	6.77	4.83	6.99	4.70
	26			4.57	3.91	5.46	4.41	5.88	4.48	6.14	4.48	6.66	4.79	6.88	4.66
	28	4.14	3.87	4.57	3.91	5.43	4.39	5.82	4.46	6.07	4.46	6.56	4.75	6.78	4.63
	30	4.14	3.87	4.56	3.90	5.39	4.38	5.77	4.44	6.00	4.43	6.46	4.71	6.67	4.59
	32	4.14	3.87	4.55	3.90	5.35	4.36	5.71	4.41	5.93	4.41	6.36	4.68	6.57	4.56
	34	4.14	3.87	4.53	3.89	5.33	4.35	5.64	4.39	5.83	4.37	6.22	4.62	6.44	4.51
	35	4.14	3.87	4.52	3.88	5.32	4.35	5.60	4.37	5.79	4.35	6.16	4.60	6.37	4.49
36	4.14	3.87	4.52	3.88	5.28	4.33	5.57	4.36	5.73	4.33	6.05	4.56	6.25	4.45	
38	4.14	3.87	4.51	3.88	5.20	4.30	5.52	4.34	5.62	4.29	5.82	4.49	6.00	4.37	
39	4.14	3.87	4.50	3.88	5.16	4.29	5.49	4.33	5.56	4.27	5.71	4.44	5.87	4.33	
41	4.14	3.87	4.49	3.87	5.00	4.22	5.26	4.24	5.33	4.19	5.46	4.36	5.60	4.22	
43	4.14	3.87	4.47	3.86	4.85	4.17	5.04	4.16	5.10	4.10	5.21	4.25	5.32	4.13	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 16 (m³/min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	
	-3.4	-4	5.61	5.60	5.59	5.54	5.48	
	-1.3	-2	5.80	5.78	5.76	5.65	5.54	
	0.8	0	6.11	6.02	5.94	5.73	5.51	
	3.9	3	6.63	6.39	6.16	5.81	5.47	
	7.0	6	7.25	6.77	6.30	5.86	5.42	
	10.1	9	7.20	6.74	6.28	5.82	5.37	
13.2	12	7.15	6.69	6.24	5.78	5.32		
16.9	15.5	7.10	6.64	6.18	5.73	5.27		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 13 (m³/min)	10			4.51	3.53	5.39	3.99	5.83	4.10	6.20	4.15	6.95	4.47	7.21	4.35
	12			4.51	3.53	5.39	3.99	5.83	4.10	6.19	4.15	6.92	4.46	7.18	4.34
	14			4.51	3.53	5.39	3.99	5.83	4.10	6.19	4.15	6.90	4.45	7.15	4.33
	16			4.51	3.53	5.39	3.99	5.83	4.10	6.18	4.15	6.87	4.44	7.12	4.32
	18			4.51	3.53	5.39	3.99	5.83	4.10	6.17	4.14	6.85	4.43	7.09	4.31
	20			4.51	3.53	5.39	3.99	5.83	4.10	6.16	4.13	6.82	4.42	7.06	4.30
	22			4.50	3.53	5.39	3.99	5.83	4.10	6.13	4.12	6.74	4.39	6.96	4.27
	24			4.50	3.53	5.39	3.99	5.83	4.10	6.10	4.11	6.65	4.36	6.87	4.24
	26			4.49	3.52	5.36	3.98	5.78	4.07	6.03	4.08	6.54	4.32	6.76	4.19
	28	4.07	3.47	4.49	3.52	5.34	3.97	5.72	4.04	5.96	4.05	6.44	4.28	6.65	4.16
	30	4.07	3.47	4.48	3.52	5.29	3.95	5.67	4.02	5.89	4.02	6.34	4.24	6.56	4.12
	32	4.07	3.47	4.47	3.51	5.25	3.94	5.61	4.00	5.82	3.99	6.24	4.20	6.46	4.09
	34	4.07	3.47	4.45	3.50	5.23	3.93	5.54	3.97	5.73	3.96	6.11	4.15	6.32	4.04
	35	4.07	3.47	4.44	3.50	5.23	3.93	5.50	3.95	5.68	3.93	6.05	4.13	6.26	4.01
36	4.07	3.47	4.44	3.50	5.19	3.90	5.47	3.94	5.63	3.91	5.94	4.08	6.13	3.97	
38	4.07	3.47	4.43	3.49	5.11	3.87	5.42	3.92	5.52	3.87	5.72	4.01	5.89	3.89	
39	4.07	3.47	4.42	3.49	5.07	3.85	5.39	3.91	5.46	3.85	5.61	3.96	5.77	3.85	
41	4.07	3.47	4.41	3.48	4.92	3.79	5.17	3.81	5.23	3.75	5.36	3.87	5.50	3.76	
43	4.07	3.47	4.39	3.47	4.76	3.71	4.95	3.72	5.00	3.65	5.11	3.78	5.23	3.67	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 13 (m³/min)	-19.8	-20	3.57	3.57	3.57	3.57	3.57	
	-17.8	-18	3.80	3.80	3.80	3.80	3.80	
	-15.7	-16	4.03	4.03	4.03	4.03	4.03	
	-13.7	-14	4.26	4.26	4.26	4.26	4.26	
	-11.7	-12	4.49	4.49	4.49	4.49	4.49	
	-9.6	-10	4.72	4.72	4.72	4.72	4.72	
	-7.5	-8	5.00	5.00	5.00	5.00	5.00	
	-5.5	-6	5.29	5.29	5.29	5.29	5.29	
	-3.4	-4	5.47	5.47	5.46	5.40	5.35	
	-1.3	-2	5.66	5.64	5.63	5.52	5.41	
	0.8	0	5.97	5.88	5.80	5.59	5.38	
	3.9	3	6.47	6.24	6.01	5.67	5.34	
	7.0	6	7.07	6.61	6.15	5.72	5.29	
	10.1	9	7.03	6.58	6.13	5.68	5.24	
13.2	12	6.98	6.53	6.09	5.64	5.20		
16.9	15.5	6.93	6.48	6.03	5.59	5.14		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 10 (m³/min)	10			4.24	3.09	5.07	3.51	5.48	3.61	5.83	3.67	6.53	3.96	6.78	3.84
	12			4.24	3.09	5.07	3.51	5.48	3.61	5.82	3.67	6.51	3.95	6.75	3.83
	14			4.24	3.09	5.07	3.51	5.48	3.61	5.81	3.67	6.48	3.94	6.72	3.82
	16			4.24	3.09	5.07	3.51	5.48	3.61	5.81	3.67	6.46	3.92	6.69	3.81
	18			4.24	3.09	5.07	3.51	5.48	3.61	5.80	3.66	6.44	3.92	6.66	3.80
	20			4.24	3.09	5.07	3.51	5.48	3.61	5.79	3.66	6.41	3.90	6.64	3.78
	22			4.23	3.09	5.06	3.51	5.48	3.61	5.76	3.64	6.33	3.87	6.54	3.75
	24			4.23	3.09	5.06	3.51	5.48	3.61	5.74	3.63	6.25	3.84	6.45	3.71
	26			4.22	3.08	5.04	3.49	5.43	3.59	5.67	3.60	6.15	3.79	6.35	3.67
	28	3.83	3.03	4.22	3.08	5.01	3.48	5.38	3.56	5.60	3.57	6.05	3.75	6.26	3.63
	30	3.83	3.03	4.21	3.08	4.98	3.47	5.33	3.54	5.54	3.54	5.96	3.70	6.16	3.59
	32	3.83	3.03	4.20	3.07	4.94	3.45	5.27	3.51	5.47	3.51	5.87	3.67	6.07	3.56
	34	3.83	3.03	4.18	3.06	4.92	3.44	5.20	3.48	5.38	3.47	5.74	3.62	5.94	3.51
	35	3.83	3.03	4.18	3.06	4.91	3.44	5.17	3.47	5.34	3.45	5.68	3.59	5.88	3.49
36	3.83	3.03	4.17	3.06	4.87	3.41	5.14	3.45	5.29	3.43	5.58	3.55	5.77	3.45	
38	3.83	3.03	4.16	3.05	4.80	3.38	5.09	3.43	5.19	3.39	5.38	3.47	5.54	3.36	
39	3.83	3.03	4.16	3.05	4.76	3.38	5.07	3.42	5.14	3.37	5.27	3.43	5.42	3.32	
41	3.83	3.03	4.14	3.04	4.62	3.30	4.86	3.33	4.92	3.27	5.04	3.34	5.17	3.23	
43	3.83	3.03	4.13	3.03	4.48	3.23	4.65	3.23	4.70	3.17	4.81	3.25	4.92	3.14	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 10 (m³/min)	-19.8	-20	3.32	3.32	3.32	3.32	3.32	
	-17.8	-18	3.54	3.54	3.54	3.54	3.54	
	-15.7	-16	3.75	3.75	3.75	3.75	3.75	
	-13.7	-14	3.97	3.97	3.97	3.97	3.97	
	-11.7	-12	4.18	4.18	4.18	4.18	4.18	
	-9.6	-10	4.39	4.39	4.39	4.39	4.39	
	-7.5	-8	4.66	4.66	4.66	4.66	4.66	
	-5.5	-6	4.93	4.93	4.93	4.93	4.93	
	-3.4	-4	5.10	5.09	5.09	5.04	4.99	
	-1.3	-2	5.27	5.26	5.24	5.14	5.04	
	0.8	0	5.56	5.48	5.40	5.21	5.01	
	3.9	3	6.03	5.82	5			

Model **FDTW45KXE6F**

Cooling mode

(kW)

Heating mode

(kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 14.5 (m ³ /min)	10			3.69	3.00	4.41	3.39	4.77	3.46	5.07	3.51	5.68	3.78	5.90	3.70
	12			3.69	3.00	4.41	3.39	4.77	3.46	5.07	3.51	5.68	3.78	5.88	3.69
	14			3.69	3.00	4.41	3.39	4.77	3.46	5.06	3.51	5.64	3.77	5.85	3.68
	16			3.69	3.00	4.41	3.39	4.77	3.46	5.05	3.51	5.62	3.76	5.83	3.68
	18			3.69	3.00	4.41	3.39	4.77	3.46	5.05	3.51	5.60	3.76	5.80	3.67
	20			3.69	3.00	4.41	3.39	4.77	3.46	5.04	3.50	5.58	3.75	5.78	3.66
	22			3.68	3.00	4.41	3.39	4.77	3.46	5.02	3.50	5.51	3.73	5.70	3.64
	24			3.68	3.00	4.41	3.39	4.77	3.46	4.99	3.48	5.44	3.70	5.62	3.61
	26			3.68	3.00	4.39	3.39	4.73	3.45	4.93	3.45	5.35	3.67	5.53	3.58
	28	3.33	2.96	3.67	2.99	4.37	3.38	4.68	3.43	4.88	3.43	5.27	3.64	5.44	3.54
	30	3.33	2.96	3.66	2.99	4.33	3.36	4.64	3.42	4.82	3.41	5.19	3.61	5.38	3.51
	32	3.33	2.96	3.65	2.99	4.30	3.35	4.59	3.40	4.76	3.39	5.11	3.58	5.28	3.49
	34	3.33	2.96	3.64	2.98	4.28	3.34	4.53	3.37	4.69	3.36	5.00	3.54	5.17	3.45
	35	3.33	2.96	3.64	2.98	4.28	3.34	4.50	3.36	4.65	3.35	4.95	3.52	5.12	3.45
36	3.33	2.96	3.63	2.98	4.24	3.32	4.48	3.35	4.60	3.33	4.86	3.49	5.02	3.38	
38	3.33	2.96	3.62	2.97	4.18	3.30	4.43	3.33	4.52	3.29	4.68	3.41	4.82	3.33	
39	3.33	2.96	3.62	2.97	4.15	3.28	4.41	3.32	4.47	3.28	4.59	3.39	4.72	3.30	
41	3.33	2.96	3.61	2.96	4.02	3.23	4.23	3.25	4.28	3.20	4.39	3.32	4.50	3.23	
43	3.33	2.96	3.59	2.96	3.90	3.18	4.05	3.18	4.09	3.13	4.18	3.24	4.28	3.15	

Air flow	Outdoor air temperature		Indoor air temperature								
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	16 °CDB	18 °CDB	20 °CDB	24 °CDB
P-Hi 14.5 (m ³ /min)	-19.8	-20	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
	-17.8	-18	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09
	-15.7	-16	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27
	-13.7	-14	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46
	-11.7	-12	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65
	-9.6	-10	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
	-7.5	-8	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07
	-5.5	-6	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
	-3.4	-4	4.45	4.44	4.44	4.44	4.39	4.39	4.35	4.35	4.35
	-1.3	-2	4.60	4.59	4.58	4.58	4.49	4.49	4.40	4.40	4.40
	0.8	0	4.85	4.78	4.71	4.71	4.54	4.54	4.38	4.38	4.38
	3.9	3	5.26	5.08	4.89	4.89	4.61	4.61	4.34	4.34	4.34
	7.0	6	5.75	5.38	5.00	5.00	4.65	4.65	4.30	4.30	4.30
	10.1	9	5.71	5.35	4.98	4.98	4.62	4.62	4.26	4.26	4.26
13.2	12	5.68	5.31	4.95	4.95	4.59	4.59	4.23	4.23	4.23	
16.9	15.5	5.63	5.27	4.91	4.91	4.54	4.54	4.18	4.18	4.18	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 12 (m ³ /min)	10			3.20	2.57	3.82	2.90	4.14	2.98	4.40	3.02	4.93	3.26	5.12	3.18
	12			3.20	2.57	3.82	2.90	4.14	2.98	4.40	3.02	4.91	3.25	5.10	3.16
	14			3.20	2.57	3.82	2.90	4.14	2.98	4.39	3.02	4.80	3.25	5.08	3.16
	16			3.20	2.57	3.82	2.90	4.14	2.98	4.38	3.01	4.88	3.24	5.05	3.15
	18			3.20	2.57	3.82	2.90	4.14	2.98	4.38	3.01	4.86	3.23	5.03	3.14
	20			3.20	2.57	3.82	2.90	4.14	2.98	4.37	3.00	4.84	3.22	5.01	3.13
	22			3.19	2.56	3.82	2.90	4.14	2.98	4.35	3.00	4.78	3.20	4.94	3.10
	24			3.19	2.56	3.82	2.90	4.14	2.98	4.33	2.99	4.72	3.18	4.87	3.08
	26			3.19	2.56	3.80	2.90	4.10	2.96	4.28	2.97	4.64	3.13	4.80	3.06
	28	2.89	2.53	3.19	2.56	3.79	2.89	4.06	2.94	4.23	2.95	4.57	3.11	4.72	3.03
	30	2.89	2.53	3.18	2.56	3.76	2.88	4.02	2.92	4.18	2.93	4.50	3.09	4.65	3.01
	32	2.89	2.53	3.17	2.56	3.73	2.87	3.98	2.90	4.13	2.89	4.43	3.07	4.58	2.99
	34	2.89	2.53	3.16	2.55	3.71	2.86	3.93	2.89	4.07	2.88	4.34	3.03	4.49	2.96
	35	2.89	2.53	3.15	2.55	3.71	2.86	3.90	2.88	4.03	2.86	4.29	3.01	4.44	2.94
36	2.89	2.53	3.15	2.55	3.68	2.84	3.88	2.87	3.99	2.85	4.21	2.98	4.35	2.91	
38	2.89	2.53	3.14	2.55	3.62	2.82	3.84	2.85	3.92	2.82	4.06	2.92	4.18	2.85	
39	2.89	2.53	3.14	2.55	3.60	2.81	3.83	2.85	3.88	2.81	3.98	2.90	4.09	2.80	
41	2.89	2.53	3.13	2.54	3.49	2.76	3.67	2.78	3.71	2.74	3.81	2.83	3.90	2.75	
43	2.89	2.53	3.12	2.54	3.38	2.72	3.51	2.71	3.55	2.68	3.63	2.77	3.71	2.69	

Air flow	Outdoor air temperature		Indoor air temperature								
	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	16 °CDB	18 °CDB	20 °CDB	24 °CDB
Hi 12 (m ³ /min)	-19.8	-20	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47
	-17.8	-18	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
	-15.7	-16	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78
	-13.7	-14	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
	-11.7	-12	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
	-9.6	-10	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26
	-7.5	-8	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46
	-5.5	-6	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
	-3.4	-4	3.79	3.78	3.77	3.77	3.74	3.74	3.70	3.70	3.70
	-1.3	-2	3.91	3.90	3.89	3.89	3.82	3.82	3.74	3.74	3.74
	0.8	0	4.13	4.07	4.01	4.01	3.87	3.87	3.72	3.72	3.72
	3.9	3	4.48	4.32	4.16	4.16	3.92	3.92	3.69	3.69	3.69
	7.0	6	4.89	4.57	4.25	4.25	3.96	3.96	3.66	3.66	3.66
	10.1	9	4.86	4.55	4.24	4.24	3.93	3.93	3.63	3.63	3.63
13.2	12	4.83	4.52	4.21	4.21	3.90	3.90	3.59	3.59	3.59	
16.9	15.5	4.79	4.48	4.17	4.17	3.87	3.87	3.56	3.56	3.56	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 10 (m ³ /min)	10			2.77	2.20	3.31	2.49	3.58	2.54	3.81	2.59	4.27	2.79	4.43	2.72
	12			2.77	2.20	3.31	2.49	3.58	2.54	3.80	2.58	4.25	2.78	4.41	2.71
	14			2.77	2.20	3.31	2.49	3.58	2.54	3.80	2.58	4.23	2.78	4.39	2.70
	16			2.77	2.20	3.31	2.49	3.58	2.54	3.79	2.58	4.22	2.77	4.37	2.70
	18			2.77	2.20	3.31	2.49	3.58	2.54	3.79	2.58	4.20	2.76	4.35	2.67
	20			2.77	2.20	3.31	2.49	3.58	2.54	3.78	2.57	4.19	2.76	4.33	2.67
	22			2.76	2.19	3.31	2.49	3.58	2.54	3.76	2.57	4.14	2.74	4.27	2.65
	24			2.76	2.19	3.31	2.49	3.58	2.54	3.75	2.56	4.08	2.71	4.21	2.64
	26			2.76	2.19	3.29	2.48	3.55	2.53	3.70	2.53	4.02	2.69	4.15	2.61
	28	2.50	2.17	2.76	2.19	3.28	2.48	3.51	2.52	3.66	2.52	3.95	2.67	4.09	2.59
	30	2.50	2.17	2.75	2.19	3.25	2.46	3.48	2.51	3.62	2.50	3.89	2.64	4.02	2.57
	32	2.50	2.17	2.74	2.19	3.22	2.45	3.44	2.49	3.57	2.49	3.83	2.62	3.98	2.55
	34	2.50	2.17	2.73	2.18	3.21	2.45	3.40	2.47	3.52	2.47	3.75	2.59	3.88	2.52
	35	2.50	2.17	2.73	2.18	3.21	2.45	3.38	2.46	3.49	2.46	3.71	2.57	3.84	2.51
36	2.50	2.17	2.72	2.18	3.18	2.43	3.36	2.46	3.45	2.44	3.64	2.55	3.77	2.49	
38	2.50	2.17	2.72	2.18	3.13	2.41	3.33	2.44	3.39	2.41	3.51	2.50	3.62	2.42	
39	2.50	2.17	2.71	2.18	3.11	2.40	3.31	2.43	3.35</						

Model **FDTW56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 14.5 (m³/min)	10	4.59	3.57	5.49	4.05	5.94	4.15	6.32	4.21	7.07	4.54	7.35	4.41		
	12	4.59	3.57	5.49	4.05	5.94	4.15	6.31	4.21	7.05	4.53	7.31	4.39		
	14	4.59	3.57	5.49	4.05	5.94	4.15	6.30	4.20	7.02	4.50	7.28	4.39		
	16	4.59	3.57	5.49	4.05	5.94	4.15	6.29	4.20	7.00	4.49	7.25	4.38		
	18	4.59	3.57	5.49	4.05	5.94	4.15	6.28	4.20	6.97	4.48	7.22	4.37		
	20	4.59	3.57	5.49	4.05	5.94	4.15	6.27	4.19	6.95	4.48	7.19	4.36		
	22	4.58	3.56	5.49	4.05	5.94	4.15	6.24	4.17	6.86	4.45	7.09	4.32		
	24	4.58	3.56	5.48	4.04	5.94	4.15	6.21	4.16	6.77	4.42	6.99	4.28		
	26	4.57	3.56	5.46	4.03	5.88	4.12	6.14	4.13	6.66	4.37	6.88	4.24		
	28	4.14	3.51	4.57	3.56	5.43	4.02	5.82	4.08	6.07	4.11	6.56	4.33	6.78	4.21
	30	4.14	3.51	4.56	3.55	5.39	4.00	5.77	4.07	6.00	4.06	6.46	4.29	6.67	4.17
	32	4.14	3.51	4.55	3.55	5.35	3.99	5.71	4.04	5.93	4.03	6.36	4.25	6.57	4.14
	34	4.14	3.51	4.53	3.54	5.33	3.98	5.64	4.02	5.83	4.00	6.22	4.20	6.44	4.09
	35	4.14	3.51	4.52	3.54	5.32	3.97	5.60	4.00	5.79	3.98	6.16	4.17	6.37	4.06
36	4.14	3.51	4.52	3.54	5.28	3.95	5.57	3.99	5.73	3.96	6.05	4.14	6.25	4.00	
38	4.14	3.51	4.51	3.53	5.20	3.92	5.52	3.97	5.62	3.92	5.82	4.03	6.00	3.93	
39	4.14	3.51	4.50	3.53	5.16	3.90	5.49	3.95	5.56	3.89	5.71	4.00	5.87	3.89	
41	4.14	3.51	4.49	3.53	5.00	3.83	5.26	3.86	5.33	3.80	5.46	3.91	5.60	3.80	
43	4.14	3.51	4.47	3.52	4.85	3.77	5.04	3.76	5.10	3.71	5.21	3.83	5.32	3.70	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
P-Hi 14.5 (m³/min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65		
	-17.8	-18	3.89	3.89	3.89	3.89	3.89		
	-15.7	-16	4.12	4.12	4.12	4.12	4.12		
	-13.7	-14	4.36	4.36	4.36	4.36	4.36		
	-11.7	-12	4.59	4.59	4.59	4.59	4.59		
	-9.6	-10	4.83	4.83	4.83	4.83	4.83		
	-7.5	-8	5.12	5.12	5.12	5.12	5.12		
	-5.5	-6	5.42	5.42	5.42	5.42	5.42		
	-3.4	-4	5.61	5.60	5.59	5.54	5.48		
	-1.3	-2	5.80	5.78	5.76	5.65	5.54		
	0.8	0	6.11	6.02	5.94	5.73	5.51		
	3.9	3	6.63	6.39	6.16	5.81	5.47		
	7.0	6	7.25	6.77	6.30	5.86	5.42		
	10.1	9	7.20	6.74	6.28	5.82	5.37		
13.2	12	7.15	6.69	6.24	5.78	5.32			
16.9	15.5	7.10	6.64	6.18	5.73	5.27			

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 12 (m³/min)	10	3.98	3.04	4.76	3.45	5.15	3.54	5.48	3.59	6.14	3.88	6.37	3.77		
	12	3.98	3.04	4.76	3.45	5.15	3.54	5.47	3.59	6.11	3.87	6.34	3.76		
	14	3.98	3.04	4.76	3.45	5.15	3.54	5.46	3.59	6.09	3.86	6.32	3.75		
	16	3.98	3.04	4.76	3.45	5.15	3.54	5.46	3.59	6.07	3.85	6.29	3.74		
	18	3.98	3.04	4.76	3.45	5.15	3.54	5.45	3.58	6.05	3.84	6.28	3.73		
	20	3.98	3.04	4.76	3.45	5.15	3.54	5.44	3.58	6.03	3.84	6.23	3.72		
	22	3.98	3.04	4.76	3.45	5.15	3.54	5.42	3.57	5.95	3.80	6.15	3.69		
	24	3.97	3.04	4.76	3.45	5.15	3.54	5.39	3.55	5.87	3.77	6.06	3.65		
	26	3.97	3.04	4.73	3.44	5.10	3.52	5.33	3.53	5.78	3.73	5.97	3.61		
	28	3.59	2.98	3.96	3.04	4.71	3.43	5.05	3.50	5.26	3.50	5.69	3.59	5.88	3.58
	30	3.59	2.98	3.95	3.03	4.68	3.41	5.00	3.47	5.20	3.47	5.60	3.65	5.79	3.55
	32	3.59	2.98	3.94	3.03	4.64	3.40	4.95	3.45	5.14	3.45	5.51	3.62	5.70	3.52
	34	3.59	2.98	3.93	3.02	4.62	3.38	4.89	3.43	5.06	3.42	5.40	3.58	5.58	3.48
	35	3.59	2.98	3.92	3.01	4.61	3.38	4.86	3.41	5.02	3.40	5.34	3.56	5.52	3.45
36	3.59	2.98	3.92	3.01	4.58	3.36	4.83	3.40	4.97	3.38	5.24	3.52	5.42	3.42	
38	3.59	2.98	3.91	3.01	4.51	3.33	4.78	3.38	4.87	3.34	5.05	3.44	5.20	3.35	
39	3.59	2.98	3.91	3.01	4.48	3.32	4.76	3.37	4.83	3.31	4.96	3.41	5.10	3.31	
41	3.59	2.98	3.89	3.00	4.34	3.26	4.57	3.28	4.62	3.23	4.74	3.33	4.86	3.21	
43	3.59	2.98	3.88	3.00	4.21	3.20	4.37	3.20	4.42	3.15	4.52	3.24	4.62	3.14	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
Hi 12 (m³/min)	-19.8	-20	3.11	3.11	3.11	3.11	3.11		
	-17.8	-18	3.31	3.31	3.31	3.31	3.31		
	-15.7	-16	3.51	3.51	3.51	3.51	3.51		
	-13.7	-14	3.71	3.71	3.71	3.71	3.71		
	-11.7	-12	3.91	3.91	3.91	3.91	3.91		
	-9.6	-10	4.11	4.11	4.11	4.11	4.11		
	-7.5	-8	4.36	4.36	4.36	4.36	4.36		
	-5.5	-6	4.61	4.61	4.61	4.61	4.61		
	-3.4	-4	4.77	4.76	4.76	4.71	4.66		
	-1.3	-2	4.93	4.92	4.90	4.81	4.72		
	0.8	0	5.20	5.12	5.05	4.87	4.69		
	3.9	3	5.64	5.44	5.24	4.94	4.65		
	7.0	6	6.16	5.76	5.36	4.98	4.61		
	10.1	9	6.12	5.73	5.34	4.95	4.57		
13.2	12	6.08	5.69	5.31	4.92	4.53			
16.9	15.5	6.04	5.65	5.26	4.87	4.48			

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 10 (m³/min)	10	3.44	2.60	4.12	2.95	4.45	3.03	4.74	3.08	5.31	3.32	5.51	3.23		
	12	3.44	2.60	4.12	2.95	4.45	3.03	4.73	3.08	5.29	3.32	5.49	3.22		
	14	3.44	2.60	4.12	2.95	4.45	3.03	4.73	3.08	5.27	3.31	5.46	3.21		
	16	3.44	2.60	4.12	2.95	4.45	3.03	4.72	3.07	5.25	3.30	5.44	3.21		
	18	3.44	2.60	4.12	2.95	4.45	3.03	4.71	3.07	5.23	3.29	5.42	3.19		
	20	3.44	2.60	4.12	2.95	4.45	3.03	4.71	3.07	5.21	3.28	5.39	3.18		
	22	3.44	2.60	4.12	2.95	4.45	3.03	4.68	3.05	5.15	3.26	5.32	3.16		
	24	3.43	2.60	4.11	2.94	4.45	3.03	4.66	3.05	5.08	3.23	5.25	3.12		
	26	3.43	2.60	4.09	2.94	4.41	3.01	4.61	3.03	5.00	3.19	5.16	3.09		
	28	3.11	2.56	3.43	2.60	4.08	2.93	4.37	3.00	4.55	3.00	4.92	3.16	5.08	3.07
	30	3.11	2.56	3.42	2.59	4.04	2.92	4.33	2.98	4.50	2.98	4.84	3.13	5.01	3.04
	32	3.11	2.56	3.41	2.59	4.01	2.90	4.29	2.96	4.45	2.96	4.77	3.10	4.93	3.01
	34	3.11	2.56	3.40	2.58	4.00	2.90	4.23	2.93	4.38	2.92	4.67	3.06	4.83	2.98
	35	3.11	2.56	3.39	2.58	3.99	2.90	4.20	2.91	4.34	2.90	4.62	3.05	4.78	2.96
36	3.11	2.56	3.39	2.58	3.96	2.88	4.18	2.91	4.30	2.89	4.54	3.01	4.69	2.92	
38	3.11	2.56	3.38	2.58	3.90	2.86	4.14	2.89	4.22	2.86	4.37	2.95	4.50	2.86	
39	3.11	2.56	3.38	2.58	3.87	2.84	4.12	2.88	4.17	2.84	4.29	2.92	4.41	2.81	
41	3.11	2.56	3.37	2.57	3.76	2.79	3.95	2.81	4.00	2.77	4.10	2.83	4.20	2.75	
43	3.11	2.56	3.35	2.56	3.64	2.74	3.78	2.74	3.82	2.69	3.91	2.77	3.99	2.68	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
Me 10 (m³/min)	-19.8	-20	2.65	2.65	2.65	2.65	2.65		
	-17.8	-18	2.82	2.82	2.82	2.82	2.82		
	-15.7	-16	2.99	2.99	2.99	2.99	2.99		
	-13.7	-14	3.16	3.16	3.16	3.16	3.16		
	-11.7	-12	3.33	3.33	3.33	3.33	3.33		
	-9.6	-10	3.50	3.50	3.50	3.50	3.50		
	-7.5	-8	3.71	3.71	3.71	3.71	3.71		
	-5.5	-6	3.93	3.93	3.93	3.93	3.93		
	-3.4	-4	4.06	4.06	4.05	4.01	3.97		
	-1.3	-2	4.20	4.19	4.18	4.10	4.02		
	0.8	0	4.43	4.37	4.30	4.15	4.00		
	3.9	3	4.81	4.64	4.46	4.21	3.96		
	7.0	6	5.25	4.91	4.57	4.25	3.93		

Model **FDTW71KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 14.5 (m³/min)	10			5.82	4.29	6.96	4.87	7.53	5.01	8.01	5.09	8.97	5.48	9.31	5.32
	12			5.82	4.29	6.96	4.87	7.53	5.01	8.00	5.09	8.94	5.46	9.27	5.31
	14			5.82	4.29	6.96	4.87	7.53	5.01	7.99	5.08	8.90	5.45	9.23	5.29
	16			5.82	4.29	6.96	4.87	7.53	5.01	7.97	5.08	8.87	5.44	9.19	5.28
	18			5.82	4.29	6.96	4.87	7.53	5.01	7.96	5.07	8.84	5.43	9.15	5.28
	20			5.82	4.29	6.96	4.87	7.53	5.01	7.95	5.07	8.81	5.41	9.11	5.25
	22			5.81	4.29	6.95	4.86	7.53	5.01	7.92	5.06	8.70	5.37	8.99	5.20
	24			5.80	4.28	6.95	4.86	7.53	5.01	7.88	5.04	8.58	5.32	8.86	5.15
	26			5.80	4.28	6.92	4.85	7.46	4.98	7.79	4.99	8.45	5.27	8.73	5.10
	28	5.25	4.20	5.79	4.28	6.89	4.84	7.38	4.94	7.69	4.95	8.31	5.21	8.59	5.05
	30	5.25	4.20	5.78	4.27	6.83	4.80	7.31	4.91	7.60	4.91	8.19	5.16	8.46	5.00
	32	5.25	4.20	5.77	4.27	6.78	4.78	7.24	4.88	7.51	4.87	8.06	5.10	8.33	4.95
	34	5.25	4.20	5.75	4.26	6.76	4.77	7.15	4.83	7.39	4.82	7.89	5.04	8.16	4.89
	35	5.25	4.20	5.74	4.25	6.75	4.76	7.10	4.81	7.33	4.79	7.80	5.00	8.08	4.85
36	5.25	4.20	5.73	4.25	6.69	4.74	7.06	4.79	7.26	4.76	7.66	4.94	7.92	4.80	
38	5.25	4.20	5.72	4.24	6.59	4.70	6.99	4.75	7.12	4.69	7.38	4.83	7.61	4.66	
39	5.25	4.20	5.71	4.23	6.54	4.67	6.96	4.74	7.05	4.66	7.24	4.77	7.45	4.61	
41	5.25	4.20	5.69	4.23	6.35	4.59	6.67	4.62	6.76	4.55	6.92	4.64	7.10	4.50	
43	5.25	4.20	5.67	4.22	6.15	4.50	6.39	4.50	6.46	4.42	6.60	4.53	6.75	4.38	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 14.5 (m³/min)	-19.8	-20	4.64	4.64	4.64	4.64
-17.8	-18		4.94	4.94	4.94	4.94	4.94	
-15.7	-16		5.24	5.24	5.24	5.24	5.24	
-13.7	-14		5.54	5.54	5.54	5.54	5.54	
-11.7	-12		5.83	5.83	5.83	5.83	5.83	
-9.6	-10		6.13	6.13	6.13	6.13	6.13	
-7.5	-8		6.51	6.51	6.51	6.51	6.51	
-5.5	-6		6.88	6.88	6.88	6.88	6.88	
-3.4	-4		7.12	7.11	7.10	7.03	6.96	
-1.3	-2		7.36	7.34	7.32	7.18	7.04	
0.8	0		7.76	7.65	7.54	7.27	7.00	
3.9	3		8.42	8.12	7.82	7.38	6.94	
7.0	6		9.20	8.60	8.00	7.44	6.88	
10.1	9		9.14	8.56	7.97	7.40	6.82	
13.2	12	9.08	8.50	7.92	7.34	6.76		
16.9	15.5	9.01	8.43	7.85	7.27	6.69		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 12 (m³/min)	10			4.99	3.64	5.96	4.13	6.45	4.25	6.86	4.33	7.68	4.66	7.98	4.52
	12			4.99	3.64	5.96	4.13	6.45	4.25	6.85	4.32	7.66	4.65	7.94	4.51
	14			4.99	3.64	5.96	4.13	6.45	4.25	6.84	4.32	7.63	4.64	7.91	4.50
	16			4.99	3.64	5.96	4.13	6.45	4.25	6.83	4.31	7.60	4.62	7.87	4.48
	18			4.99	3.64	5.96	4.13	6.45	4.25	6.82	4.31	7.57	4.61	7.84	4.47
	20			4.99	3.64	5.96	4.13	6.45	4.25	6.81	4.31	7.54	4.60	7.81	4.46
	22			4.98	3.64	5.96	4.13	6.45	4.25	6.78	4.29	7.45	4.56	7.70	4.41
	24			4.97	3.63	5.96	4.13	6.45	4.25	6.75	4.28	7.35	4.51	7.59	4.37
	26			4.97	3.63	5.93	4.11	6.39	4.23	6.67	4.24	7.24	4.47	7.48	4.32
	28	4.50	3.56	4.96	3.63	5.90	4.10	6.33	4.19	6.59	4.20	7.12	4.41	7.36	4.27
	30	4.50	3.56	4.95	3.62	5.85	4.08	6.26	4.16	6.51	4.16	7.01	4.38	7.25	4.24
	32	4.50	3.56	4.94	3.62	5.81	4.06	6.20	4.13	6.44	4.14	6.90	4.32	7.14	4.20
	34	4.50	3.56	4.92	3.60	5.79	4.05	6.12	4.10	6.33	4.09	6.76	4.26	6.99	4.14
	35	4.50	3.56	4.91	3.60	5.78	4.05	6.08	4.08	6.28	4.06	6.69	4.24	6.92	4.11
36	4.50	3.56	4.91	3.60	5.73	4.02	6.05	4.06	6.22	4.04	6.57	4.19	6.78	4.06	
38	4.50	3.56	4.90	3.59	5.65	3.99	5.99	4.04	6.10	3.99	6.33	4.09	6.51	3.96	
39	4.50	3.56	4.89	3.59	5.60	3.96	5.96	4.03	6.04	3.96	6.21	4.04	6.38	3.91	
41	4.50	3.56	4.87	3.58	5.44	3.89	5.72	3.92	5.79	3.85	5.93	3.93	6.08	3.80	
43	4.50	3.56	4.86	3.58	5.27	3.80	5.47	3.81	5.53	3.73	5.65	3.82	5.78	3.70	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 12 (m³/min)	-19.8	-20	3.89	3.89	3.89	3.89
-17.8	-18		4.14	4.14	4.14	4.14	4.14	
-15.7	-16		4.39	4.39	4.39	4.39	4.39	
-13.7	-14		4.64	4.64	4.64	4.64	4.64	
-11.7	-12		4.89	4.89	4.89	4.89	4.89	
-9.6	-10		5.14	5.14	5.14	5.14	5.14	
-7.5	-8		5.46	5.46	5.46	5.46	5.46	
-5.5	-6		5.77	5.77	5.77	5.77	5.77	
-3.4	-4		5.97	5.96	5.95	5.90	5.84	
-1.3	-2		6.17	6.16	6.14	6.02	5.90	
0.8	0		6.51	6.42	6.32	6.10	5.87	
3.9	3		7.06	6.81	6.56	6.19	5.82	
7.0	6		7.72	7.21	6.71	6.24	5.77	
10.1	9		7.67	7.17	6.68	6.20	5.72	
13.2	12	7.61	7.13	6.64	6.16	5.67		
16.9	15.5	7.56	7.07	6.58	6.10	5.61		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 10 (m³/min)	10			4.27	3.09	5.10	3.51	5.52	3.61	5.87	3.68	6.58	3.97	6.83	3.85
	12			4.27	3.09	5.10	3.51	5.52	3.61	5.86	3.68	6.55	3.95	6.80	3.83
	14			4.27	3.09	5.10	3.51	5.52	3.61	5.85	3.67	6.53	3.94	6.77	3.82
	16			4.27	3.09	5.10	3.51	5.52	3.61	5.85	3.67	6.50	3.93	6.74	3.81
	18			4.27	3.09	5.10	3.51	5.52	3.61	5.84	3.66	6.48	3.92	6.71	3.80
	20			4.27	3.09	5.10	3.51	5.52	3.61	5.83	3.66	6.46	3.91	6.68	3.79
	22			4.26	3.08	5.10	3.51	5.52	3.61	5.80	3.65	6.38	3.88	6.59	3.75
	24			4.25	3.08	5.10	3.51	5.52	3.61	5.78	3.64	6.29	3.84	6.50	3.72
	26			4.25	3.08	5.07	3.49	5.47	3.59	5.71	3.60	6.19	3.80	6.40	3.67
	28	3.85	3.02	4.25	3.08	5.05	3.48	5.41	3.56	5.64	3.57	6.10	3.76	6.30	3.63
	30	3.85	3.02	4.24	3.07	5.01	3.47	5.36	3.54	5.58	3.54	6.00	3.71	6.20	3.59
	32	3.85	3.02	4.23	3.07	4.97	3.44	5.31	3.52	5.51	3.51	5.91	3.68	6.11	3.56
	34	3.85	3.02	4.21	3.06	4.95	3.44	5.24	3.49	5.42	3.47	5.78	3.62	5.98	3.50
	35	3.85	3.02	4.21	3.06	4.85	3.44	5.21	3.47	5.38	3.46	5.72	3.59	5.92	3.48
36	3.85	3.02	4.20	3.05	4.91	3.42	5.18	3.46	5.33	3.43	5.62	3.55	5.81	3.44	
38	3.85	3.02	4.19	3.05	4.83	3.38	5.13	3.43	5.22	3.39	5.41	3.47	5.58	3.36	
39	3.85	3.02	4.19	3.05	4.80	3.37	5.10	3.42	5.17	3.36	5.31	3.43	5.46	3.31	
41	3.85	3.02	4.17	3.04	4.65	3.30	4.89	3.32	4.95	3.27	5.08	3.34	5.21	3.22	
43	3.85	3.02	4.16	3.03	4.51	3.23	4.68	3.23	4.74	3.17	4.84	3.24	4.95	3.13	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 10 (m³/min)	-19.8	-20	3.27	3.27	3.27	3.27
-17.8	-18		3.48	3.48	3.48	3.48	3.48	
-15.7	-16		3.69	3.69	3.69	3.69	3.69	
-13.7	-14		3.91	3.91	3.91	3.91	3.91	
-11.7	-12		4.12	4.12	4.12	4.12	4.12	
-9.6	-10		4.33	4.33	4.33	4.33	4.33	
-7.5	-8		4.59	4.59	4.59	4.59	4.59	
-5.5	-6		4.85	4.85	4.85	4.85	4.85	
-3.4	-4		5.02	5.02	5.01	4.96	4.91	
-1.3	-2		5.19	5.18	5.16	5.07	4.97	
0.8	0		5.47	5.40	5.32	5.13	4.94	
3.9	3		5.94	5.73	5.52	5.21	4.90	
7.0	6		6.49	6.07	5.64	5.25	4.85	
10.1	9		6.45					

Model **FDTW90KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 31 (m ³ /min)	10			7.38	6.08	8.82	6.90	9.54	7.02	10.15	7.14	11.37	7.71	11.80	7.53
	12			7.38	6.08	8.82	6.90	9.54	7.02	10.14	7.14	11.33	7.70	11.75	7.50
	14			7.38	6.08	8.82	6.90	9.54	7.02	10.12	7.13	11.29	7.69	11.70	7.48
	16			7.38	6.08	8.82	6.90	9.54	7.02	10.11	7.13	11.25	7.66	11.65	7.47
	18			7.38	6.08	8.82	6.90	9.54	7.02	10.09	7.12	11.20	7.65	11.60	7.46
	20			7.38	6.08	8.82	6.90	9.54	7.02	10.08	7.11	11.16	7.64	11.55	7.43
	22			7.37	6.08	8.82	6.90	9.54	7.02	10.03	7.09	11.02	7.58	11.39	7.37
	24			7.36	6.07	8.81	6.89	9.54	7.02	9.99	7.08	10.88	7.53	11.24	7.33
	26			7.35	6.07	8.77	6.88	9.45	6.99	9.87	6.99	10.71	7.46	11.06	7.27
	28	6.66	6.01	7.34	6.07	8.73	6.85	9.36	6.96	9.75	6.95	10.54	7.40	10.89	7.21
	30	6.66	6.01	7.33	6.06	8.66	6.83	9.27	6.93	9.64	6.92	10.38	7.33	10.73	7.15
	32	6.66	6.01	7.31	6.06	8.60	6.81	9.18	6.90	9.53	6.89	10.22	7.27	10.56	7.05
	34	6.66	6.01	7.28	6.04	8.57	6.80	9.06	6.85	9.37	6.82	10.00	7.16	10.35	7.00
	35	6.66	6.01	7.27	6.04	8.55	6.77	9.00	6.83	9.30	6.80	9.89	7.13	10.24	6.97
	36	6.66	6.01	7.26	6.04	8.49	6.75	8.96	6.82	9.21	6.77	9.72	7.08	10.04	6.92
	38	6.66	6.01	7.25	6.03	8.36	6.69	8.87	6.77	9.03	6.70	9.36	6.96	9.64	6.79
39	6.66	6.01	7.24	6.03	8.29	6.67	8.82	6.75	8.94	6.65	9.18	6.90	9.44	6.72	
41	6.66	6.01	7.21	6.02	8.04	6.57	8.46	6.61	8.58	6.50	8.77	6.75	9.00	6.57	
43	6.66	6.01	7.19	6.01	7.80	6.47	8.10	6.46	8.19	6.37	8.37	6.62	8.56	6.44	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
P-Hi 31 (m ³ /min)	-19.8	-20	5.80	5.80	5.80	5.80	5.80	5.80	
	-17.8	-18	6.17	6.17	6.17	6.17	6.17	6.17	
	-15.7	-16	6.55	6.55	6.55	6.55	6.55	6.55	
	-13.7	-14	6.92	6.92	6.92	6.92	6.92	6.92	
	-11.7	-12	7.29	7.29	7.29	7.29	7.29	7.29	
	-9.6	-10	7.67	7.67	7.67	7.67	7.67	7.67	
	-7.5	-8	8.13	8.13	8.13	8.13	8.13	8.13	
	-5.5	-6	8.60	8.60	8.60	8.60	8.60	8.60	
	-3.4	-4	8.90	8.89	8.88	8.79	8.70		
	-1.3	-2	9.20	9.18	9.15	8.98	8.80		
	0.8	0	9.70	9.56	9.43	9.09	8.75		
	3.9	3	10.53	10.15	9.78	9.23	8.68		
	7.0	6	11.50	10.75	10.00	9.30	8.60		
	10.1	9	11.43	10.69	9.96	9.24	8.53		
	13.2	12	11.35	10.63	9.90	9.18	8.45		
	16.9	15.5	11.26	10.54	9.81	9.09	8.36		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 27 (m ³ /min)	10			6.67	5.45	7.97	6.17	8.63	6.31	9.18	6.36	10.28	6.90	10.67	6.73
	12			6.67	5.45	7.97	6.17	8.63	6.31	9.16	6.35	10.24	6.88	10.63	6.72
	14			6.67	5.45	7.97	6.17	8.63	6.31	9.15	6.35	10.21	6.88	10.58	6.69
	16			6.67	5.45	7.97	6.17	8.63	6.31	9.14	6.35	10.17	6.87	10.54	6.68
	18			6.67	5.45	7.97	6.17	8.63	6.31	9.13	6.35	10.13	6.84	10.49	6.67
	20			6.67	5.45	7.97	6.17	8.63	6.31	9.11	6.34	10.09	6.83	10.44	6.64
	22			6.66	5.45	7.97	6.17	8.63	6.31	9.07	6.33	9.97	6.78	10.30	6.60
	24			6.65	5.44	7.97	6.17	8.63	6.31	9.03	6.31	9.84	6.73	10.16	6.55
	26			6.65	5.44	7.93	6.15	8.54	6.27	8.92	6.28	9.68	6.67	10.00	6.49
	28	6.02	5.37	6.64	5.44	7.89	6.12	8.46	6.24	8.82	6.25	9.53	6.61	9.85	6.44
	30	6.02	5.37	6.62	5.43	7.83	6.10	8.38	6.20	8.72	6.20	9.38	6.55	9.70	6.35
	32	6.02	5.37	6.61	5.43	7.77	6.08	8.30	6.17	8.61	6.15	9.24	6.47	9.55	6.32
	34	6.02	5.37	6.59	5.42	7.74	6.06	8.19	6.12	8.48	6.10	9.04	6.41	9.35	6.27
	35	6.02	5.37	6.57	5.40	7.73	6.06	8.14	6.11	8.41	6.08	8.94	6.38	9.26	6.23
	36	6.02	5.37	6.57	5.40	7.67	6.04	8.10	6.08	8.33	6.05	8.78	6.34	9.08	6.18
	38	6.02	5.37	6.55	5.39	7.56	5.98	8.02	6.05	8.16	5.99	8.46	6.22	8.72	6.06
39	6.02	5.37	6.54	5.39	7.50	5.96	7.97	6.04	8.08	5.95	8.30	6.16	8.54	6.00	
41	6.02	5.37	6.52	5.38	7.27	5.87	7.65	5.90	7.74	5.81	7.93	6.02	8.14	5.86	
43	6.02	5.37	6.50	5.37	7.05	5.75	7.32	5.74	7.40	5.66	7.57	5.89	7.74	5.69	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
Hi 27 (m ³ /min)	-19.8	-20	5.17	5.17	5.17	5.17	5.17	5.17	
	-17.8	-18	5.50	5.50	5.50	5.50	5.50	5.50	
	-15.7	-16	5.83	5.83	5.83	5.83	5.83	5.83	
	-13.7	-14	6.17	6.17	6.17	6.17	6.17	6.17	
	-11.7	-12	6.50	6.50	6.50	6.50	6.50	6.50	
	-9.6	-10	6.83	6.83	6.83	6.83	6.83	6.83	
	-7.5	-8	7.25	7.25	7.25	7.25	7.25	7.25	
	-5.5	-6	7.66	7.66	7.66	7.66	7.66	7.66	
	-3.4	-4	7.93	7.92	7.91	7.83	7.75		
	-1.3	-2	8.20	8.18	8.15	8.00	7.84		
	0.8	0	8.65	8.52	8.40	8.10	7.80		
	3.9	3	9.38	9.05	8.71	8.22	7.73		
	7.0	6	10.25	9.58	8.91	8.29	7.66		
	10.1	9	10.18	9.53	8.88	8.24	7.60		
	13.2	12	10.12	9.47	8.82	8.18	7.53		
	16.9	15.5	10.04	9.39	8.75	8.10	7.45		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 23 (m ³ /min)	10			5.90	4.78	7.05	5.40	7.63	5.53	8.12	5.60	9.09	6.04	9.44	5.90
	12			5.90	4.78	7.05	5.40	7.63	5.53	8.11	5.57	9.06	6.03	9.40	5.88
	14			5.90	4.78	7.05	5.40	7.63	5.53	8.10	5.57	9.03	6.02	9.36	5.87
	16			5.90	4.78	7.05	5.40	7.63	5.53	8.09	5.57	9.00	6.01	9.32	5.86
	18			5.90	4.78	7.05	5.40	7.63	5.53	8.07	5.56	8.96	6.00	9.28	5.83
	20			5.90	4.78	7.05	5.40	7.63	5.53	8.06	5.56	8.93	5.99	9.24	5.82
	22			5.89	4.77	7.05	5.40	7.63	5.53	8.03	5.55	8.82	5.95	9.11	5.78
	24			5.88	4.77	7.05	5.40	7.63	5.53	7.99	5.53	8.70	5.90	8.99	5.73
	26			5.88	4.77	7.02	5.39	7.56	5.50	7.89	5.50	8.57	5.85	8.85	5.68
	28	5.33	4.71	5.87	4.77	6.98	5.37	7.49	5.47	7.80	5.47	8.43	5.80	8.71	5.63
	30	5.33	4.71	5.86	4.76	6.93	5.35	7.41	5.43	7.71	5.43	8.30	5.75	8.58	5.59
	32	5.33	4.71	5.85	4.76	6.88	5.33	7.34	5.41	7.62	5.40	8.17	5.70	8.45	5.51
	34	5.33	4.71	5.83	4.74	6.85	5.32	7.25	5.36	7.50	5.35	8.00	5.64	8.28	5.47
	35	5.33	4.71	5.82	4.74	6.84	5.30	7.20	5.35	7.44	5.32	7.91	5.57	8.19	5.44
	36	5.33	4.71	5.81	4.73	6.79	5.29	7.16	5.34	7.37	5.30	7.77	5.53	8.03	5.41
	38	5.33	4.71	5.80	4.73	6.68	5.24	7.09	5.30	7.22	5.24	7.49	5.44	7.71	5.29
39	5.33	4.71	5.79	4.72	6.63	5.22	7.05	5.29	7.15	5.21	7.34	5.38	7.55	5.24	
41	5.33	4.71	5.77	4.72	6.43	5.14	6.77	5.17	6.85	5.09	7.02	5.27	7.20	5.12	
43	5.33	4.71	5.75	4.71	6.24	5.04	6.48	5.03	6.55	4.96	6.69	5.16	6.84	5.00	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
Me 23 (m ³ /min)	-19.8	-20	4.51	4.51	4.51	4.51	4.51	4.51	
	-17.8	-18	4.80	4.80	4.80	4.80	4.80	4.80	
	-15.7	-16	5.09	5.09	5.09	5.09	5.09	5.09	
	-13.7	-14	5.38	5.38	5.38	5.38	5.38	5.38	
	-11.7	-12	5.67	5.67	5.67	5.67	5.67	5.67	
	-9.6	-10	5.96	5.96	5.96	5.96	5.96	5.96	
	-7.5	-8	6.32	6.32	6.32	6.32	6.32	6.32	

Model **FDTW112KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 31 (m ³ /min)	10			9.18	7.26	10.97	8.22	11.87	8.42	12.63	8.54	14.15	9.22	14.69	8.95
	12			9.18	7.26	10.97	8.22	11.87	8.42	12.61	8.53	14.10	9.21	14.63	8.93
	14			9.18	7.26	10.97	8.22	11.87	8.42	12.60	8.53	14.05	9.14	14.56	8.91
	16			9.18	7.26	10.97	8.22	11.87	8.42	12.58	8.52	14.00	9.13	14.50	8.89
	18			9.18	7.26	10.97	8.22	11.87	8.42	12.56	8.51	13.94	9.11	14.44	8.88
	20			9.18	7.26	10.97	8.22	11.87	8.42	12.55	8.51	13.89	9.09	14.37	8.86
	22			9.17	7.26	10.97	8.22	11.87	8.42	12.49	8.49	13.72	9.04	14.18	8.79
	24			9.15	7.25	10.97	8.22	11.87	8.42	12.43	8.45	13.54	8.98	13.98	8.71
	26			9.15	7.25	10.92	8.17	11.76	8.38	12.28	8.40	13.33	8.90	13.77	8.65
	28	8.29	7.15	9.14	7.24	10.86	8.14	11.65	8.33	12.14	8.34	13.11	8.81	13.55	8.57
	30	8.29	7.15	9.12	7.23	10.78	8.11	11.54	8.28	12.00	8.27	12.91	8.73	13.35	8.50
	32	8.29	7.15	9.09	7.22	10.70	8.08	11.42	8.23	11.85	8.22	12.71	8.65	13.15	8.42
	34	8.29	7.15	9.06	7.21	10.66	8.07	11.27	8.16	11.66	8.14	12.45	8.55	12.87	8.33
	35	8.29	7.15	9.05	7.21	10.64	8.06	11.20	8.10	11.57	8.11	12.31	8.49	12.74	8.27
36	8.29	7.15	9.04	7.20	10.56	8.03	11.14	8.08	11.46	8.02	12.09	8.43	12.49	8.15	
38	8.29	7.15	9.02	7.20	10.40	7.97	11.03	8.04	11.24	7.95	11.65	8.22	12.00	8.01	
39	8.29	7.15	9.00	7.19	10.32	7.94	10.96	8.02	11.13	7.91	11.43	8.15	11.75	7.94	
41	8.29	7.15	8.97	7.17	10.01	7.80	10.53	7.84	10.66	7.74	10.92	7.98	11.20	7.75	
43	8.29	7.15	8.94	7.16	9.70	7.67	10.08	7.67	10.19	7.55	10.41	7.81	10.65	7.58	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 31 (m ³ /min)	-19.8	-20	7.25	7.25	7.25	7.25
-17.8	-18		7.72	7.72	7.72	7.72	7.72	
-15.7	-16		8.18	8.18	8.18	8.18	8.18	
-13.7	-14		8.65	8.65	8.65	8.65	8.65	
-11.7	-12		9.12	9.12	9.12	9.12	9.12	
-9.6	-10		9.58	9.58	9.58	9.58	9.58	
-7.5	-8		10.17	10.17	10.17	10.17	10.17	
-5.5	-6		10.75	10.75	10.75	10.75	10.75	
-3.4	-4		11.13	11.11	11.09	10.98	10.88	
-1.3	-2		11.50	11.47	11.44	11.22	11.00	
0.8	0		12.13	11.95	11.78	11.36	10.94	
3.9	3		13.16	12.69	12.22	11.53	10.84	
7.0	6		14.38	13.44	12.50	11.63	10.75	
10.1	9		14.28	13.37	12.45	11.55	10.66	
13.2	12	14.19	13.28	12.38	11.47	10.56		
16.9	15.5	14.08	13.17	12.27	11.36	10.45		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 27 (m ³ /min)	10			8.30	6.48	9.92	7.35	10.73	7.51	11.42	7.64	12.79	8.24	13.28	8.02
	12			8.30	6.48	9.92	7.35	10.73	7.51	11.40	7.64	12.75	8.23	13.23	8.01
	14			8.30	6.48	9.92	7.35	10.73	7.51	11.39	7.63	12.70	8.21	13.17	7.98
	16			8.30	6.48	9.92	7.35	10.73	7.51	11.37	7.61	12.65	8.18	13.11	7.96
	18			8.30	6.48	9.92	7.35	10.73	7.51	11.36	7.61	12.61	8.17	13.05	7.94
	20			8.30	6.48	9.92	7.35	10.73	7.51	11.34	7.60	12.56	8.15	13.00	7.91
	22			8.29	6.48	9.92	7.35	10.73	7.51	11.29	7.58	12.40	8.08	12.82	7.86
	24			8.28	6.47	9.92	7.35	10.73	7.51	11.24	7.57	12.24	8.02	12.64	7.79
	26			8.27	6.47	9.87	7.32	10.63	7.47	11.11	7.48	12.05	7.94	12.45	7.72
	28	7.49	6.39	8.26	6.46	9.82	7.30	10.53	7.43	10.97	7.43	11.86	7.87	12.25	7.65
	30	7.49	6.39	8.24	6.45	9.75	7.27	10.43	7.40	10.85	7.39	11.68	7.80	12.07	7.58
	32	7.49	6.39	8.22	6.45	9.67	7.23	10.33	7.35	10.72	7.34	11.50	7.73	11.89	7.48
	34	7.49	6.39	8.20	6.44	9.64	7.22	10.19	7.30	10.55	7.27	11.25	7.60	11.64	7.41
	35	7.49	6.39	8.18	6.43	9.62	7.21	10.13	7.26	10.46	7.24	11.13	7.57	11.52	7.38
36	7.49	6.39	8.17	6.43	9.55	7.18	10.08	7.24	10.36	7.19	10.93	7.50	11.29	7.31	
38	7.49	6.39	8.15	6.42	9.40	7.12	9.97	7.20	10.16	7.11	10.53	7.36	10.85	7.16	
39	7.49	6.39	8.14	6.41	9.33	7.09	9.92	7.17	10.06	7.07	10.33	7.28	10.62	7.08	
41	7.49	6.39	8.11	6.40	9.05	6.97	9.52	7.02	9.64	6.90	9.87	7.11	10.13	6.91	
43	7.49	6.39	8.08	6.39	8.77	6.84	9.11	6.84	9.21	6.73	9.41	6.94	9.63	6.74	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 27 (m ³ /min)	-19.8	-20	6.46	6.46	6.46	6.46
-17.8	-18		6.88	6.88	6.88	6.88	6.88	
-15.7	-16		7.29	7.29	7.29	7.29	7.29	
-13.7	-14		7.71	7.71	7.71	7.71	7.71	
-11.7	-12		8.13	8.13	8.13	8.13	8.13	
-9.6	-10		8.54	8.54	8.54	8.54	8.54	
-7.5	-8		9.06	9.06	9.06	9.06	9.06	
-5.5	-6		9.58	9.58	9.58	9.58	9.58	
-3.4	-4		9.92	9.90	9.89	9.79	9.69	
-1.3	-2		10.25	10.22	10.19	10.00	9.80	
0.8	0		10.81	10.65	10.50	10.12	9.75	
3.9	3		11.73	11.31	10.89	10.28	9.66	
7.0	6		12.81	11.98	11.14	10.36	9.58	
10.1	9		12.73	11.91	11.10	10.30	9.50	
13.2	12	12.64	11.84	11.03	10.22	9.41		
16.9	15.5	12.55	11.74	10.93	10.12	9.32		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 23 (m ³ /min)	10			7.34	5.69	8.78	6.44	9.50	6.59	10.10	6.70	11.32	7.22	11.75	7.03
	12			7.34	5.69	8.78	6.44	9.50	6.59	10.09	6.70	11.28	7.21	11.70	7.01
	14			7.34	5.69	8.78	6.44	9.50	6.59	10.08	6.69	11.24	7.19	11.65	7.00
	16			7.34	5.69	8.78	6.44	9.50	6.59	10.06	6.69	11.19	7.18	11.60	6.97
	18			7.34	5.69	8.78	6.44	9.50	6.59	10.05	6.67	11.15	7.15	11.55	6.96
	20			7.34	5.69	8.78	6.44	9.50	6.59	10.04	6.67	11.11	7.14	11.50	6.94
	22			7.33	5.68	8.78	6.44	9.50	6.59	9.99	6.63	10.97	7.08	11.34	6.88
	24			7.32	5.67	8.77	6.44	9.50	6.59	9.94	6.61	10.83	7.02	11.18	6.82
	26			7.32	5.67	8.73	6.41	9.41	6.56	9.82	6.57	10.66	6.96	11.01	6.76
	28	6.63	5.58	7.31	5.66	8.69	6.40	9.32	6.52	9.71	6.53	10.49	6.89	10.84	6.70
	30	6.63	5.58	7.29	5.66	8.62	6.37	9.23	6.48	9.59	6.48	10.33	6.83	10.68	6.64
	32	6.63	5.58	7.27	5.65	8.56	6.33	9.14	6.44	9.48	6.43	10.17	6.76	10.52	6.55
	34	6.63	5.58	7.25	5.64	8.53	6.32	9.02	6.40	9.33	6.37	9.96	6.68	10.30	6.49
	35	6.63	5.58	7.24	5.63	8.51	6.32	8.96	6.36	9.26	6.34	9.85	6.62	10.19	6.46
36	6.63	5.58	7.23	5.63	8.45	6.29	8.91	6.34	9.17	6.30	9.67	6.57	9.99	6.40	
38	6.63	5.58	7.21	5.62	8.32	6.23	8.82	6.31	8.99	6.23	9.32	6.44	9.60	6.26	
39	6.63	5.58	7.20	5.62	8.25	6.21	8.78	6.28	8.90	6.19	9.14	6.37	9.40	6.19	
41	6.63	5.58	7.18	5.61	8.01	6.09	8.42	6.14	8.53	6.04	8.73	6.22	8.96	6.04	
43	6.63	5.58	7.15	5.60	7.76	5.99	8.06	5.99	8.15	5.86	8.33	6.07	8.52	5.88	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 23 (m ³ /min)	-19.8	-20	5.63	5.63	5.63	5.63
-17.8	-18		6.00	6.00	6.00	6.00	6.00	
-15.7	-16		6.36	6.36	6.36	6.36	6.36	
-13.7	-14		6.72	6.72	6.72	6.72	6.72	
-11.7	-12		7.09	7.09	7.09	7.09	7.09	
-9.6	-10		7.45	7.45	7.45	7.45	7.45	
-7.5	-8		7.90	7.90	7.90	7.90	7.90	
-5.5	-6		8.35	8.35	8.35	8.35	8.35	
-3.4	-4		8.65	8.63</				

Model **FDTW140KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
P-Hi 31 (m³/min)	10	11.48	8.86	13.72	10.03	14.84	10.29	15.79	10.45	17.69	11.26	18.36	10.95			
	12	11.48	8.86	13.72	10.03	14.84	10.29	15.77	10.44	17.62	11.23	18.28	10.93			
	14	11.48	8.86	13.72	10.03	14.84	10.29	15.75	10.43	17.56	11.21	18.20	10.90			
	16	11.48	8.86	13.72	10.03	14.84	10.29	15.72	10.42	17.49	11.18	18.13	10.87			
	18	11.48	8.86	13.72	10.03	14.84	10.29	15.70	10.41	17.43	11.16	18.05	10.85			
	20	11.48	8.86	13.72	10.03	14.84	10.29	15.68	10.40	17.37	11.14	17.97	10.80			
	22	11.46	8.85	13.71	10.03	14.84	10.29	15.61	10.37	17.15	11.05	17.72	10.71			
	24	11.44	8.84	13.71	10.03	14.84	10.29	15.54	10.33	16.93	10.95	17.48	10.63			
	26	11.43	8.83	13.64	10.00	14.70	10.23	15.35	10.25	16.66	10.85	17.21	10.54			
	28	10.36	8.72	11.42	8.83	13.58	9.97	14.56	10.17	15.17	10.18	16.39	10.75	16.94	10.39	
	30	10.36	8.72	11.40	8.82	13.48	9.93	14.42	10.11	14.99	10.10	16.14	10.64	16.69	10.31	
	32	10.36	8.72	11.37	8.81	13.37	9.88	14.28	10.04	14.82	10.04	15.89	10.51	16.43	10.27	
	34	10.36	8.72	11.33	8.79	13.32	9.86	14.09	9.96	14.58	9.92	15.56	10.39	16.09	10.10	
	35	10.36	8.72	11.31	8.78	13.30	9.85	14.00	9.92	14.46	9.88	15.39	10.32	15.92	10.10	
36	10.36	8.72	11.30	8.78	13.20	9.81	13.93	9.89	14.32	9.82	15.11	10.22	15.61	9.94		
38	10.36	8.72	11.27	8.76	13.00	9.72	13.79	9.83	14.05	9.71	14.56	10.02	15.00	9.73		
39	10.36	8.72	11.26	8.76	12.90	9.67	13.72	9.80	13.91	9.66	14.28	9.92	14.69	9.63		
41	10.36	8.72	11.22	8.74	12.51	9.50	13.16	9.56	13.32	9.41	13.65	9.69	14.00	9.41		
43	10.36	8.72	11.18	8.72	12.13	9.34	12.60	9.33	12.74	9.18	13.02	9.47	13.31	9.17		

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
P-Hi 31 (m³/min)	-19.8	-20	9.28	9.28	9.28	9.28	9.28
	-17.8	-18	9.88	9.88	9.88	9.88	9.88
	-15.7	-16	10.47	10.47	10.47	10.47	10.47
	-13.7	-14	11.07	11.07	11.07	11.07	11.07
	-11.7	-12	11.67	11.67	11.67	11.67	11.67
	-9.6	-10	12.27	12.27	12.27	12.27	12.27
	-7.5	-8	13.01	13.01	13.01	13.01	13.01
	-5.5	-6	13.76	13.76	13.76	13.76	13.76
	-3.4	-4	14.24	14.22	14.20	14.06	13.92
	-1.3	-2	14.72	14.68	14.64	14.36	14.08
	0.8	0	15.52	15.30	15.08	14.54	14.00
	3.9	3	16.84	16.24	15.64	14.76	13.88
	7.0	6	18.40	17.20	16.00	14.88	13.76
	10.1	9	19.28	17.11	15.94	14.79	13.64
13.2	12	18.16	17.00	15.84	14.68	13.52	
16.9	15.5	18.02	16.86	15.70	14.54	13.38	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
Hi 27 (m³/min)	10	10.38	7.75	12.40	8.78	13.42	9.03	14.28	9.17	15.99	9.89	16.60	9.80			
	12	10.38	7.75	12.40	8.78	13.42	9.03	14.26	9.16	15.93	9.86	16.53	9.58			
	14	10.38	7.75	12.40	8.78	13.42	9.03	14.24	9.15	15.87	9.83	16.46	9.55			
	16	10.38	7.75	12.40	8.78	13.42	9.03	14.22	9.15	15.82	9.81	16.39	9.49			
	18	10.38	7.75	12.40	8.78	13.42	9.03	14.20	9.14	15.76	9.79	16.32	9.46			
	20	10.38	7.75	12.40	8.78	13.42	9.03	14.18	9.13	15.70	9.76	16.25	9.44			
	22	10.36	7.74	12.40	8.78	13.42	9.03	14.11	9.10	15.50	9.65	16.02	9.36			
	24	10.35	7.73	12.39	8.77	13.42	9.03	14.05	9.08	15.30	9.57	15.80	9.29			
	26	10.34	7.73	12.34	8.75	13.29	8.96	13.88	8.99	15.06	9.48	15.56	9.21			
	28	9.37	7.60	10.33	7.72	12.28	8.72	13.16	8.91	13.72	8.92	14.82	9.39	15.32	9.11	
	30	9.37	7.60	10.30	7.71	12.18	8.68	13.04	8.85	13.56	8.85	14.60	9.30	15.09	9.02	
	32	9.37	7.60	10.28	7.70	12.09	8.63	12.91	8.79	13.40	8.78	14.37	9.22	14.86	8.94	
	34	9.37	7.60	10.24	7.67	12.05	8.61	12.74	8.71	13.18	8.69	14.07	9.09	14.55	8.83	
	35	9.37	7.60	10.23	7.67	12.03	8.61	12.66	8.68	13.08	8.65	13.91	9.02	14.40	8.76	
36	9.37	7.60	10.22	7.66	11.93	8.56	12.59	8.65	12.95	8.59	13.66	8.92	14.12	8.67		
38	9.37	7.60	10.19	7.65	11.75	8.48	12.47	8.60	12.70	8.48	13.16	8.73	13.56	8.46		
39	9.37	7.60	10.18	7.64	11.66	8.44	12.40	8.56	12.57	8.43	12.91	8.64	13.28	8.37		
41	9.37	7.60	10.14	7.63	11.31	8.28	11.90	8.34	12.05	8.21	12.34	8.41	12.66	8.11		
43	9.37	7.60	10.11	7.61	10.96	8.11	11.39	8.10	11.52	7.97	11.77	8.17	12.03	7.91		

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Hi 27 (m³/min)	-19.8	-20	8.27	8.27	8.27	8.27	8.27
	-17.8	-18	8.80	8.80	8.80	8.80	8.80
	-15.7	-16	9.34	9.34	9.34	9.34	9.34
	-13.7	-14	9.87	9.87	9.87	9.87	9.87
	-11.7	-12	10.40	10.40	10.40	10.40	10.40
	-9.6	-10	10.93	10.93	10.93	10.93	10.93
	-7.5	-8	11.60	11.60	11.60	11.60	11.60
	-5.5	-6	12.26	12.26	12.26	12.26	12.26
	-3.4	-4	12.69	12.67	12.66	12.53	12.41
	-1.3	-2	13.12	13.08	13.05	12.80	12.55
	0.8	0	13.63	13.64	13.44	12.96	12.48
	3.9	3	15.01	14.47	13.94	13.15	12.37
	7.0	6	16.40	15.33	14.26	13.26	12.26
	10.1	9	16.29	15.25	14.21	13.18	12.16
13.2	12	16.19	15.15	14.12	13.08	12.05	
16.9	15.5	16.06	15.03	13.99	12.96	11.92	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 23 (m³/min)	10			9.18	6.78	10.97	7.69	11.87	7.91	12.83	8.05	14.15	8.68	14.69	8.41
	12			9.18	6.78	10.97	7.69	11.87	7.91	12.81	8.04	14.10	8.64	14.63	8.39
	14			9.18	6.78	10.97	7.69	11.87	7.91	12.59	8.03	14.04	8.61	14.56	8.37
	16			9.18	6.78	10.97	7.69	11.87	7.91	12.58	8.03	13.99	8.59	14.50	8.35
	18			9.18	6.78	10.97	7.69	11.87	7.91	12.56	8.02	13.94	8.58	14.44	8.33
	20			9.18	6.78	10.97	7.69	11.87	7.91	12.54	8.01	13.89	8.56	14.37	8.29
	22			9.17	6.78	10.97	7.69	11.87	7.91	12.49	7.98	13.72	8.49	14.18	8.22
	24			9.15	6.77	10.96	7.69	11.87	7.91	12.43	7.95	13.54	8.41	13.98	8.14
	26			9.15	6.77	10.91	7.65	11.76	7.86	12.28	7.89	13.33	8.32	13.76	8.05
	28	8.29	6.65	9.14	6.76	10.86	7.62	11.65	7.81	12.13	7.82	13.11	8.22	13.55	7.98
	30	8.29	6.65	9.12	6.75	10.78	7.59	11.53	7.75	11.99	7.76	12.91	8.15	13.35	7.90
	32	8.29	6.65	9.09	6.73	10.69	7.55	11.42	7.71	11.85	7.70	12.71	8.06	13.14	7.82
	34	8.29	6.65	9.06	6.72	10.66	7.54	11.27	7.64	11.66	7.62	12.44	7.95	12.87	7.71
	35	8.29	6.65	9.05	6.72	10.64	7.53	11.20	7.58	11.57	7.57	12.31	7.90	12.74	7.67
36	8.29	6.65	9.04	6.71	10.56	7.50	11.14	7.56	11.46	7.51	12.09	7.81	12.49	7.58	
38	8.29	6.65	9.01	6.70	10.40	7.43	11.03	7.51	11.24	7.42	11.65	7.64	12.00	7.38	
39	8.29	6.65	9.00	6.69	10.32	7.39	10.97	7.49	11.12	7.37	11.43	7.52	11.75	7.29	
41	8.29	6.65	8.97	6.68	10.01	7.25	10.53	7.31	10.66	7.18	10.92	7.34	11.20	7.12	
43	8.29	6.65	8.94	6.66	9.70	7.11	10.08	7.11	10.19	6.99	10.41	7.15	10.65	6.93	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Me 23 (m³/min)	-19.8	-20	7.21	7.21	7.21	7.21	7.21
	-17.8	-18	7.68	7.68	7.68	7.68	7.68
	-15.7	-16	8.14	8.14	8.14	8.14	8.14
	-13.7	-14	8.61	8.61	8.6		

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

Model **FDTQ22KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 8 (m³/min)	10			1.80	1.58	2.16	1.78	2.33	1.82	2.48	1.84	2.78	1.99	2.89	1.95
	12			1.80	1.58	2.16	1.78	2.33	1.82	2.48	1.84	2.77	1.99	2.87	1.94
	14			1.80	1.58	2.16	1.78	2.33	1.82	2.47	1.84	2.76	1.98	2.86	1.94
	16			1.80	1.58	2.16	1.78	2.33	1.82	2.47	1.84	2.75	1.98	2.85	1.93
	18			1.80	1.58	2.16	1.78	2.33	1.82	2.47	1.84	2.74	1.98	2.84	1.93
	20			1.80	1.58	2.16	1.78	2.33	1.82	2.46	1.83	2.73	1.98	2.82	1.91
	22			1.80	1.58	2.15	1.78	2.33	1.82	2.45	1.83	2.69	1.96	2.78	1.90
	24			1.80	1.58	2.15	1.78	2.33	1.82	2.44	1.83	2.66	1.94	2.75	1.89
	26			1.80	1.58	2.14	1.77	2.31	1.81	2.41	1.82	2.62	1.92	2.70	1.88
	28	1.63	1.56	1.80	1.58	2.13	1.77	2.29	1.81	2.38	1.80	2.58	1.91	2.66	1.87
	30	1.63	1.56	1.79	1.57	2.12	1.77	2.27	1.79	2.36	1.80	2.54	1.90	2.62	1.86
	32	1.63	1.56	1.79	1.57	2.10	1.76	2.24	1.78	2.33	1.77	2.50	1.89	2.58	1.84
	34	1.63	1.56	1.78	1.57	2.09	1.76	2.21	1.77	2.29	1.76	2.44	1.87	2.53	1.83
	35	1.63	1.56	1.78	1.57	2.09	1.76	2.20	1.76	2.27	1.75	2.42	1.86	2.50	1.82
	36	1.63	1.56	1.78	1.57	2.07	1.75	2.19	1.76	2.25	1.75	2.37	1.84	2.45	1.80
	38	1.63	1.56	1.77	1.57	2.04	1.74	2.17	1.75	2.21	1.73	2.29	1.81	2.36	1.77
39	1.63	1.56	1.77	1.57	2.03	1.73	2.16	1.75	2.19	1.73	2.24	1.80	2.31	1.76	
41	1.63	1.56	1.76	1.56	1.97	1.71	2.07	1.71	2.09	1.69	2.14	1.76	2.20	1.72	
43	1.63	1.56	1.76	1.56	1.91	1.69	1.98	1.68	2.00	1.66	2.05	1.73	2.09	1.69	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 8 (m³/min)	-19.8	-20	1.45	1.45	1.45	1.45	1.45	
	-17.8	-18	1.54	1.54	1.54	1.54	1.54	
	-15.7	-16	1.64	1.64	1.64	1.64	1.64	
	-13.7	-14	1.73	1.73	1.73	1.73	1.73	
	-11.7	-12	1.82	1.82	1.82	1.82	1.82	
	-9.6	-10	1.92	1.92	1.92	1.92	1.92	
	-7.5	-8	2.03	2.03	2.03	2.03	2.03	
	-5.5	-6	2.15	2.15	2.15	2.15	2.15	
	-3.4	-4	2.23	2.22	2.22	2.20	2.18	
	-1.3	-2	2.30	2.29	2.29	2.24	2.20	
	0.8	0	2.43	2.39	2.36	2.27	2.19	
	3.9	3	2.63	2.54	2.44	2.31	2.17	
	7.0	6	2.88	2.69	2.50	2.33	2.15	
	10.1	9	2.86	2.67	2.49	2.31	2.13	
	13.2	12	2.84	2.66	2.48	2.29	2.11	
	16.9	15.5	2.82	2.63	2.45	2.27	2.09	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 7 (m³/min)	10			1.76	1.48	2.11	1.67	2.28	1.70	2.42	1.73	2.72	1.87	2.82	1.82
	12			1.76	1.48	2.11	1.67	2.28	1.70	2.42	1.73	2.71	1.87	2.81	1.82
	14			1.76	1.48	2.11	1.67	2.28	1.70	2.42	1.73	2.70	1.86	2.80	1.82
	16			1.76	1.48	2.11	1.67	2.28	1.70	2.41	1.73	2.69	1.86	2.78	1.81
	18			1.76	1.48	2.11	1.67	2.28	1.70	2.41	1.73	2.68	1.86	2.77	1.81
	20			1.76	1.48	2.11	1.67	2.28	1.70	2.40	1.72	2.63	1.84	2.72	1.78
	22			1.76	1.48	2.11	1.67	2.28	1.70	2.40	1.72	2.63	1.84	2.72	1.78
	24			1.76	1.48	2.11	1.67	2.28	1.70	2.39	1.72	2.60	1.83	2.68	1.77
	26			1.76	1.48	2.10	1.67	2.26	1.70	2.36	1.70	2.56	1.80	2.64	1.76
	28	1.59	1.46	1.75	1.48	2.09	1.67	2.24	1.69	2.33	1.69	2.52	1.79	2.60	1.75
	30	1.59	1.46	1.75	1.48	2.07	1.66	2.21	1.68	2.30	1.68	2.48	1.78	2.56	1.74
	32	1.59	1.46	1.75	1.48	2.05	1.65	2.19	1.67	2.28	1.67	2.44	1.77	2.52	1.72
	34	1.59	1.46	1.74	1.47	2.05	1.65	2.16	1.66	2.24	1.66	2.39	1.75	2.47	1.71
	35	1.59	1.46	1.74	1.47	2.04	1.64	2.15	1.66	2.22	1.65	2.36	1.74	2.45	1.70
	36	1.59	1.46	1.74	1.47	2.03	1.64	2.14	1.65	2.20	1.64	2.32	1.72	2.40	1.68
	38	1.59	1.46	1.73	1.47	2.00	1.63	2.12	1.65	2.16	1.63	2.24	1.70	2.30	1.65
39	1.59	1.46	1.73	1.47	1.98	1.62	2.11	1.64	2.14	1.62	2.19	1.68	2.26	1.64	
41	1.59	1.46	1.72	1.46	1.92	1.59	2.02	1.60	2.05	1.58	2.10	1.65	2.15	1.60	
43	1.59	1.46	1.72	1.46	1.86	1.57	1.94	1.57	1.96	1.55	2.00	1.61	2.04	1.55	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 7 (m³/min)	-19.8	-20	1.42	1.42	1.42	1.42	1.42	
	-17.8	-18	1.51	1.51	1.51	1.51	1.51	
	-15.7	-16	1.60	1.60	1.60	1.60	1.60	
	-13.7	-14	1.70	1.70	1.70	1.70	1.70	
	-11.7	-12	1.79	1.79	1.79	1.79	1.79	
	-9.6	-10	1.88	1.88	1.88	1.88	1.88	
	-7.5	-8	1.99	1.99	1.99	1.99	1.99	
	-5.5	-6	2.11	2.11	2.11	2.11	2.11	
	-3.4	-4	2.18	2.17	2.17	2.15	2.13	
	-1.3	-2	2.25	2.25	2.24	2.20	2.16	
	0.8	0	2.38	2.34	2.31	2.23	2.14	
	3.9	3	2.58	2.49	2.39	2.26	2.13	
	7.0	6	2.82	2.63	2.45	2.28	2.11	
	10.1	9	2.80	2.62	2.44	2.26	2.09	
	13.2	12	2.78	2.60	2.43	2.25	2.07	
	16.9	15.5	2.76	2.58	2.40	2.23	2.05	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 6 (m³/min)	10			1.69	1.35	2.02	1.53	2.18	1.56	2.32	1.58	2.60	1.70	2.70	1.66
	12			1.69	1.35	2.02	1.53	2.18	1.56	2.32	1.58	2.59	1.70	2.69	1.66
	14			1.69	1.35	2.02	1.53	2.18	1.56	2.32	1.58	2.58	1.70	2.68	1.66
	16			1.69	1.35	2.02	1.53	2.18	1.56	2.31	1.58	2.57	1.69	2.67	1.65
	18			1.69	1.35	2.02	1.53	2.18	1.56	2.31	1.58	2.56	1.69	2.66	1.65
	20			1.69	1.35	2.02	1.53	2.18	1.56	2.31	1.58	2.56	1.69	2.64	1.64
	22			1.69	1.35	2.02	1.53	2.18	1.56	2.30	1.58	2.52	1.68	2.61	1.63
	24			1.68	1.34	2.02	1.53	2.18	1.56	2.29	1.57	2.49	1.66	2.57	1.62
	26			1.68	1.34	2.01	1.52	2.16	1.55	2.26	1.56	2.45	1.65	2.53	1.60
	28	1.52	1.32	1.68	1.34	2.00	1.52	2.14	1.54	2.23	1.55	2.41	1.63	2.49	1.59
	30	1.52	1.32	1.68	1.34	1.98	1.51	2.12	1.53	2.21	1.54	2.38	1.62	2.46	1.58
	32	1.52	1.32	1.67	1.34	1.97	1.51	2.10	1.53	2.18	1.53	2.34	1.61	2.42	1.57
	34	1.52	1.32	1.67	1.34	1.96	1.50	2.07	1.51	2.15	1.51	2.29	1.59	2.37	1.55
	35	1.52	1.32	1.66	1.34	1.96	1.50	2.06	1.51	2.13	1.50	2.26	1.58	2.34	1.54
	36	1.52	1.32	1.66	1.34	1.94	1.49	2.05	1.51	2.11	1.50	2.22	1.56	2.30	1.52
	38	1.52	1.32	1.66	1.34	1.91	1.47	2.03	1.50	2.07	1.48	2.14	1.53	2.21	1.49
39	1.52	1.32	1.66	1.34	1.90	1.47	2.02	1.49	2.05	1.47	2.10	1.52	2.16	1.48	
41	1.52	1.32	1.65	1.33	1.84	1.45	1.94	1.46	1.96	1.43	2.01	1.49	2.06	1.44	
43	1.52	1.32	1.64	1.33	1.78	1.42	1.85	1.42	1.87	1.40	1.92	1.45	1.96	1.41	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 6 (m³/min)	-19.8	-20	1.35	1.35	1.35	1.35	1.35	
	-17.8	-18	1.44	1.44	1.44	1.44	1.44	
	-15.7	-16	1.53	1.53	1.53	1.53	1.53	
	-13.7	-14	1.61	1.61	1.61	1.61	1.61	
	-11.7	-12	1.70	1.70	1.70	1.70	1.70	
	-9.6	-10	1.79	1.79	1.79	1.79	1.79	
	-7.5	-8	1.90	1.90	1.90	1.90	1.90	
	-5.5	-6	2.00	2.00	2.00	2.00	2.00	
	-3.4	-4	2.07	2.07	2.07	2.05	2.03	
	-1.3	-2	2.14	2.14	2.13	2.09	2.05	
	0.8	0	2.26	2.23	2.20	2.12	2.04	
	3.9	3	2.45	2.36	2.28	2.15	2.02	
	7.0	6	2.68	2.50				

Model **FDTQ28KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 8 (m³/min)	10			2.30	1.91	2.74	2.15	2.97	2.21	3.16	2.23	3.54	2.41	3.67	2.35
	12			2.30	1.91	2.74	2.15	2.97	2.21	3.15	2.23	3.52	2.40	3.66	2.34
	14			2.30	1.91	2.74	2.15	2.97	2.21	3.15	2.23	3.51	2.40	3.64	2.34
	16			2.30	1.91	2.74	2.15	2.97	2.21	3.14	2.23	3.50	2.40	3.63	2.34
	18			2.30	1.91	2.74	2.15	2.97	2.21	3.14	2.23	3.49	2.39	3.61	2.33
	20			2.30	1.91	2.74	2.15	2.97	2.21	3.14	2.23	3.47	2.38	3.59	2.32
	22			2.29	1.90	2.74	2.15	2.97	2.21	3.12	2.21	3.43	2.37	3.54	2.30
	24			2.29	1.90	2.74	2.15	2.97	2.21	3.11	2.21	3.39	2.35	3.50	2.29
	26			2.29	1.90	2.73	2.15	2.94	2.19	3.07	2.20	3.33	2.33	3.44	2.27
	28	2.07	1.88	2.28	1.90	2.72	2.15	2.91	2.18	3.03	2.18	3.28	2.31	3.39	2.25
	30	2.07	1.88	2.28	1.90	2.70	2.14	2.88	2.17	3.00	2.17	3.23	2.29	3.34	2.23
	32	2.07	1.88	2.27	1.90	2.67	2.12	2.86	2.16	2.96	2.15	3.18	2.27	3.29	2.22
	34	2.07	1.88	2.27	1.90	2.66	2.12	2.82	2.14	2.92	2.13	3.11	2.25	3.22	2.19
	35	2.07	1.88	2.26	1.89	2.66	2.12	2.80	2.13	2.89	2.12	3.08	2.24	3.18	2.18
	36	2.07	1.88	2.26	1.89	2.64	2.11	2.79	2.13	2.86	2.11	3.02	2.22	3.12	2.16
	38	2.07	1.88	2.25	1.89	2.60	2.10	2.76	2.12	2.81	2.09	2.91	2.18	3.00	2.11
39	2.07	1.88	2.25	1.89	2.58	2.09	2.74	2.11	2.78	2.08	2.86	2.16	2.94	2.09	
41	2.07	1.88	2.24	1.88	2.50	2.05	2.63	2.07	2.66	2.03	2.73	2.11	2.80	2.05	
43	2.07	1.88	2.24	1.88	2.43	2.02	2.52	2.02	2.55	1.99	2.60	2.06	2.66	2.01	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	°CDB
P-Hi 8 (m³/min)	-19.8	-20	1.86	1.86	1.86	1.86	1.86	1.86	1.86
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	1.98	
	-15.7	-16	2.09	2.09	2.09	2.09	2.09	2.09	
	-13.7	-14	2.21	2.21	2.21	2.21	2.21	2.21	
	-11.7	-12	2.33	2.33	2.33	2.33	2.33	2.33	
	-9.6	-10	2.45	2.45	2.45	2.45	2.45	2.45	
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	2.60	
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	2.75	
	-3.4	-4	2.85	2.84	2.84	2.81	2.78	2.78	
	-1.3	-2	2.94	2.94	2.93	2.87	2.82	2.82	
	0.8	0	3.10	3.06	3.02	2.91	2.80	2.80	
	3.9	3	3.37	3.25	3.13	2.95	2.78	2.78	
	7.0	6	3.68	3.44	3.20	2.98	2.75	2.75	
	10.1	9	3.66	3.42	3.19	2.96	2.73	2.73	
	13.2	12	3.63	3.40	3.17	2.94	2.70	2.70	
	16.9	15.5	3.60	3.37	3.14	2.91	2.68	2.68	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 7 (m³/min)	10			2.24	1.78	2.68	2.02	2.89	2.06	3.08	2.09	3.45	2.25	3.58	2.20
	12			2.24	1.78	2.68	2.02	2.89	2.06	3.07	2.09	3.44	2.25	3.57	2.19
	14			2.24	1.78	2.68	2.02	2.89	2.06	3.07	2.09	3.42	2.24	3.55	2.19
	16			2.24	1.78	2.68	2.02	2.89	2.06	3.07	2.09	3.41	2.24	3.53	2.18
	18			2.24	1.78	2.68	2.02	2.89	2.06	3.06	2.08	3.40	2.24	3.52	2.17
	20			2.24	1.78	2.68	2.02	2.89	2.06	3.06	2.08	3.39	2.23	3.50	2.17
	22			2.23	1.78	2.67	2.01	2.89	2.06	3.04	2.08	3.34	2.21	3.46	2.16
	24			2.23	1.78	2.67	2.01	2.89	2.06	3.03	2.07	3.30	2.20	3.41	2.14
	26			2.23	1.78	2.66	2.01	2.87	2.05	2.99	2.05	3.25	2.18	3.36	2.12
	28	2.02	1.75	2.23	1.78	2.65	2.00	2.84	2.04	2.96	2.04	3.20	2.16	3.30	2.10
	30	2.02	1.75	2.22	1.77	2.63	1.99	2.81	2.03	2.92	2.02	3.15	2.14	3.25	2.08
	32	2.02	1.75	2.22	1.77	2.61	1.99	2.78	2.01	2.89	2.01	3.10	2.12	3.20	2.06
	34	2.02	1.75	2.21	1.77	2.60	1.98	2.75	2.00	2.84	1.99	3.03	2.10	3.14	2.04
	35	2.02	1.75	2.21	1.77	2.59	1.98	2.73	1.99	2.82	1.98	3.00	2.08	3.11	2.03
	36	2.02	1.75	2.20	1.76	2.57	1.97	2.72	1.99	2.79	1.97	2.95	2.06	3.04	2.01
	38	2.02	1.75	2.20	1.76	2.53	1.95	2.69	1.97	2.74	1.95	2.84	2.02	2.92	1.97
39	2.02	1.75	2.19	1.76	2.52	1.95	2.68	1.97	2.71	1.94	2.79	2.00	2.86	1.93	
41	2.02	1.75	2.19	1.76	2.44	1.91	2.57	1.93	2.60	1.90	2.66	1.95	2.73	1.90	
43	2.02	1.75	2.18	1.75	2.36	1.88	2.46	1.88	2.48	1.85	2.54	1.91	2.60	1.86	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	°CDB
Hi 7 (m³/min)	-19.8	-20	1.80	1.80	1.80	1.80	1.80	1.80	1.80
	-17.8	-18	1.92	1.92	1.92	1.92	1.92	1.92	
	-15.7	-16	2.04	2.04	2.04	2.04	2.04	2.04	
	-13.7	-14	2.15	2.15	2.15	2.15	2.15	2.15	
	-11.7	-12	2.27	2.27	2.27	2.27	2.27	2.27	
	-9.6	-10	2.38	2.38	2.38	2.38	2.38	2.38	
	-7.5	-8	2.53	2.53	2.53	2.53	2.53	2.53	
	-5.5	-6	2.67	2.67	2.67	2.67	2.67	2.67	
	-3.4	-4	2.77	2.76	2.76	2.73	2.71	2.71	
	-1.3	-2	2.86	2.85	2.85	2.79	2.74	2.74	
	0.8	0	3.02	2.97	2.93	2.83	2.72	2.72	
	3.9	3	3.27	3.16	3.04	2.87	2.70	2.70	
	7.0	6	3.58	3.34	3.11	2.89	2.67	2.67	
	10.1	9	3.55	3.33	3.10	2.87	2.65	2.65	
	13.2	12	3.53	3.30	3.08	2.85	2.63	2.63	
	16.9	15.5	3.50	3.28	3.05	2.83	2.60	2.60	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 6 (m³/min)	10			2.11	1.62	2.52	1.83	2.72	1.87	2.90	1.90	3.25	2.05	3.37	2.00
	12			2.11	1.62	2.52	1.83	2.72	1.87	2.89	1.90	3.23	2.04	3.36	1.99
	14			2.11	1.62	2.52	1.83	2.72	1.87	2.89	1.90	3.22	2.04	3.34	1.98
	16			2.11	1.62	2.52	1.83	2.72	1.87	2.89	1.90	3.21	2.04	3.33	1.98
	18			2.11	1.62	2.52	1.83	2.72	1.87	2.88	1.90	3.20	2.03	3.31	1.97
	20			2.11	1.62	2.52	1.83	2.72	1.87	2.88	1.90	3.19	2.03	3.30	1.97
	22			2.10	1.61	2.52	1.83	2.72	1.87	2.87	1.89	3.15	2.01	3.25	1.95
	24			2.10	1.61	2.52	1.83	2.72	1.87	2.85	1.88	3.11	2.00	3.21	1.93
	26			2.10	1.61	2.50	1.82	2.70	1.86	2.82	1.86	3.06	1.97	3.16	1.91
	28	1.90	1.58	2.10	1.61	2.49	1.82	2.67	1.85	2.78	1.85	3.01	1.95	3.11	1.90
	30	1.90	1.58	2.09	1.60	2.47	1.80	2.65	1.84	2.75	1.84	2.96	1.93	3.06	1.88
	32	1.90	1.58	2.09	1.60	2.45	1.80	2.62	1.83	2.72	1.83	2.92	1.92	3.02	1.86
	34	1.90	1.58	2.08	1.60	2.45	1.80	2.59	1.81	2.68	1.81	2.86	1.90	2.95	1.84
	35	1.90	1.58	2.08	1.60	2.44	1.79	2.57	1.81	2.66	1.80	2.83	1.88	2.92	1.83
	36	1.90	1.58	2.07	1.60	2.42	1.78	2.56	1.80	2.63	1.79	2.77	1.86	2.87	1.81
	38	1.90	1.58	2.07	1.60	2.39	1.77	2.53	1.79	2.58	1.77	2.67	1.82	2.75	1.77
39	1.90	1.58	2.07	1.60	2.37	1.76	2.52	1.78	2.55	1.76	2.62	1.80	2.70	1.75	
41	1.90	1.58	2.06	1.59	2.30	1.73	2.42	1.74	2.45	1.71	2.51	1.76	2.57	1.71	
43	1.90	1.58	2.05	1.59	2.23	1.70	2.31	1.69	2.34	1.67	2.39	1.72	2.44	1.66	

Air flow	Outdoor air temperature	Indoor air temperature							
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	°CDB
Me 6 (m³/min)	-19.8	-20	1.68	1.68	1.68	1.68	1.68	1.68	1.68
	-17.8	-18	1.79	1.79	1.79	1.79	1.79	1.79	
	-15.7	-16	1.90	1.90	1.90	1.90	1.90	1.90	
	-13.7	-14	2.01	2.01	2.01	2.01	2.01	2.01	
	-11.7	-12	2.12	2.12	2.12	2.12	2.12	2.12	
	-9.6	-10	2.22	2.22	2.22	2.22	2.22	2.22	
	-7.5	-8	2.36	2.36	2.36	2.36	2.36	2.36	
	-5.5</								

Model **FDTQ36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 8 (m³/min)	10			2.95	2.24	3.53	2.54	3.82	2.61	4.06	2.65	4.55	2.86	4.72	2.77
	12			2.95	2.24	3.53	2.54	3.82	2.61	4.05	2.65	4.53	2.85	4.70	2.77
	14			2.95	2.24	3.53	2.54	3.82	2.61	4.05	2.65	4.51	2.84	4.68	2.76
	16			2.95	2.24	3.53	2.54	3.82	2.61	4.04	2.64	4.50	2.84	4.66	2.75
	18			2.95	2.24	3.53	2.54	3.82	2.61	4.04	2.64	4.48	2.83	4.64	2.75
	20			2.95	2.24	3.53	2.54	3.82	2.61	4.03	2.64	4.47	2.83	4.62	2.74
	22			2.95	2.24	3.53	2.54	3.82	2.61	4.01	2.63	4.41	2.80	4.56	2.72
	24			2.94	2.24	3.52	2.54	3.82	2.61	3.99	2.61	4.35	2.78	4.49	2.69
	26			2.94	2.24	3.51	2.53	3.78	2.59	3.95	2.60	4.28	2.75	4.43	2.67
	28	2.66	2.20	2.94	2.24	3.49	2.53	3.74	2.57	3.90	2.58	4.22	2.72	4.36	2.64
	30	2.66	2.20	2.93	2.23	3.47	2.52	3.71	2.56	3.86	2.56	4.15	2.70	4.29	2.62
	32	2.66	2.20	2.92	2.23	3.44	2.50	3.67	2.54	3.81	2.54	4.09	2.67	4.23	2.60
	34	2.66	2.20	2.91	2.23	3.43	2.50	3.62	2.52	3.75	2.52	4.00	2.64	4.14	2.55
	35	2.66	2.20	2.91	2.23	3.42	2.50	3.60	2.51	3.72	2.51	3.96	2.61	4.09	2.54
36	2.66	2.20	2.91	2.23	3.39	2.48	3.58	2.50	3.68	2.49	3.89	2.59	4.02	2.52	
38	2.66	2.20	2.90	2.22	3.34	2.46	3.55	2.49	3.61	2.46	3.74	2.53	3.86	2.46	
39	2.66	2.20	2.89	2.22	3.32	2.45	3.53	2.48	3.58	2.45	3.67	2.51	3.78	2.43	
41	2.66	2.20	2.88	2.21	3.22	2.40	3.38	2.42	3.43	2.38	3.51	2.45	3.60	2.37	
43	2.66	2.20	2.87	2.20	3.12	2.36	3.24	2.36	3.28	2.32	3.35	2.39	3.42	2.31	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 8 (m³/min)	-19.8	-20	2.32	2.32	2.32	2.32
-17.8	-18		2.47	2.47	2.47	2.47	2.47	
-15.7	-16		2.62	2.62	2.62	2.62	2.62	
-13.7	-14		2.77	2.77	2.77	2.77	2.77	
-11.7	-12		2.92	2.92	2.92	2.92	2.92	
-9.6	-10		3.07	3.07	3.07	3.07	3.07	
-7.5	-8		3.25	3.25	3.25	3.25	3.25	
-5.5	-6		3.44	3.44	3.44	3.44	3.44	
-3.4	-4		3.56	3.56	3.55	3.52	3.48	
-1.3	-2		3.68	3.67	3.66	3.59	3.52	
0.8	0		3.88	3.83	3.77	3.64	3.50	
3.9	3		4.21	4.06	3.91	3.69	3.47	
7.0	6		4.60	4.30	4.00	3.72	3.44	
10.1	9		4.57	4.28	3.99	3.70	3.41	
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 7 (m³/min)	10			2.86	2.11	3.42	2.40	3.70	2.46	3.94	2.51	4.41	2.70	4.58	2.62
	12			2.86	2.11	3.42	2.40	3.70	2.46	3.93	2.50	4.39	2.69	4.56	2.62
	14			2.86	2.11	3.42	2.40	3.70	2.46	3.93	2.50	4.38	2.69	4.54	2.61
	16			2.86	2.11	3.42	2.40	3.70	2.46	3.92	2.50	4.36	2.68	4.52	2.60
	18			2.86	2.11	3.42	2.40	3.70	2.46	3.91	2.49	4.35	2.68	4.50	2.59
	20			2.86	2.11	3.42	2.40	3.70	2.46	3.91	2.49	4.33	2.67	4.48	2.58
	22			2.86	2.11	3.42	2.40	3.70	2.46	3.89	2.48	4.27	2.64	4.42	2.55
	24			2.85	2.11	3.42	2.40	3.70	2.46	3.87	2.48	4.22	2.62	4.36	2.53
	26			2.85	2.11	3.40	2.39	3.66	2.45	3.83	2.46	4.15	2.58	4.29	2.50
	28	2.58	2.07	2.85	2.11	3.39	2.38	3.63	2.43	3.78	2.43	4.09	2.56	4.22	2.48
	30	2.58	2.07	2.84	2.10	3.36	2.37	3.59	2.41	3.74	2.42	4.02	2.53	4.16	2.46
	32	2.58	2.07	2.83	2.10	3.33	2.35	3.56	2.40	3.69	2.39	3.96	2.51	4.10	2.44
	34	2.58	2.07	2.82	2.09	3.32	2.35	3.51	2.38	3.63	2.37	3.88	2.48	4.01	2.40
	35	2.58	2.07	2.82	2.09	3.32	2.35	3.49	2.37	3.61	2.36	3.84	2.46	3.97	2.39
36	2.58	2.07	2.82	2.09	3.29	2.34	3.47	2.36	3.57	2.34	3.77	2.43	3.89	2.36	
38	2.58	2.07	2.81	2.09	3.24	2.31	3.44	2.34	3.50	2.31	3.63	2.38	3.74	2.30	
39	2.58	2.07	2.81	2.09	3.22	2.30	3.42	2.34	3.47	2.30	3.56	2.35	3.66	2.28	
41	2.58	2.07	2.80	2.08	3.12	2.26	3.28	2.27	3.32	2.24	3.40	2.29	3.49	2.22	
43	2.58	2.07	2.79	2.08	3.02	2.21	3.14	2.21	3.18	2.17	3.24	2.23	3.32	2.16	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 7 (m³/min)	-19.8	-20	2.26	2.26	2.26	2.26
-17.8	-18		2.40	2.40	2.40	2.40	2.40	
-15.7	-16		2.55	2.55	2.55	2.55	2.55	
-13.7	-14		2.69	2.69	2.69	2.69	2.69	
-11.7	-12		2.84	2.84	2.84	2.84	2.84	
-9.6	-10		2.98	2.98	2.98	2.98	2.98	
-7.5	-8		3.16	3.16	3.16	3.16	3.16	
-5.5	-6		3.35	3.35	3.35	3.35	3.35	
-3.4	-4		3.46	3.46	3.45	3.42	3.38	
-1.3	-2		3.58	3.57	3.56	3.49	3.42	
0.8	0		3.77	3.72	3.67	3.54	3.40	
3.9	3		4.09	3.95	3.80	3.59	3.37	
7.0	6		4.47	4.18	3.89	3.62	3.35	
10.1	9		4.44	4.16	3.88	3.60	3.32	
13.2	12	4.42	4.13	3.85	3.57	3.29		
16.9	15.5	4.38	4.10	3.82	3.54	3.25		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 6 (m³/min)	10			2.66	1.91	3.17	2.17	3.43	2.23	3.65	2.27	4.09	2.45	4.25	2.38
	12			2.66	1.91	3.17	2.17	3.43	2.23	3.65	2.27	4.08	2.45	4.23	2.37
	14			2.66	1.91	3.17	2.17	3.43	2.23	3.64	2.27	4.06	2.44	4.21	2.36
	16			2.66	1.91	3.17	2.17	3.43	2.23	3.64	2.27	4.05	2.43	4.19	2.35
	18			2.66	1.91	3.17	2.17	3.43	2.23	3.63	2.26	4.03	2.42	4.18	2.35
	20			2.66	1.91	3.17	2.17	3.43	2.23	3.63	2.26	4.02	2.42	4.16	2.34
	22			2.65	1.91	3.17	2.17	3.43	2.23	3.61	2.26	3.97	2.40	4.10	2.32
	24			2.65	1.91	3.17	2.17	3.43	2.23	3.60	2.25	3.92	2.38	4.04	2.29
	26			2.65	1.91	3.16	2.16	3.40	2.22	3.55	2.23	3.86	2.35	3.98	2.27
	28	2.40	1.87	2.64	1.90	3.14	2.15	3.37	2.20	3.51	2.21	3.79	2.32	3.92	2.25
	30	2.40	1.87	2.64	1.90	3.12	2.14	3.34	2.19	3.47	2.19	3.74	2.30	3.86	2.22
	32	2.40	1.87	2.63	1.90	3.09	2.13	3.30	2.17	3.43	2.17	3.68	2.27	3.80	2.20
	34	2.40	1.87	2.62	1.89	3.08	2.12	3.26	2.15	3.37	2.15	3.60	2.24	3.72	2.16
	35	2.40	1.87	2.62	1.89	3.08	2.12	3.24	2.14	3.35	2.14	3.56	2.21	3.69	2.15
36	2.40	1.87	2.61	1.89	3.05	2.11	3.22	2.13	3.32	2.12	3.50	2.19	3.61	2.12	
38	2.40	1.87	2.61	1.89	3.01	2.09	3.19	2.12	3.25	2.09	3.37	2.14	3.47	2.07	
39	2.40	1.87	2.60	1.88	2.99	2.08	3.18	2.11	3.22	2.08	3.31	2.12	3.40	2.05	
41	2.40	1.87	2.60	1.88	2.90	2.04	3.05	2.06	3.08	2.02	3.16	2.06	3.24	1.99	
43	2.40	1.87	2.59	1.88	2.81	2.00	2.92	2.00	2.95	1.96	3.01	2.00	3.08	1.93	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 6 (m³/min)	-19.8	-20	2.10	2.10	2.10	2.10
-17.8	-18		2.23	2.23	2.23	2.23	2.23	
-15.7	-16		2.37	2.37	2.37	2.37	2.37	
-13.7	-14		2.51	2.51	2.51	2.51	2.51	
-11.7	-12		2.64	2.64	2.64	2.64	2.64	
-9.6	-10		2.78	2.78	2.78	2.78	2.78	
-7.5	-8		2.94	2.94	2.94	2.94	2.94	
-5.5	-6		3.11	3.11	3.11	3.11	3.11	
-3.4	-4		3.22	3.22	3.21	3.18	3.15	
-1.3	-2		3.33	3.32	3.31	3.25	3.19	
0.8	0		3.51	3.46	3.41	3.29	3.17	
3.9	3		3.81	3.67	3.54	3.34	3.14	
7.0	6		4.16	3.89	3.62	3.37	3.11	
10.1	9		4.14					

Model **FDU56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 13 (m ³ /min)	10			4.59	3.66	5.49	4.14	5.94	4.24	6.32	4.30	7.07	4.64	7.35	4.52
	12			4.59	3.66	5.49	4.14	5.94	4.24	6.31	4.29	7.05	4.63	7.31	4.50
	14			4.59	3.66	5.49	4.14	5.94	4.24	6.30	4.29	7.02	4.62	7.28	4.49
	16			4.59	3.66	5.49	4.14	5.94	4.24	6.29	4.28	7.00	4.61	7.25	4.48
	18			4.59	3.66	5.49	4.14	5.94	4.24	6.28	4.28	6.97	4.60	7.22	4.47
	20			4.59	3.66	5.49	4.14	5.94	4.24	6.27	4.28	6.95	4.59	7.19	4.46
	22			4.58	3.66	5.49	4.14	5.94	4.24	6.24	4.26	6.86	4.56	7.09	4.43
	24			4.58	3.66	5.48	4.14	5.94	4.24	6.21	4.25	6.77	4.52	6.99	4.39
	26			4.57	3.65	5.46	4.13	5.88	4.21	6.14	4.22	6.66	4.48	6.88	4.35
	28	4.14	3.60	4.57	3.65	5.43	4.12	5.82	4.19	6.07	4.19	6.56	4.44	6.78	4.32
	30	4.14	3.60	4.56	3.65	5.39	4.10	5.77	4.17	6.00	4.17	6.46	4.40	6.67	4.27
	32	4.14	3.60	4.55	3.65	5.35	4.08	5.71	4.14	5.93	4.14	6.36	4.36	6.57	4.24
	34	4.14	3.60	4.53	3.64	5.33	4.07	5.64	4.11	5.83	4.10	6.22	4.31	6.44	4.19
	35	4.14	3.60	4.52	3.63	5.32	4.07	5.60	4.10	5.79	4.08	6.16	4.28	6.37	4.17
36	4.14	3.60	4.52	3.63	5.28	4.05	5.57	4.08	5.73	4.06	6.05	4.24	6.25	4.13	
38	4.14	3.60	4.51	3.63	5.20	4.02	5.52	4.06	5.62	4.01	5.82	4.16	6.00	4.05	
39	4.14	3.60	4.50	3.62	5.16	4.00	5.49	4.05	5.56	3.99	5.71	4.12	5.87	4.00	
41	4.14	3.60	4.49	3.62	5.10	3.93	5.26	3.96	5.33	3.90	5.46	4.03	5.60	3.91	
43	4.14	3.60	4.47	3.61	4.85	3.87	5.04	3.87	5.10	3.81	5.21	3.94	5.32	3.82	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 13 (m ³ /min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	
	-3.4	-4	5.61	5.60	5.59	5.54	5.48	
	-1.3	-2	5.80	5.78	5.76	5.65	5.54	
	0.8	0	6.11	6.02	5.94	5.73	5.51	
	3.9	3	6.63	6.39	6.16	5.81	5.47	
	7.0	6	7.25	6.77	6.30	5.86	5.42	
	10.1	9	7.20	6.74	6.28	5.82	5.37	
13.2	12	7.15	6.69	6.24	5.78	5.32		
16.9	15.5	7.10	6.64	6.18	5.73	5.27		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m ³ /min)	10			4.41	3.23	5.27	3.66	5.70	3.77	6.07	3.83	6.80	4.13	7.06	4.01
	12			4.41	3.23	5.27	3.66	5.70	3.77	6.06	3.83	6.77	4.12	7.03	3.97
	14			4.41	3.23	5.27	3.66	5.70	3.77	6.05	3.82	6.75	4.11	7.00	3.99
	16			4.41	3.23	5.27	3.66	5.70	3.77	6.04	3.82	6.72	4.10	6.97	3.97
	18			4.41	3.23	5.27	3.66	5.70	3.77	6.03	3.81	6.70	4.09	6.94	3.96
	20			4.41	3.23	5.27	3.66	5.70	3.77	6.03	3.81	6.67	4.08	6.90	3.95
	22			4.40	3.22	5.27	3.66	5.70	3.77	6.00	3.80	6.59	4.04	6.81	3.91
	24			4.40	3.22	5.27	3.66	5.70	3.77	5.97	3.79	6.50	4.00	6.72	3.88
	26			4.39	3.22	5.24	3.65	5.65	3.74	5.90	3.76	6.40	3.96	6.61	3.83
	28	3.98	3.16	4.39	3.22	5.22	3.64	5.60	3.72	5.83	3.72	6.30	3.92	6.51	3.80
	30	3.98	3.16	4.38	3.21	5.18	3.62	5.54	3.69	5.76	3.69	6.20	3.87	6.41	3.75
	32	3.98	3.16	4.37	3.21	5.14	3.60	5.49	3.67	5.69	3.66	6.11	3.84	6.31	3.72
	34	3.98	3.16	4.35	3.20	5.12	3.59	5.42	3.64	5.60	3.62	5.98	3.78	6.18	3.67
	35	3.98	3.16	4.35	3.20	5.11	3.59	5.38	3.62	5.56	3.61	5.91	3.75	6.12	3.65
36	3.98	3.16	4.34	3.19	5.07	3.57	5.35	3.61	5.50	3.58	5.81	3.71	6.00	3.60	
38	3.98	3.16	4.33	3.19	5.00	3.54	5.30	3.58	5.40	3.54	5.60	3.63	5.76	3.51	
39	3.98	3.16	4.33	3.19	4.96	3.52	5.27	3.57	5.34	3.51	5.49	3.59	5.64	3.47	
41	3.98	3.16	4.31	3.18	4.81	3.45	5.06	3.48	5.12	3.42	5.25	3.49	5.38	3.38	
43	3.98	3.16	4.30	3.17	4.66	3.38	4.84	3.38	4.90	3.32	5.00	3.39	5.11	3.28	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 10 (m ³ /min)	-19.8	-20	3.52	3.52	3.52	3.52	3.52	
	-17.8	-18	3.75	3.75	3.75	3.75	3.75	
	-15.7	-16	3.97	3.97	3.97	3.97	3.97	
	-13.7	-14	4.20	4.20	4.20	4.20	4.20	
	-11.7	-12	4.43	4.43	4.43	4.43	4.43	
	-9.6	-10	4.65	4.65	4.65	4.65	4.65	
	-7.5	-8	4.94	4.94	4.94	4.94	4.94	
	-5.5	-6	5.22	5.22	5.22	5.22	5.22	
	-3.4	-4	5.40	5.39	5.39	5.33	5.28	
	-1.3	-2	5.58	5.57	5.55	5.45	5.34	
	0.8	0	5.89	5.80	5.72	5.52	5.31	
	3.9	3	6.39	6.16	5.93	5.60	5.27	
	7.0	6	6.98	6.53	6.07	5.65	5.22	
	10.1	9	6.93	6.49	6.05	5.61	5.17	
13.2	12	6.89	6.45	6.01	5.57	5.13		
16.9	15.5	6.84	6.40	5.96	5.52	5.08		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m ³ /min)	10			4.11	2.97	4.92	3.38	5.32	3.48	5.66	3.54	6.34	3.81	6.58	3.70
	12			4.11	2.97	4.92	3.38	5.32	3.48	5.65	3.54	6.32	3.81	6.56	3.69
	14			4.11	2.97	4.92	3.38	5.32	3.48	5.65	3.54	6.30	3.80	6.53	3.68
	16			4.11	2.97	4.92	3.38	5.32	3.48	5.64	3.53	6.27	3.78	6.50	3.67
	18			4.11	2.97	4.92	3.38	5.32	3.48	5.63	3.53	6.25	3.78	6.47	3.66
	20			4.11	2.97	4.92	3.38	5.32	3.48	5.62	3.53	6.23	3.77	6.44	3.64
	22			4.11	2.97	4.92	3.38	5.32	3.48	5.60	3.52	6.15	3.73	6.35	3.61
	24			4.10	2.97	4.92	3.38	5.32	3.48	5.57	3.50	6.07	3.70	6.27	3.58
	26			4.10	2.97	4.89	3.37	5.27	3.45	5.51	3.47	5.97	3.65	6.17	3.54
	28	3.71	2.91	4.10	2.97	4.87	3.36	5.22	3.43	5.44	3.44	5.88	3.62	6.07	3.50
	30	3.71	2.91	4.09	2.96	4.83	3.34	5.17	3.41	5.38	3.41	5.79	3.58	5.98	3.46
	32	3.71	2.91	4.08	2.96	4.79	3.32	5.12	3.39	5.31	3.38	5.70	3.54	5.89	3.43
	34	3.71	2.91	4.06	2.95	4.78	3.31	5.05	3.35	5.23	3.34	5.58	3.49	5.77	3.38
	35	3.71	2.91	4.06	2.95	4.77	3.31	5.02	3.34	5.19	3.33	5.52	3.46	5.71	3.36
36	3.71	2.91	4.05	2.94	4.73	3.29	4.99	3.33	5.14	3.31	5.42	3.42	5.60	3.31	
38	3.71	2.91	4.04	2.94	4.66	3.26	4.94	3.30	5.04	3.26	5.22	3.34	5.38	3.23	
39	3.71	2.91	4.04	2.94	4.63	3.24	4.92	3.29	4.99	3.24	5.12	3.30	5.27	3.19	
41	3.71	2.91	4.02	2.93	4.49	3.18	4.72	3.20	4.78	3.15	4.89	3.21	5.02	3.10	
43	3.71	2.91	4.01	2.92	4.35	3.11	4.52	3.11	4.57	3.06	4.67	3.12	4.77	3.02	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 9 (m ³ /min)	-19.8	-20	3.22	3.22	3.22	3.22	3.22	
	-17.8	-18	3.43	3.43	3.43	3.43	3.43	
	-15.7	-16	3.64	3.64	3.64	3.64	3.64	
	-13.7	-14	3.85	3.85	3.85	3.85	3.85	
	-11.7	-12	4.06	4.06	4.06	4.06	4.06	
	-9.6	-10	4.26	4.26	4.26	4.26	4.26	
	-7.5	-8	4.52	4.52	4.52	4.52	4.52	
	-5.5	-6	4.78	4.78	4.78	4.78	4.78	
	-3.4	-4	4.95	4.94	4.93	4.89	4.84	
	-1.3	-2	5.12	5.10	5.09	4.99	4.89	
	0.8	0	5.39	5.32	5.24	5.05	4.87	
	3.9	3	5.85	5.64	5.43	5.13	4	

Model FDU71KXE6F Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 24 (m³/min)	10			5.82	5.32	6.96	6.01	7.53	6.12	8.01	6.19	8.97	6.70	9.31	6.54
	12			5.82	5.32	6.96	6.01	7.53	6.12	8.00	6.19	8.94	6.69	9.27	6.52
	14			5.82	5.32	6.96	6.01	7.53	6.12	7.99	6.18	8.90	6.68	9.23	6.51
	16			5.82	5.32	6.96	6.01	7.53	6.12	7.97	6.16	8.87	6.67	9.19	6.50
	18			5.82	5.32	6.96	6.01	7.53	6.12	7.96	6.16	8.84	6.66	9.15	6.49
	20			5.82	5.32	6.96	6.01	7.53	6.12	7.95	6.15	8.81	6.63	9.11	6.48
	22			5.81	5.31	6.95	6.00	7.53	6.12	7.92	6.14	8.70	6.60	8.99	6.44
	24			5.80	5.31	6.95	6.00	7.53	6.12	7.88	6.13	8.58	6.56	8.86	6.40
	26			5.80	5.31	6.92	5.99	7.46	6.10	7.79	6.10	8.45	6.51	8.73	6.35
	28	5.25	5.04	5.79	5.31	6.89	5.98	7.38	6.07	7.69	6.06	8.31	6.46	8.59	6.31
	30	5.25	5.04	5.78	5.30	6.83	5.96	7.31	6.03	7.60	6.03	8.19	6.42	8.46	6.27
	32	5.25	5.04	5.77	5.30	6.78	5.94	7.24	6.00	7.51	6.00	8.06	6.38	8.33	6.23
	34	5.25	5.04	5.75	5.29	6.76	5.93	7.15	5.97	7.39	5.94	7.89	6.32	8.16	6.17
	35	5.25	5.04	5.74	5.29	6.75	5.93	7.10	5.95	7.33	5.92	7.80	6.28	8.08	6.14
	36	5.25	5.04	5.73	5.28	6.69	5.91	7.06	5.94	7.26	5.90	7.66	6.23	7.92	6.10
	38	5.25	5.04	5.72	5.28	6.59	5.86	6.99	5.91	7.12	5.85	7.38	6.14	7.61	5.99
	39	5.25	5.04	5.71	5.27	6.54	5.84	6.96	5.90	7.05	5.83	7.24	6.08	7.45	5.95
	41	5.25	5.04	5.69	5.27	6.35	5.77	6.67	5.78	6.76	5.71	6.92	5.98	7.10	5.84
	43	5.25	5.04	5.67	5.26	6.15	5.69	6.39	5.68	6.46	5.61	6.60	5.87	6.75	5.73

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 24 (m³/min)	-19.8	-20	4.64	4.64	4.64	4.64
-17.8	-18		4.94	4.94	4.94	4.94	4.94	
-15.7	-16		5.24	5.24	5.24	5.24	5.24	
-13.7	-14		5.54	5.54	5.54	5.54	5.54	
-11.7	-12		5.83	5.83	5.83	5.83	5.83	
-9.6	-10		6.13	6.13	6.13	6.13	6.13	
-7.5	-8		6.51	6.51	6.51	6.51	6.51	
-5.5	-6		6.88	6.88	6.88	6.88	6.88	
-3.4	-4		7.12	7.11	7.10	7.03	6.96	
-1.3	-2		7.36	7.34	7.32	7.18	7.04	
0.8	0		7.76	7.65	7.54	7.27	7.00	
3.9	3		8.42	8.12	7.82	7.38	6.94	
7.0	6		9.20	8.60	8.00	7.44	6.88	
10.1	9		9.14	8.56	7.97	7.40	6.82	
13.2	12		9.08	8.50	7.92	7.34	6.76	
16.9	15.5		9.01	8.43	7.85	7.27	6.69	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 19 (m³/min)	10			5.65	4.71	6.75	5.33	7.30	5.44	7.77	5.50	8.70	5.95	9.04	5.81
	12			5.65	4.71	6.75	5.33	7.30	5.44	7.76	5.50	8.67	5.94	9.00	5.79
	14			5.65	4.71	6.75	5.33	7.30	5.44	7.75	5.50	8.64	5.93	8.96	5.77
	16			5.65	4.71	6.75	5.33	7.30	5.44	7.74	5.49	8.61	5.92	8.92	5.76
	18			5.65	4.71	6.75	5.33	7.30	5.44	7.73	5.49	8.58	5.91	8.88	5.75
	20			5.65	4.71	6.75	5.33	7.30	5.44	7.72	5.49	8.55	5.90	8.84	5.74
	22			5.64	4.71	6.75	5.33	7.30	5.44	7.68	5.47	8.44	5.85	8.72	5.70
	24			5.63	4.70	6.75	5.33	7.30	5.44	7.65	5.46	8.33	5.81	8.60	5.65
	26			5.63	4.70	6.71	5.30	7.23	5.41	7.56	5.43	8.20	5.77	8.47	5.61
	28	5.10	4.65	5.62	4.70	6.68	5.29	7.17	5.38	7.47	5.39	8.07	5.71	8.34	5.57
	30	5.10	4.65	5.61	4.69	6.63	5.27	7.10	5.36	7.38	5.35	7.94	5.67	8.21	5.51
	32	5.10	4.65	5.59	4.68	6.58	5.25	7.03	5.33	7.29	5.32	7.82	5.63	8.09	5.48
	34	5.10	4.65	5.58	4.68	6.56	5.24	6.94	5.29	7.18	5.28	7.66	5.56	7.92	5.42
	35	5.10	4.65	5.57	4.68	6.55	5.24	6.89	5.27	7.12	5.25	7.57	5.53	7.84	5.40
	36	5.10	4.65	5.56	4.67	6.50	5.22	6.86	5.25	7.05	5.22	7.44	5.49	7.68	5.34
	38	5.10	4.65	5.55	4.67	6.40	5.18	6.79	5.23	6.91	5.17	7.17	5.39	7.38	5.25
	39	5.10	4.65	5.54	4.66	6.35	5.16	6.75	5.21	6.84	5.14	7.03	5.34	7.23	5.19
	41	5.10	4.65	5.52	4.65	6.16	5.08	6.48	5.11	6.56	5.03	6.72	5.23	6.89	5.09
	43	5.10	4.65	5.50	4.65	5.97	5.00	6.20	5.00	6.27	4.92	6.41	5.11	6.55	4.98

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 19 (m³/min)	-19.8	-20	4.49	4.49	4.49	4.49
-17.8	-18		4.78	4.78	4.78	4.78	4.78	
-15.7	-16		5.07	5.07	5.07	5.07	5.07	
-13.7	-14		5.36	5.36	5.36	5.36	5.36	
-11.7	-12		5.65	5.65	5.65	5.65	5.65	
-9.6	-10		5.93	5.93	5.93	5.93	5.93	
-7.5	-8		6.30	6.30	6.30	6.30	6.30	
-5.5	-6		6.66	6.66	6.66	6.66	6.66	
-3.4	-4		6.89	6.88	6.87	6.80	6.73	
-1.3	-2		7.12	7.10	7.08	6.95	6.81	
0.8	0		7.51	7.40	7.29	7.03	6.77	
3.9	3		8.15	7.86	7.57	7.14	6.71	
7.0	6		8.90	8.32	7.74	7.20	6.66	
10.1	9		8.84	8.28	7.71	7.15	6.60	
13.2	12		8.78	8.22	7.66	7.10	6.54	
16.9	15.5		8.72	8.16	7.59	7.03	6.47	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 15 (m³/min)	10			5.37	4.17	6.42	4.71	6.94	4.84	7.39	4.91	8.27	5.29	8.59	5.15
	12			5.37	4.17	6.42	4.71	6.94	4.84	7.38	4.91	8.24	5.28	8.55	5.13
	14			5.37	4.17	6.42	4.71	6.94	4.84	7.37	4.90	8.21	5.27	8.52	5.12
	16			5.37	4.17	6.42	4.71	6.94	4.84	7.36	4.90	8.18	5.25	8.48	5.11
	18			5.37	4.17	6.42	4.71	6.94	4.84	7.35	4.89	8.15	5.24	8.44	5.10
	20			5.37	4.17	6.42	4.71	6.94	4.84	7.34	4.88	8.12	5.23	8.41	5.08
	22			5.36	4.16	6.42	4.71	6.94	4.84	7.30	4.87	8.02	5.19	8.29	5.04
	24			5.35	4.16	6.41	4.70	6.94	4.84	7.27	4.86	7.92	5.15	8.18	5.00
	26			5.35	4.16	6.38	4.69	6.88	4.81	7.18	4.82	7.79	5.10	8.05	4.95
	28	4.85	4.10	5.34	4.15	6.35	4.68	6.81	4.78	7.10	4.79	7.67	5.05	7.93	4.91
	30	4.85	4.10	5.33	4.15	6.30	4.66	6.75	4.74	7.02	4.75	7.55	5.00	7.81	4.87
	32	4.85	4.10	5.32	4.14	6.26	4.64	6.68	4.71	6.93	4.70	7.44	4.96	7.69	4.82
	34	4.85	4.10	5.30	4.14	6.23	4.63	6.59	4.67	6.82	4.66	7.28	4.90	7.53	4.77
	35	4.85	4.10	5.29	4.13	6.22	4.62	6.55	4.66	6.77	4.64	7.20	4.87	7.45	4.74
	36	4.85	4.10	5.29	4.13	6.18	4.61	6.52	4.64	6.70	4.61	7.07	4.82	7.31	4.69
	38	4.85	4.10	5.27	4.12	6.08	4.57	6.45	4.62	6.57	4.56	6.81	4.72	7.02	4.58
	39	4.85	4.10	5.27	4.12	6.03	4.54	6.42	4.60	6.51	4.53	6.68	4.67	6.87	4.53
	41	4.85	4.10	5.25	4.11	5.85	4.47	6.16	4.50	6.23	4.43	6.39	4.57	6.55	4.42
	43	4.85	4.10	5.23	4.11	5.67	4.39	5.90	4.39	5.96	4.32	6.09	4.45	6.23	4.30

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 15 (m³/min)	-19.8	-20	4.22	4.22	4.22	4.22
-17.8	-18		4.49	4.49	4.49	4.49	4.49	
-15.7	-16		4.76	4.76	4.76	4.76	4.76	
-13.7	-14		5.03	5.03	5.03	5.03	5.03	
-11.7	-12		5.30	5.30	5.30	5.30	5.30	
-9.6	-10		5.57	5.57	5.57	5.57	5.57	
-7.5	-8		5.91	5.91	5.91	5.91	5.91	
-5.5	-6		6.25	6.25	6.25	6.25	6.25	
-3.4	-4		6.47	6.46	6.45	6.39	6.32	
-1.3	-2		6.69	6.67	6.65	6.52	6.40	
0.8	0		7.05	6.95	6.85	6.61	6.36	
3.9	3		7.65	7.38	7.11	6.71	6.31	
7.0	6		8.36	7.82	7.27	6.76	6.25	
10.1	9		8.31					

Model FDU112KXE6F Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 36 (m³/min)	10			9.18	7.72	10.97	8.72	11.87	8.91	12.63	9.01	14.15	9.75	14.69	9.51
	12			9.18	7.72	10.97	8.72	11.87	8.91	12.61	9.00	14.10	9.71	14.63	9.43
	14			9.18	7.72	10.97	8.72	11.87	8.91	12.60	9.00	14.05	9.70	14.56	9.41
	16			9.18	7.72	10.97	8.72	11.87	8.91	12.58	8.99	14.00	9.69	14.50	9.40
	18			9.18	7.72	10.97	8.72	11.87	8.91	12.56	8.98	13.94	9.67	14.44	9.38
	20			9.18	7.72	10.97	8.72	11.87	8.91	12.55	8.98	13.89	9.65	14.37	9.36
	22			9.17	7.72	10.97	8.72	11.87	8.91	12.49	8.96	13.72	9.54	14.18	9.31
	24			9.15	7.71	10.97	8.72	11.87	8.91	12.43	8.94	13.54	9.48	13.98	9.25
	26			9.15	7.71	10.92	8.70	11.76	8.87	12.28	8.87	13.33	9.42	13.77	9.19
	28	8.29	7.59	9.14	7.71	10.86	8.66	11.65	8.81	12.14	8.82	13.11	9.35	13.55	9.11
	30	8.29	7.59	9.12	7.68	10.78	8.63	11.54	8.77	12.00	8.76	12.91	9.27	13.35	9.04
	32	8.29	7.59	9.09	7.67	10.70	8.60	11.42	8.71	11.85	8.71	12.71	9.21	13.15	8.98
	34	8.29	7.59	9.06	7.66	10.66	8.59	11.27	8.66	11.66	8.62	12.45	9.11	12.87	8.88
	35	8.29	7.59	9.05	7.65	10.64	8.58	11.20	8.63	11.57	8.59	12.31	9.05	12.74	8.85
	36	8.29	7.59	9.04	7.65	10.56	8.55	11.14	8.61	11.46	8.56	12.09	8.98	12.49	8.76
	38	8.29	7.59	9.02	7.64	10.40	8.48	11.03	8.56	11.24	8.47	11.65	8.83	12.00	8.60
39	8.29	7.59	9.00	7.60	10.32	8.45	10.98	8.54	11.13	8.43	11.43	8.75	11.75	8.52	
41	8.29	7.59	8.97	7.59	10.01	8.32	10.53	8.37	10.66	8.24	10.92	8.58	11.20	8.28	
43	8.29	7.59	8.94	7.58	9.70	8.19	10.08	8.17	10.19	8.06	10.41	8.34	10.65	8.13	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 36 (m³/min)	-19.8	-20	7.25	7.25	7.25	7.25
-17.8	-18		7.72	7.72	7.72	7.72	7.72	
-15.7	-16		8.18	8.18	8.18	8.18	8.18	
-13.7	-14		8.65	8.65	8.65	8.65	8.65	
-11.7	-12		9.12	9.12	9.12	9.12	9.12	
-9.6	-10		9.58	9.58	9.58	9.58	9.58	
-7.5	-8		10.17	10.17	10.17	10.17	10.17	
-5.5	-6		10.75	10.75	10.75	10.75	10.75	
-3.4	-4		11.13	11.11	11.09	10.98	10.88	
-1.3	-2		11.50	11.47	11.44	11.22	11.00	
0.8	0		12.13	11.95	11.78	11.36	10.94	
3.9	3		13.16	12.69	12.22	11.53	10.84	
7.0	6		14.38	13.44	12.50	11.63	10.75	
10.1	9		14.28	13.37	12.45	11.55	10.66	
13.2	12		14.19	13.28	12.38	11.47	10.56	
16.9	15.5		14.08	13.17	12.27	11.36	10.45	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 28 (m³/min)	10			8.94	6.86	10.69	7.79	11.56	7.99	12.30	8.12	13.78	8.76	14.31	8.50
	12			8.94	6.86	10.69	7.79	11.56	7.99	12.29	8.11	13.73	8.74	14.25	8.48
	14			8.94	6.86	10.69	7.79	11.56	7.99	12.27	8.11	13.68	8.68	14.19	8.46
	16			8.94	6.86	10.69	7.79	11.56	7.99	12.25	8.10	13.63	8.67	14.13	8.44
	18			8.94	6.86	10.69	7.79	11.56	7.99	12.24	8.10	13.58	8.65	14.06	8.42
	20			8.94	6.86	10.69	7.79	11.56	7.99	12.22	8.08	13.53	8.63	14.00	8.41
	22			8.93	6.85	10.69	7.79	11.56	7.99	12.16	8.05	13.36	8.58	13.81	8.33
	24			8.92	6.85	10.68	7.79	11.56	7.99	12.11	8.04	13.19	8.51	13.62	8.26
	26			8.91	6.84	10.63	7.77	11.46	7.95	11.96	7.97	12.98	8.43	13.41	8.19
	28	8.07	6.77	8.90	6.84	10.58	7.75	11.35	7.90	11.82	7.91	12.77	8.34	13.20	8.11
	30	8.07	6.77	8.88	6.83	10.50	7.71	11.24	7.83	11.68	7.86	12.58	8.27	13.00	8.04
	32	8.07	6.77	8.86	6.82	10.42	7.68	11.13	7.79	11.55	7.77	12.39	8.19	12.81	7.97
	34	8.07	6.77	8.83	6.81	10.38	7.66	10.98	7.73	11.36	7.70	12.12	8.09	12.54	7.83
	35	8.07	6.77	8.82	6.81	10.36	7.65	10.91	7.71	11.27	7.67	11.99	8.04	12.41	7.79
	36	8.07	6.77	8.80	6.80	10.29	7.61	10.86	7.69	11.16	7.63	11.78	7.92	12.17	7.72
	38	8.07	6.77	8.78	6.79	10.13	7.55	10.75	7.64	10.95	7.55	11.35	7.79	11.69	7.57
39	8.07	6.77	8.77	6.79	10.05	7.51	10.69	7.61	10.84	7.49	11.13	7.70	11.45	7.48	
41	8.07	6.77	8.74	6.77	9.75	7.38	10.26	7.43	10.38	7.31	10.64	7.52	10.91	7.30	
43	8.07	6.77	8.71	6.76	9.45	7.24	9.82	7.24	9.93	7.14	10.14	7.33	10.37	7.12	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 28 (m³/min)	-19.8	-20	7.05	7.05	7.05	7.05
-17.8	-18		7.51	7.51	7.51	7.51	7.51	
-15.7	-16		7.96	7.96	7.96	7.96	7.96	
-13.7	-14		8.41	8.41	8.41	8.41	8.41	
-11.7	-12		8.87	8.87	8.87	8.87	8.87	
-9.6	-10		9.32	9.32	9.32	9.32	9.32	
-7.5	-8		9.89	9.89	9.89	9.89	9.89	
-5.5	-6		10.46	10.46	10.46	10.46	10.46	
-3.4	-4		10.82	10.81	10.79	10.69	10.58	
-1.3	-2		11.19	11.16	11.13	10.91	10.70	
0.8	0		11.80	11.63	11.46	11.05	10.64	
3.9	3		12.80	12.34	11.89	11.22	10.55	
7.0	6		13.98	13.07	12.16	11.31	10.46	
10.1	9		13.89	13.00	12.11	11.24	10.37	
13.2	12		13.80	12.92	12.04	11.16	10.28	
16.9	15.5		13.70	12.81	11.93	11.05	10.17	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 25 (m³/min)	10			8.43	6.41	10.07	7.26	10.90	7.46	11.59	7.55	12.99	8.16	13.48	7.94
	12			8.43	6.41	10.07	7.26	10.90	7.46	11.58	7.55	12.94	8.15	13.43	7.92
	14			8.43	6.41	10.07	7.26	10.90	7.46	11.56	7.54	12.89	8.13	13.37	7.89
	16			8.43	6.41	10.07	7.26	10.90	7.46	11.55	7.54	12.85	8.10	13.31	7.87
	18			8.43	6.41	10.07	7.26	10.90	7.46	11.53	7.53	12.80	8.09	13.25	7.86
	20			8.43	6.41	10.07	7.26	10.90	7.46	11.52	7.53	12.75	8.07	13.19	7.82
	22			8.41	6.40	10.07	7.26	10.90	7.46	11.46	7.51	12.59	8.00	13.01	7.76
	24			8.40	6.39	10.07	7.26	10.90	7.46	11.41	7.49	12.43	7.94	12.83	7.69
	26			8.40	6.39	10.02	7.23	10.79	7.40	11.27	7.44	12.23	7.86	12.64	7.62
	28	7.61	6.29	8.39	6.39	9.97	7.21	10.69	7.36	11.14	7.38	12.04	7.78	12.44	7.54
	30	7.61	6.29	8.37	6.38	9.89	7.18	10.59	7.31	11.01	7.32	11.85	7.70	12.25	7.46
	32	7.61	6.29	8.35	6.37	9.82	7.14	10.49	7.28	10.88	7.26	11.67	7.63	12.07	7.39
	34	7.61	6.29	8.32	6.36	9.78	7.13	10.35	7.21	10.71	7.20	11.42	7.51	11.82	7.32
	35	7.61	6.29	8.31	6.35	9.77	7.12	10.28	7.19	10.62	7.15	11.30	7.47	11.69	7.28
	36	7.61	6.29	8.30	6.35	9.69	7.09	10.23	7.16	10.52	7.12	11.10	7.41	11.47	7.20
	38	7.61	6.29	8.28	6.34	9.55	7.03	10.13	7.12	10.31	7.02	10.69	7.25	11.01	7.04
39	7.61	6.29	8.27	6.34	9.47	7.00	10.07	7.10	10.21	6.98	10.49	7.17	10.78	6.96	
41	7.61	6.29	8.24	6.32	9.19	6.85	9.66	6.92	9.78	6.78	10.02	6.99	10.28	6.78	
43	7.61	6.29	8.21	6.31	8.90	6.74	9.25	6.73	9.35	6.63	9.56	6.82	9.77	6.58	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 25 (m³/min)	-19.8	-20	6.59	6.59	6.59	6.59
-17.8	-18		7.01	7.01	7.01	7.01	7.01	
-15.7	-16		7.44	7.44	7.44	7.44	7.44	
-13.7	-14		7.86	7.86	7.86	7.86	7.86	
-11.7	-12		8.29	8.29	8.29	8.29	8.29	
-9.6	-10		8.71	8.71	8.71	8.71	8.71	
-7.5	-8		9.24	9.24	9.24	9.24	9.24	
-5.5	-6		9.77	9.77	9.77</			

Model		FDU140KXE6F														Cooling mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																																									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB																													
		14 °CWB	16 °CWB	16 °CWB	18 °CWB	18 °CWB	18 °CWB	19 °CWB	20 °CWB	20 °CWB	20 °CWB	22 °CWB	24 °CWB																														
TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																														
P-Hi 39 (m ³ /min)	10			11.48	9.96	13.72	11.27	14.84	11.49	15.79	11.62	17.69	12.56	18.36	12.26																												
	12			11.48	9.96	13.72	11.27	14.84	11.49	15.77	11.61	17.62	12.53	18.28	12.23																												
	14			11.48	9.96	13.72	11.27	14.84	11.49	15.75	11.60	17.56	12.51	18.20	12.20																												
	16			11.48	9.96	13.72	11.27	14.84	11.49	15.72	11.59	17.49	12.49	18.13	12.18																												
	18			11.48	9.96	13.72	11.27	14.84	11.49	15.70	11.58	17.43	12.46	18.05	12.15																												
	20			11.48	9.96	13.72	11.27	14.84	11.49	15.68	11.57	17.37	12.44	17.97	12.13																												
	22			11.46	9.96	13.71	11.26	14.84	11.49	15.61	11.55	17.15	12.36	17.72	12.04																												
	24			11.44	9.95	13.71	11.26	14.84	11.49	15.54	11.52	16.93	12.28	17.48	11.96																												
	26			11.43	9.94	13.64	11.23	14.70	11.43	15.35	11.45	16.66	12.18	17.21	11.87																												
	28	10.36	9.84	11.42	9.94	13.58	11.21	14.56	11.38	15.17	11.38	16.39	12.09	16.94	11.79																												
	30	10.36	9.84	11.40	9.93	13.48	11.17	14.42	11.32	14.99	11.31	16.14	12.00	16.69	11.70																												
	32	10.36	9.84	11.37	9.92	13.37	11.12	14.28	11.26	14.82	11.24	15.89	11.91	16.43	11.62																												
	34	10.36	9.84	11.33	9.90	13.32	11.10	14.09	11.19	14.58	11.15	15.56	11.79	16.09	11.51																												
	35	10.36	9.84	11.31	9.89	13.30	11.09	14.00	11.15	14.46	11.10	15.39	11.73	15.92	11.45																												
36	10.36	9.84	11.30	9.89	13.20	11.05	13.93	11.12	14.32	11.05	15.11	11.64	15.61	11.35																													
38	10.36	9.84	11.27	9.87	13.00	10.97	13.79	11.07	14.05	10.95	14.56	11.44	15.00	11.16																													
39	10.36	9.84	11.26	9.87	12.90	10.93	13.72	11.04	13.91	10.90	14.28	11.35	14.69	11.06																													
41	10.36	9.84	11.22	9.85	12.51	10.78	13.16	10.82	13.32	10.68	13.65	11.13	14.00	10.84																													
43	10.36	9.84	11.18	9.84	12.13	10.62	12.60	10.61	12.74	10.46	13.02	10.92	13.31	10.56																													

Model		FDU140KXE6F														Heating mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																																									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB																													
		14 °CWB	16 °CWB	16 °CWB	18 °CWB	18 °CWB	19 °CWB	20 °CWB	20 °CWB	20 °CWB	22 °CWB	24 °CWB																															
TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																														
P-Hi 39 (m ³ /min)	10			-19.8	-20	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28																													
	12			-17.8	-18	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88																													
	14			-15.7	-16	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47																													
	16			-13.7	-14	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07																													
	18			-11.7	-12	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67																													
	20			-9.6	-10	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27																													
	22			-7.5	-8	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01																													
	24			-5.5	-6	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76																													
	26			-3.4	-4	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24																													
	28	-1.3	-2	14.72	14.68	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64																													
	30	0.8	0	15.52	15.30	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08																													
	32	3.9	3	16.84	16.24	15.64	14.76	14.76	14.76	14.76	14.76	14.76	14.76	14.76																													
	34	7.0	6	18.40	17.20	16.04	14.88	14.88	14.88	14.88	14.88	14.88	14.88	14.88																													
	35	10.1	9	18.28	17.11	15.94	14.79	14.79	14.79	14.79	14.79	14.79	14.79	14.79																													
36	13.2	12	18.16	17.00	15.84	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68																														
41	16.9	15.5	18.02	16.86	15.70	14.54	14.54	14.54	14.54	14.54	14.54	14.54	14.54																														

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																											
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB															
		14 °CWB	16 °CWB	16 °CWB	18 °CWB	18 °CWB	19 °CWB	20 °CWB	20 °CWB	20 °CWB	22 °CWB	24 °CWB																	
TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																
Hi 32 (m ³ /min)	10			11.29	9.01	13.49	10.19	14.60	10.42	15.53	10.56	17.40	11.41	18.06	11.11														
	12			11.29	9.01	13.49	10.19	14.60	10.42	15.51	10.56	17.33	11.38	17.98	11.08														
	14			11.29	9.01	13.49	10.19	14.60	10.42	15.49	10.55	17.27	11.36	17.91	11.06														
	16			11.29	9.01	13.49	10.19	14.60	10.42	15.47	10.54	17.21	11.34	17.83	11.03														
	18			11.29	9.01	13.49	10.19	14.60	10.42	15.45	10.53	17.14	11.31	17.75	11.00														
	20			11.29	9.01	13.49	10.19	14.60	10.42	15.42	10.52	17.08	11.29	17.67	10.97														
	22			11.27	9.00	13.49	10.19	14.60	10.42	15.35	10.49	16.86	11.20	17.43	10.89														
	24			11.28	9.00	13.48	10.18	14.60	10.42	15.28	10.46	16.65	11.12	17.19	10.80														
	26			11.25	8.99	13.42	10.16	14.46	10.37	15.10	10.39	16.39	11.02	16.93	10.71														
	28	10.19	8.86	11.24	8.99	13.36	10.13	14.32	10.31	14.12	10.31	16.12	10.92	16.66	10.62														
	30	10.19	8.86	11.21	8.98	13.25	10.08	14.18	10.25	14.75	10.24	15.88	10.81	16.41	10.51														
	32	10.19	8.86	11.18	8.96	13.15	10.04	14.05	10.19	14.57	10.17	15.63	10.72	16.16	10.43														
	34	10.19	8.86	11.14	8.95	13.10	10.02	13.86	10.11	14.34	10.08	15.30	10.59	15.83	10.32														
	35	10.19	8.86	11.13	8.94	13.08	10.01	13.77	10.08	14.23	10.04	15.14	10.54	15.66	10.26														
36	10.19	8.86	11.11	8.93	12.98	9.97	13.70	10.05	14.09	9.98	14.86	10.43	15.36	10.16															
38	10.19	8.86	11.08	8.92	12.79	9.88	13.56	9.99	13.82	9.87	14.32	10.23	14.75	9.95															
39	10.19	8.86	11.07	8.91	12.69	9.84	13.49	9.96	13.68	9.82	14.05	10.14	14.45	9.85															
41	10.19	8.86	11.03	8.90	12.31	9.68	12.94	9.73	13.10	9.59	13.43	9.91	13.77	9.63															
43	10.19	8.86	10.99	8.88	11.93	9.52	12.39	9.51	12.53	9.37	12.80	9.69	13.09	9.41															

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																											
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB															
		14 °CWB	16 °CWB	16 °CWB	18 °CWB	18 °CWB	19 °CWB	20 °CWB	20 °CWB	20 °CWB	22 °CWB	24 °CWB																	
TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																
Hi 32 (m ³ /min)	10			-19.8	-20	9.09	9.09	9.09	9.09	9.09	9.09	9.09	9.09	9.09															
	12			-17.8	-18	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68															
	14			-15.7	-16	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27															
	16			-13.7	-14	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85															
	18			-11.7	-12	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44															
	20			-9.6	-10	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02															
	22			-7.5	-8	12.75	12.75	12.75	12.75	12.75	12.75	12.75	12.75	12.75															
	24			-5.5	-6	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48															
	26			-3.4	-4	13.96	13.94	13.92	13.78	13.84	13.92	13.78	13.84	13.92															
	28	-1.3	-2	14.43	14.39	14.35	14.07	13.80	13.80	13.80	13.80	13.80	13.80	13.80															
	30	0.8	0	15.21	14.99	14.78	14.25	13.72	13.72	13.72	13.72	13.72	13.72	13.72															
	32	3.9	3	16.50	15.92	15.33	14.46	13.60	13.60	13.60	13.60	13.60	13.60	13.60															
	34	7.0	6	18.03	16.86	15.68	14.58	13.48	13.48	13.48	13.48	13.48	13.48	13.48															
	35	10.1	9	17.91	16.77	15.62	14.49	13.37	13.37	13.37	13.37	13.37	13.37	13.37															
36	13.2	12	17.80	16.66	15.52	14.39	13.25	13.25	13.25	13.25	13.25	13.25	13.25																
41	16.9	15.5	17.66	16.52	15.39	14.25	13.11	13.11	13.11	13.11	13.11	13.11	13.11																

Model FDU160KXE6F Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 48 (m ³ /min)	10			13.12	11.09	15.68	12.51	16.96	12.79	18.04	12.94	20.21	13.99	20.99	13.66
	12			13.12	11.09	15.68	12.51	16.96	12.79	18.02	12.93	20.14	13.96	20.90	13.61
	14			13.12	11.09	15.68	12.51	16.96	12.79	18.00	12.93	20.07	13.94	20.81	13.58
	16			13.12	11.09	15.68	12.51	16.96	12.79	17.97	12.92	19.99	13.91	20.72	13.56
	18			13.12	11.09	15.68	12.51	16.96	12.79	17.95	12.91	19.92	13.89	20.62	13.53
	20			13.12	11.09	15.68	12.51	16.96	12.79	17.92	12.90	19.85	13.84	20.53	13.50
	22			13.10	11.08	15.67	12.51	16.96	12.79	17.84	12.87	19.60	13.76	20.25	13.39
	24			13.08	11.08	15.67	12.51	16.96	12.79	17.75	12.84	19.34	13.67	19.97	13.30
	26			13.07	11.07	15.59	12.48	16.80	12.73	17.55	12.74	19.04	13.55	19.67	13.19
	28	11.84	10.95	13.06	11.07	15.52	12.45	16.64	12.65	17.34	12.67	18.73	13.45	19.36	13.09
	30	11.84	10.95	13.02	11.05	15.40	12.41	16.48	12.59	17.14	12.59	18.45	13.33	19.07	12.98
	32	11.84	10.95	12.99	11.04	15.28	12.36	16.32	12.53	16.93	12.50	18.16	13.24	18.78	12.90
	34	11.84	10.95	12.95	11.00	15.23	12.34	16.11	12.45	16.66	12.40	17.78	13.09	18.39	12.76
	35	11.84	10.95	12.93	10.99	15.20	12.33	16.00	12.39	16.53	12.36	17.59	13.03	18.20	12.70
	36	11.84	10.95	12.91	10.98	15.09	12.29	15.92	12.36	16.37	12.27	17.27	12.90	17.85	12.60
	38	11.84	10.95	12.88	10.97	14.86	12.18	15.76	12.30	16.05	12.16	16.64	12.62	17.14	12.30
	39	11.84	10.95	12.86	10.96	14.74	12.13	15.68	12.27	15.89	12.11	16.32	12.52	16.79	12.20
	41	11.84	10.95	12.82	10.95	14.30	11.94	15.04	12.01	15.23	11.85	15.60	12.29	16.00	11.98
	43	11.84	10.95	12.77	10.93	13.86	11.78	14.40	11.76	14.56	11.60	14.87	12.06	15.21	11.75

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CWB	°CWB	°CWB	°CWB	°CWB	°CWB	
P-Hi 48 (m ³ /min)	-19.8	-20	10.44	10.44	10.44	10.44	10.44	
	-17.8	-18	11.11	11.11	11.11	11.11	11.11	
	-15.7	-16	11.78	11.78	11.78	11.78	11.78	
	-13.7	-14	12.46	12.46	12.46	12.46	12.46	
	-11.7	-12	13.13	13.13	13.13	13.13	13.13	
	-9.6	-10	13.80	13.80	13.80	13.80	13.80	
	-7.5	-8	14.44	14.44	14.44	14.44	14.44	
	-5.5	-6	15.48	15.48	15.48	15.48	15.48	
	-3.4	-4	16.02	16.00	15.98	15.82	15.66	
	-1.3	-2	16.56	16.52	16.47	16.16	15.84	
	0.8	0	17.46	17.21	16.97	16.36	15.75	
	3.9	3	18.95	18.27	17.60	16.61	15.62	
	7.0	6	20.70	19.35	18.00	16.74	15.48	
	10.1	9	20.57	19.25	17.93	16.64	15.35	
	13.2	12	20.43	19.13	17.82	16.52	15.21	
16.9	15.5	20.27	18.97	17.66	16.36	15.05		

Hi 35 (m³/min)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		21 °CDB 16 °CWB		23 °CDB 18 °CWB		26 °CDB 19 °CWB		27 °CDB 20 °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
10				12.90	9.64	15.42	10.94	16.68	11.24	17.75	11.43	19.88	12.29	20.65	11.97
12				12.90	9.64	15.42	10.94	16.68	11.24	17.73	11.42	19.81	12.27	20.56	11.94
14				12.90	9.64	15.42	10.94	16.68	11.24	17.70	11.41	19.74	12.24	20.47	11.89
16				12.90	9.64	15.42	10.94	16.68	11.24	17.68	11.40	19.67	12.22	20.38	11.86
18				12.90	9.64	15.42	10.94	16.68	11.24	17.65	11.37	19.60	12.19	20.29	11.83
20				12.90	9.64	15.42	10.94	16.68	11.24	17.63	11.36	19.52	12.16	20.20	11.78
22				12.88	9.63	15.42	10.94	16.68	11.24	17.55	11.33	19.28	12.06	19.92	11.68
24				12.87	9.63	15.41	10.94	16.68	11.24	17.47	11.30	19.03	11.95	19.65	11.59
26				12.85	9.62	15.34	10.89	16.53	11.17	17.26	11.20	18.73	11.83	19.35	11.47
28	11.65	9.47	12.84	9.62	15.27	10.86	16.37	11.10	17.06	11.11	18.43	11.70	19.05	11.36	
30	11.65	9.47	12.81	9.60	15.15	10.82	16.21	11.02	16.86	11.03	18.15	11.59	18.76	11.25	
32	11.65	9.47	12.78	9.59	15.03	10.75	16.05	10.96	16.66	10.94	17.87	11.47	18.48	11.14	
34	11.65	9.47	12.74	9.57	14.98	10.73	15.84	10.86	16.39	10.82	17.49	11.32	18.09	10.96	
35	11.65	9.47	12.72	9.56	14.95	10.72	15.74	10.82	16.26	10.77	17.30	11.24	17.90	10.90	
36	11.65	9.47	12.70	9.55	14.84	10.64	15.66	10.77	16.10	10.69	16.99	11.09	17.56	10.79	
38	11.65	9.47	12.67	9.54	14.61	10.55	15.50	10.71	15.79	10.58	16.37	10.88	16.86	10.56	
39	11.65	9.47	12.65	9.53	14.50	10.50	15.43	10.68	15.64	10.47	16.06	10.76	16.51	10.43	
41	11.65	9.47	12.61	9.50	14.07	10.33	14.80	10.39	14.98	10.22	15.35	10.48	15.74	10.15	
43	11.65	9.47	12.57	9.48	13.63	10.14	14.17	10.12	14.32	9.96	14.63	10.20	14.96	9.88	

Hi 35 (m³/min)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CWB	°CWB	°CWB	°CWB	°CWB	°CWB	
-19.8	-20	10.23	10.23	10.23	10.23	10.23		
-17.8	-18	10.89	10.89	10.89	10.89	10.89		
-15.7	-16	11.55	11.55	11.55	11.55	11.55		
-13.7	-14	12.21	12.21	12.21	12.21	12.21		
-11.7	-12	12.87	12.87	12.87	12.87	12.87		
-9.6	-10	13.52	13.52	13.52	13.52	13.52		
-7.5	-8	14.35	14.35	14.35	14.35	14.35		
-5.5	-6	15.17	15.17	15.17	15.17	15.17		
-3.4	-4	15.70	15.68	15.66	15.50	15.35		
-1.3	-2	16.23	16.18	16.14	15.83	15.52		
0.8	0	17.11	16.87	16.63	16.03	15.44		
3.9	3	18.57	17.90	17.24	16.27	15.30		
7.0	6	20.29	18.96	17.64	16.41	15.17		
10.1	9	20.15	18.86	17.57	16.31	15.04		
13.2	12	20.02	18.74	17.46	16.18	14.91		
16.9	15.5	19.87	18.59	17.31	16.03	14.75		

Me 28 (m³/min)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
10				12.07	8.60	14.42	9.77	15.60	10.08	16.60	10.27	18.60	11.07	19.31	10.74
12				12.07	8.60	14.42	9.77	15.60	10.08	16.58	10.27	18.53	11.04	19.22	10.70
14				12.07	8.60	14.42	9.77	15.60	10.08	16.56	10.26	18.46	11.02	19.14	10.67
16				12.07	8.60	14.42	9.77	15.60	10.08	16.53	10.25	18.39	10.98	19.06	10.64
18				12.07	8.60	14.42	9.77	15.60	10.08	16.51	10.24	18.33	10.95	18.97	10.59
20				12.07	8.60	14.42	9.77	15.60	10.08	16.49	10.23	18.26	10.93	18.89	10.56
22				12.05	8.57	14.42	9.77	15.60	10.08	16.41	10.18	18.03	10.81	18.63	10.45
24				12.03	8.56	14.41	9.77	15.60	10.08	16.33	10.15	17.80	10.71	18.38	10.35
26				12.02	8.55	14.35	9.74	15.46	10.00	16.14	10.06	17.52	10.59	18.09	10.23
28	10.89	8.41	12.01	8.55	14.28	9.70	15.31	9.93	15.95	9.97	17.24	10.46	17.81	10.10	
30	10.89	8.41	11.98	8.54	14.17	9.65	15.16	9.87	15.77	9.87	16.97	10.32	17.54	10.00	
32	10.89	8.41	11.95	8.52	14.06	9.59	15.01	9.79	15.58	9.79	16.71	10.22	17.28	9.90	
34	10.89	8.41	11.91	8.50	14.01	9.57	14.82	9.70	15.33	9.68	16.36	10.08	16.92	9.77	
35	10.89	8.41	11.89	8.50	13.98	9.56	14.72	9.66	15.21	9.63	16.18	10.00	16.74	9.69	
36	10.89	8.41	11.88	8.49	13.88	9.52	14.65	9.63	15.06	9.56	15.89	9.87	16.42	9.57	
38	10.89	8.41	11.85	8.48	13.67	9.41	14.50	9.56	14.77	9.43	15.31	9.64	15.77	9.31	
39	10.89	8.41	11.83	8.47	13.56	9.35	14.43	9.53	14.62	9.36	15.02	9.52	15.44	9.16	
41	10.89	8.41	11.79	8.45	13.16	9.17	13.84	9.25	14.01	9.09	14.35	9.22	14.72	8.93	
43	10.89	8.41	11.75	8.43	12.75	8.96	13.25	8.95	13.39	8.80	13.68	8.97	13.99	8.67	

Me 28 (m³/min)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		16 °CDB			

Model **FDU224KXZE1** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 80 (m³/min)	10	18.36	17.63	21.95	19.91	23.74	20.22	25.26	20.44	28.30	22.13	29.38	21.66		
	12	18.36	17.63	21.95	19.91	23.74	20.22	25.23	20.38	28.19	22.09	29.25	21.61		
	14	18.36	17.63	21.95	19.91	23.74	20.22	25.19	20.37	28.09	22.05	29.13	21.58		
	16	18.36	17.63	21.95	19.91	23.74	20.22	25.16	20.36	27.99	22.02	29.00	21.54		
	18	18.36	17.63	21.95	19.91	23.74	20.22	25.13	20.35	27.89	21.99	28.87	21.50		
	20	18.36	17.63	21.95	19.91	23.74	20.22	25.09	20.33	27.79	21.96	28.75	21.46		
	22	18.34	17.61	21.94	19.90	23.74	20.22	24.97	20.29	27.43	21.84	28.36	21.20		
	24	18.31	17.58	21.93	19.90	23.74	20.22	24.86	20.25	27.08	21.72	27.96	21.08		
	26	18.29	17.56	21.83	19.86	23.52	20.14	24.57	20.14	26.66	21.45	27.53	20.95		
	28	16.58	15.92	18.28	17.55	21.73	19.82	23.30	20.06	24.27	20.04	26.23	21.31	27.10	20.82
	30	16.58	15.92	18.23	17.50	21.56	19.71	23.07	19.97	23.99	19.94	25.83	21.18	26.70	20.70
	32	16.58	15.92	18.19	17.46	21.39	19.65	22.85	19.89	23.71	19.84	25.43	21.04	26.29	20.58
	34	16.58	15.92	18.13	17.40	21.32	19.62	22.55	19.78	23.33	19.71	24.89	20.87	25.75	20.42
	35	16.58	15.92	18.10	17.38	21.28	19.61	22.40	19.72	23.14	19.64	24.62	20.78	25.48	20.34
36	16.58	15.92	18.08	17.36	21.12	19.55	22.29	19.68	22.92	19.57	24.18	20.64	24.98	20.20	
38	16.58	15.92	18.03	17.31	20.80	19.43	22.06	19.60	22.47	19.36	23.30	20.35	23.99	20.20	
39	16.58	15.92	18.01	17.29	20.64	19.37	21.95	19.52	22.25	19.29	22.85	20.21	23.50	19.76	
41	16.58	15.92	17.95	17.23	20.02	19.13	21.06	19.20	21.32	18.96	21.84	19.89	22.40	19.44	
43	16.58	15.92	17.88	17.16	19.40	18.62	20.16	18.87	20.38	18.64	20.82	19.57	21.30	19.12	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
P-Hi 80 (m³/min)	-19.8	-20	14.50	14.50	14.50	14.50	14.50
	-17.8	-18	15.43	15.43	15.43	15.43	15.43
	-15.7	-16	16.37	16.37	16.37	16.37	16.37
	-13.7	-14	17.30	17.30	17.30	17.30	17.30
	-11.7	-12	18.23	18.23	18.23	18.23	18.23
	-9.6	-10	19.17	19.17	19.17	19.17	19.17
	-7.5	-8	20.33	20.33	20.33	20.33	20.33
	-5.5	-6	21.50	21.50	21.50	21.50	21.50
	-3.4	-4	22.25	22.22	22.19	21.97	21.75
	-1.3	-2	23.00	22.94	22.88	22.44	22.00
	0.8	0	24.25	23.91	23.56	22.72	21.88
	3.9	3	26.31	25.38	24.44	23.06	21.69
	7.0	6	28.75	26.88	25.00	23.25	21.50
	10.1	9	28.56	26.73	24.91	23.11	21.31
13.2	12	28.38	26.56	24.75	22.94	21.13	
16.9	15.5	28.16	26.34	24.53	22.72	20.93	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 72 (m³/min)	10	16.56	15.89	19.79	17.93	21.41	18.21	22.78	18.41	25.52	19.93	26.50	19.51		
	12	16.56	15.89	19.79	17.93	21.41	18.21	22.75	18.40	25.43	19.90	26.38	19.47		
	14	16.56	15.89	19.79	17.93	21.41	18.21	22.72	18.35	25.33	19.86	26.27	19.44		
	16	16.56	15.89	19.79	17.93	21.41	18.21	22.69	18.34	25.24	19.84	26.15	19.40		
	18	16.56	15.89	19.79	17.93	21.41	18.21	22.66	18.33	25.15	19.81	26.04	19.37		
	20	16.56	15.89	19.79	17.93	21.41	18.21	22.63	18.32	25.06	19.78	25.92	19.33		
	22	16.53	15.87	19.79	17.93	21.41	18.21	22.52	18.28	24.74	19.67	25.57	19.10		
	24	16.51	15.85	19.78	17.92	21.41	18.21	22.42	18.24	24.42	19.56	25.22	18.99		
	26	16.50	15.84	19.69	17.89	21.21	18.14	22.15	18.14	24.04	19.44	24.83	18.87		
	28	14.95	14.35	16.48	15.82	19.59	17.85	21.01	18.06	21.89	18.05	23.65	19.19	24.44	18.76
	30	14.95	14.35	16.44	15.78	19.44	17.76	20.81	17.99	21.63	17.96	23.29	19.07	24.08	18.65
	32	14.95	14.35	16.40	15.74	19.29	17.70	20.60	17.92	21.38	17.87	22.93	18.95	23.71	18.54
	34	14.95	14.35	16.35	15.70	19.22	17.68	20.33	17.81	21.04	17.75	22.45	18.80	23.22	18.39
	35	14.95	14.35	16.32	15.67	19.19	17.66	20.20	17.77	20.87	17.69	22.20	18.72	22.98	18.32
36	14.95	14.35	16.30	15.65	19.05	17.61	20.10	17.73	20.67	17.62	21.81	18.59	22.53	18.19	
38	14.95	14.35	16.26	15.61	18.76	17.50	19.90	17.66	20.27	17.45	21.01	18.33	21.64	17.93	
39	14.95	14.35	16.24	15.59	18.61	17.44	19.80	17.58	20.07	17.37	20.61	18.20	21.19	17.79	
41	14.95	14.35	16.18	15.53	18.05	17.23	18.99	17.29	19.22	17.08	19.69	17.91	20.20	17.50	
43	14.95	14.35	16.13	15.48	17.50	16.80	18.18	17.00	18.38	16.79	18.78	17.62	19.20	17.22	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
Hi 72 (m³/min)	-19.8	-20	13.05	13.05	13.05	13.05	13.05
	-17.8	-18	13.89	13.89	13.89	13.89	13.89
	-15.7	-16	14.73	14.73	14.73	14.73	14.73
	-13.7	-14	15.57	15.57	15.57	15.57	15.57
	-11.7	-12	16.41	16.41	16.41	16.41	16.41
	-9.6	-10	17.25	17.25	17.25	17.25	17.25
	-7.5	-8	18.30	18.30	18.30	18.30	18.30
	-5.5	-6	19.35	19.35	19.35	19.35	19.35
	-3.4	-4	20.03	20.00	19.97	19.77	19.58
	-1.3	-2	20.70	20.64	20.59	20.19	19.80
	0.8	0	21.83	21.52	21.21	20.45	19.69
	3.9	3	23.68	22.84	21.99	20.76	19.52
	7.0	6	25.88	24.19	22.50	20.93	19.35
	10.1	9	25.71	24.06	22.42	20.80	19.18
13.2	12	25.54	23.91	22.28	20.64	19.01	
16.9	15.5	25.34	23.71	22.08	20.45	18.82	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 64 (m³/min)	10	14.75	14.14	17.64	15.96	19.08	16.21	20.30	16.38	22.74	17.73	23.61	17.36		
	12	14.75	14.14	17.64	15.96	19.08	16.21	20.27	16.37	22.66	17.71	23.51	17.33		
	14	14.75	14.14	17.64	15.96	19.08	16.21	20.24	16.36	22.57	17.68	23.41	17.30		
	16	14.75	14.14	17.64	15.96	19.08	16.21	20.22	16.35	22.49	17.65	23.30	17.26		
	18	14.75	14.14	17.64	15.96	19.08	16.21	20.19	16.31	22.41	17.62	23.20	17.23		
	20	14.75	14.14	17.64	15.96	19.08	16.21	20.16	16.30	22.33	17.60	23.10	17.20		
	22	14.73	14.13	17.63	15.95	19.08	16.21	20.07	16.26	22.05	17.51	22.79	16.99		
	24	14.71	14.12	17.62	15.95	19.08	16.21	19.97	16.23	21.76	17.41	22.47	16.89		
	26	14.70	14.11	17.54	15.91	18.90	16.14	19.74	16.15	21.42	17.30	22.13	16.79		
	28	13.32	12.79	14.69	14.10	17.46	15.89	18.72	16.07	19.51	16.07	21.08	17.08	21.78	16.69
	30	13.32	12.79	14.65	14.06	17.33	15.84	18.54	16.01	19.28	15.98	20.75	16.97	21.45	16.59
	32	13.32	12.79	14.62	14.04	17.19	15.75	18.36	15.94	19.05	15.90	20.43	16.86	21.13	16.49
	34	13.32	12.79	14.57	13.99	17.13	15.73	18.12	15.85	18.75	15.80	20.00	16.72	20.69	16.36
	35	13.32	12.79	14.54	13.96	17.10	15.72	18.00	15.81	18.60	15.75	19.79	16.66	20.47	16.30
36	13.32	12.79	14.53	13.95	16.97	15.67	17.91	15.78	18.42	15.68	19.43	16.54	20.08	16.18	
38	13.32	12.79	14.49	13.91	16.71	15.57	17.73	15.71	18.06	15.56	18.72	16.31	19.28	15.95	
39	13.32	12.79	14.47	13.89	16.58	15.52	17.64	15.65	17.88	15.46	18.36	16.20	18.88	15.83	
41	13.32	12.79	14.42	13.84	16.09	15.34	16.92	15.38	17.13	15.20	17.55	15.94	18.00	15.57	
43	13.32	12.79	14.37	13.80	15.59	14.97	16.20	15.12	16.38	14.94	16.73	15.68	17.11	15.32	

Air flow	Outdoor air temperature
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Model FDU280KXZE1 Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi (80 m³/min)	10	22.95	19.57	27.44	22.09	29.68	22.51	31.58	22.83	35.37	24.71	36.73	24.08		
	12	22.95	19.57	27.44	22.09	29.68	22.51	31.53	22.81	35.24	24.66	36.57	24.03		
	14	22.95	19.57	27.44	22.09	29.68	22.51	31.49	22.80	35.12	24.62	36.41	23.98		
	16	22.95	19.57	27.44	22.09	29.68	22.51	31.45	22.78	34.99	24.53	36.25	23.93		
	18	22.95	19.57	27.44	22.09	29.68	22.51	31.41	22.77	34.86	24.49	36.09	23.88		
	20	22.95	19.57	27.44	22.09	29.68	22.51	31.36	22.75	34.73	24.44	35.93	23.83		
	22	22.92	19.55	27.43	22.08	29.68	22.51	31.22	22.61	34.29	24.29	35.44	23.67		
	24	22.89	19.54	27.42	22.08	29.68	22.51	31.07	22.56	33.85	24.14	34.95	23.52		
	26	22.87	19.54	27.42	22.02	29.40	22.40	30.71	22.42	33.32	23.96	34.42	23.30		
	28	20.72	19.34	22.85	19.53	27.16	21.97	29.12	22.29	30.34	22.28	32.78	23.73		
	30	20.72	19.34	22.79	19.50	26.95	21.89	28.84	22.18	29.99	22.16	32.29	23.56		
	32	20.72	19.34	22.74	19.48	26.74	21.81	28.56	22.07	29.64	22.03	31.79	23.39		
	34	20.72	19.34	22.66	19.45	26.65	21.77	28.19	21.93	29.16	21.85	31.11	23.11		
	35	20.72	19.34	22.62	19.43	26.60	21.75	28.00	21.86	28.93	21.76	30.78	23.00		
	36	20.72	19.34	22.60	19.42	26.40	21.67	27.86	21.81	28.65	21.66	30.23	22.82		
	38	20.72	19.34	22.54	19.40	26.00	21.51	27.58	21.70	28.09	21.45	29.12	22.44		
	39	20.72	19.34	22.51	19.38	25.80	21.43	27.44	21.65	27.82	21.36	28.57	22.21		
	41	20.72	19.34	22.43	19.35	25.02	21.13	26.32	21.22	26.65	20.94	27.30	21.79		
43	20.72	19.34	22.35	19.32	24.25	20.83	25.20	20.80	25.48	20.51	26.03	21.24			

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
P-Hi (80 m³/min)	-19.8	-20	18.27	18.27	18.27	18.27	18.27
	-17.8	-18	19.45	19.45	19.45	19.45	19.45
	-15.7	-16	20.62	20.62	20.62	20.62	20.62
	-13.7	-14	21.80	21.80	21.80	21.80	21.80
	-11.7	-12	22.97	22.97	22.97	22.97	22.97
	-9.6	-10	24.15	24.15	24.15	24.15	24.15
	-7.5	-8	25.62	25.62	25.62	25.62	25.62
	-5.5	-6	27.09	27.09	27.09	27.09	27.09
	-3.4	-4	28.04	28.00	27.96	27.68	27.41
	-1.3	-2	28.98	28.90	28.82	28.27	27.72
	0.8	0	30.56	30.12	29.69	28.63	27.56
	3.9	3	33.15	31.97	30.79	29.06	27.33
	7.0	6	36.23	33.86	31.50	29.30	27.09
	10.1	9	35.99	33.69	31.38	29.12	26.85
	13.2	12	35.75	33.47	31.19	28.90	26.62
	16.9	15.5	35.48	33.19	30.91	28.63	26.34

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi (72 m³/min)	10	20.66	17.62	24.69	19.87	26.71	20.25	28.42	20.54	31.83	22.24	33.05	21.67		
	12	20.66	17.62	24.69	19.87	26.71	20.25	28.38	20.53	31.72	22.20	32.91	21.63		
	14	20.66	17.62	24.69	19.87	26.71	20.25	28.34	20.52	31.60	22.16	32.77	21.58		
	16	20.66	17.62	24.69	19.87	26.71	20.25	28.30	20.50	31.49	22.08	32.63	21.54		
	18	20.66	17.62	24.69	19.87	26.71	20.25	28.27	20.49	31.37	22.04	32.48	21.49		
	20	20.66	17.62	24.69	19.87	26.71	20.25	28.23	20.47	31.26	22.00	32.34	21.44		
	22	20.63	17.60	24.68	19.87	26.71	20.25	28.10	20.35	30.86	21.86	31.90	21.30		
	24	20.60	17.59	24.67	19.86	26.71	20.25	27.96	20.30	30.47	21.73	31.46	21.16		
	26	20.58	17.58	24.66	19.82	26.46	20.16	27.64	20.18	29.99	21.56	30.98	20.98		
	28	18.65	17.41	20.56	17.57	24.44	19.77	26.21	20.06	27.31	20.06	29.51	21.36		
	30	18.65	17.41	20.51	17.55	24.26	19.70	25.96	19.96	26.99	19.94	29.06	21.20		
	32	18.65	17.41	20.46	17.53	24.07	19.63	25.70	19.86	26.67	19.82	28.61	21.05		
	34	18.65	17.41	20.40	17.51	23.98	19.59	25.37	19.74	26.25	19.67	28.00	20.87		
	35	18.65	17.41	20.36	17.49	23.94	19.58	25.20	19.67	26.03	19.58	27.70	20.70		
	36	18.65	17.41	20.34	17.48	23.76	19.51	25.07	19.62	25.78	19.49	27.20	20.53		
	38	18.65	17.41	20.29	17.46	23.40	19.36	24.82	19.53	25.28	19.31	26.21	20.20		
	39	18.65	17.41	20.26	17.45	23.22	19.29	24.70	19.48	25.03	19.22	25.71	19.99		
	41	18.65	17.41	20.19	17.42	22.82	19.02	23.69	19.10	23.98	18.84	24.57	19.61		
43	18.65	17.41	20.12	17.39	21.83	18.75	22.68	18.72	22.93	18.46	23.43	19.12			

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Hi (72 m³/min)	-19.8	-20	16.47	16.47	16.47	16.47	16.47
	-17.8	-18	17.53	17.53	17.53	17.53	17.53
	-15.7	-16	18.59	18.59	18.59	18.59	18.59
	-13.7	-14	19.65	19.65	19.65	19.65	19.65
	-11.7	-12	20.71	20.71	20.71	20.71	20.71
	-9.6	-10	21.77	21.77	21.77	21.77	21.77
	-7.5	-8	23.10	23.10	23.10	23.10	23.10
	-5.5	-6	24.42	24.42	24.42	24.42	24.42
	-3.4	-4	25.28	25.24	25.21	24.96	24.71
	-1.3	-2	26.13	26.06	25.99	25.49	24.99
	0.8	0	27.55	27.16	26.77	25.81	24.85
	3.9	3	29.89	28.83	27.76	26.20	24.64
	7.0	6	32.66	30.53	28.40	26.41	24.42
	10.1	9	32.45	30.37	28.29	26.25	24.21
	13.2	12	32.23	30.18	28.12	26.06	24.00
	16.9	15.5	31.99	29.93	27.87	25.81	23.75

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me (64 m³/min)	10	18.36	15.65	21.95	17.67	23.74	18.01	25.26	18.26	28.30	19.77	29.38	19.26		
	12	18.36	15.65	21.95	17.67	23.74	18.01	25.23	18.25	28.19	19.73	29.25	19.22		
	14	18.36	15.65	21.95	17.67	23.74	18.01	25.19	18.24	28.09	19.70	29.13	19.18		
	16	18.36	15.65	21.95	17.67	23.74	18.01	25.16	18.23	27.99	19.63	29.00	19.14		
	18	18.36	15.65	21.95	17.67	23.74	18.01	25.13	18.21	27.89	19.59	28.87	19.10		
	20	18.36	15.65	21.95	17.67	23.74	18.01	25.09	18.20	27.79	19.56	28.75	19.07		
	22	18.34	15.65	21.94	17.66	23.74	18.01	24.97	18.09	27.43	19.43	28.36	18.94		
	24	18.31	15.64	21.93	17.66	23.74	18.01	24.86	18.05	27.08	19.31	27.96	18.81		
	26	18.29	15.63	21.83	17.62	23.52	17.92	24.57	17.94	26.66	19.16	27.53	18.64		
	28	16.58	15.47	18.28	15.62	21.73	15.58	23.30	17.83	24.27	17.83	26.20	18.51		
	30	16.58	15.47	18.23	15.60	21.56	17.51	23.07	17.74	23.99	17.72	25.83	18.85		
	32	16.58	15.47	18.19	15.58	21.39	17.44	22.85	17.66	23.71	17.62	25.43	18.71		
	34	16.58	15.47	18.13	15.56	21.32	17.41	22.55	17.54	23.33	17.48	24.89	18.49		
	35	16.58	15.47	18.10	15.55	21.28	17.40	22.40	17.49	23.14	17.41	24.62	18.40		
	36	16.58	15.47	18.08	15.54	21.12	17.34	22.29	17.44	22.92	17.33	24.18	18.25		
	38	16.58	15.47	18.03	15.52	20.80	17.21	22.06	17.36	22.47	17.16	23.30	17.96		
	39	16.58	15.47	18.01	15.51	20.64	17.15	21.95	17.32	22.25	17.08	22.85	17.77		
	41	16.58	15.47	17.95	15.48	20.02	16.90	21.06	16.98	21.32	16.75	21.84	17.43		
43	16.58	15.47	17.88	15.45	19.40	16.66	20.16	16.84	20.38	16.41	20.82	16.99			

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB
Me (64 m³/min)	-19.8	-20	14.62	14.62	14.62	14.62	14.62
	-17.8	-18	15.56	15.56	15.56	15.56	15.56
	-15.7	-16	16.50	16.50	16.50	16.50	16.50
	-13.7	-14	17.44	17.44	17.44	17.44	17.44
	-11.7	-12	18.38	18.38	18.38	18.38	18.38
	-9.6	-10	19.32	19.32	19.32	19.32	19.32
	-7.5	-8	20.50	20.50	20.50	20.50	20.50
	-5.5	-6	21.67	21.67	21.67	21.67	21.67
	-3.4	-4	22.43	22.40	22.37	22.14	21.92
	-1.3	-2	23.18	23.12	23.06	22.62	22.18
	0.8	0	24.44	24.10	23.75	22.90	22.05
	3.9	3					

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

Model		FDUM22KXE6F		Cooling mode (kW)															
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																	
		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				
P-Hi 13 (m ³ /min)	10			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.38	2.78	2.67	2.89	2.77				
	12			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.38	2.77	2.66	2.87	2.76				
	14			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.76	2.65	2.86	2.75				
	16			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.75	2.64	2.85	2.74				
	18			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.74	2.63	2.84	2.73				
	20			1.80	1.73	2.16	2.07	2.33	2.24	2.46	2.36	2.73	2.62	2.82	2.71				
	22			1.80	1.73	2.15	2.06	2.33	2.24	2.45	2.35	2.69	2.58	2.78	2.67				
	24			1.80	1.73	2.15	2.06	2.33	2.24	2.44	2.34	2.66	2.55	2.75	2.64				
	26			1.80	1.73	2.14	2.05	2.31	2.22	2.41	2.31	2.62	2.52	2.70	2.59				
	28	1.63	1.56	1.80	1.73	2.13	2.04	2.29	2.20	2.38	2.28	2.58	2.48	2.66	2.55				
	30	1.63	1.56	1.79	1.72	2.12	2.04	2.27	2.18	2.36	2.27	2.54	2.44	2.62	2.52				
	32	1.63	1.56	1.79	1.72	2.10	2.02	2.24	2.15	2.33	2.24	2.50	2.40	2.58	2.48				
	34	1.63	1.56	1.78	1.71	2.09	2.01	2.21	2.12	2.29	2.20	2.44	2.34	2.53	2.43				
	35	1.63	1.56	1.78	1.71	2.09	2.01	2.20	2.11	2.27	2.18	2.42	2.32	2.50	2.40				
	36	1.63	1.56	1.78	1.71	2.07	1.99	2.19	2.10	2.25	2.16	2.37	2.28	2.45	2.35				
	38	1.63	1.56	1.77	1.70	2.04	1.96	2.17	2.08	2.21	2.12	2.29	2.20	2.36	2.27				
39	1.63	1.56	1.77	1.70	2.03	1.95	2.16	2.07	2.19	2.10	2.24	2.15	2.31	2.22					
41	1.63	1.56	1.76	1.69	1.97	1.89	2.07	1.99	2.09	2.01	2.14	2.05	2.20	2.11					
43	1.63	1.56	1.76	1.69	1.91	1.83	1.98	1.90	2.00	1.92	2.05	1.97	2.09	2.01					

Model		FDUM22KXE6F		Heating mode (kW)															
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																	
		16°CDB		18°CDB		20°CDB		22°CDB		24°CDB									
		°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB								
P-Hi 13 (m ³ /min)	-19.8	-20	1.45	1.45	1.45	1.45	1.45	1.45											
	-17.8	-18	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54									
	-15.7	-16	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64									
	-13.7	-14	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73									
	-11.7	-12	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82									
	-9.6	-10	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92									
	-7.5	-8	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03									
	-5.5	-6	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15									
	-3.4	-4	2.23	2.22	2.22	2.22	2.22	2.22	2.22	2.22									
	-1.3	-2	2.30	2.29	2.29	2.29	2.29	2.29	2.29	2.29									
	0.8	0	2.43	2.39	2.36	2.36	2.36	2.36	2.36	2.36									
	3.9	3	2.63	2.54	2.44	2.44	2.44	2.44	2.44	2.44									
	7.0	6	2.88	2.69	2.50	2.50	2.50	2.50	2.50	2.50									
	10.1	9	2.86	2.67	2.49	2.49	2.49	2.49	2.49	2.49									
	13.2	12	2.84	2.66	2.48	2.48	2.48	2.48	2.48	2.48									
	16.9	15.5	2.82	2.63	2.45	2.45	2.45	2.45	2.45	2.45									

Model		FDUM22KXE6F		Cooling mode (kW)															
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																	
		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				
Hi 10 (m ³ /min)	10			1.78	1.71	2.13	2.04	2.30	2.21	2.45	2.35	2.74	2.58	2.85	2.54				
	12			1.78	1.71	2.13	2.04	2.30	2.21	2.44	2.34	2.73	2.58	2.83	2.53				
	14			1.78	1.71	2.13	2.04	2.30	2.21	2.44	2.34	2.72	2.58	2.82	2.53				
	16			1.78	1.71	2.13	2.04	2.30	2.21	2.44	2.34	2.71	2.57	2.81	2.52				
	18			1.78	1.71	2.13	2.04	2.30	2.21	2.43	2.33	2.70	2.57	2.80	2.52				
	20			1.78	1.71	2.13	2.04	2.30	2.21	2.43	2.33	2.69	2.57	2.78	2.52				
	22			1.78	1.71	2.13	2.04	2.30	2.21	2.42	2.32	2.66	2.55	2.75	2.51				
	24			1.77	1.70	2.12	2.04	2.30	2.21	2.41	2.31	2.62	2.52	2.71	2.49				
	26			1.77	1.70	2.11	2.03	2.28	2.19	2.38	2.28	2.58	2.48	2.67	2.48				
	28	1.61	1.55	1.77	1.70	2.10	2.02	2.26	2.17	2.35	2.26	2.54	2.44	2.63	2.47				
	30	1.61	1.55	1.77	1.70	2.09	2.01	2.24	2.15	2.32	2.23	2.50	2.40	2.59	2.46				
	32	1.61	1.55	1.76	1.69	2.07	1.99	2.21	2.12	2.30	2.21	2.46	2.36	2.55	2.45				
	34	1.61	1.55	1.76	1.69	2.07	1.99	2.18	2.09	2.26	2.17	2.41	2.31	2.49	2.39				
	35	1.61	1.55	1.75	1.68	2.06	1.98	2.17	2.08	2.24	2.15	2.39	2.29	2.47	2.37				
	36	1.61	1.55	1.75	1.68	2.05	1.97	2.16	2.07	2.22	2.13	2.34	2.25	2.42	2.32				
	38	1.61	1.55	1.75	1.68	2.01	1.93	2.14	2.05	2.18	2.09	2.26	2.17	2.32	2.23				
39	1.61	1.55	1.74	1.67	2.00	1.92	2.13	2.04	2.16	2.07	2.21	2.12	2.28	2.19					
41	1.61	1.55	1.74	1.67	1.94	1.86	2.04	1.96	2.07	1.99	2.12	2.04	2.17	2.08					
43	1.61	1.55	1.73	1.66	1.88	1.80	1.95	1.87	1.97	1.89	2.02	1.94	2.06	1.98					

Model		FDUM22KXE6F		Heating mode (kW)															
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																	
		16°CDB		18°CDB		20°CDB		22°CDB		24°CDB									
		°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB								
Hi 10 (m ³ /min)	-19.8	-20	1.43	1.43	1.43	1.43	1.43	1.43											
	-17.8	-18	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52									
	-15.7	-16	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61									
	-13.7	-14	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70									
	-11.7	-12	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79									
	-9.6	-10	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89									
	-7.5	-8	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00									
	-5.5	-6	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12									
	-3.4	-4	2.19	2.19	2.18	2.18	2.18	2.18	2.18	2.18									
	-1.3	-2	2.26	2.26	2.25	2.25	2.25	2.25	2.25	2.25									
	0.8	0	2.39	2.35	2.32	2.32	2.32	2.32	2.32	2.32									
	3.9	3	2.59	2.50	2.40	2.40	2.40	2.40	2.40	2.40									
	7.0	6	2.83	2.64	2.46	2.46	2.46	2.46	2.46	2.46									
	10.1	9	2.81	2.63	2.45	2.45	2.45	2.45	2.45	2.45									
	13.2	12	2.79	2.61	2.44	2.44	2.44	2.44	2.44	2.44									
	16.9	15.5	2.77	2.59	2.41	2.41	2.41	2.41	2.41	2.41									

Model		FDUM22KXE6F		Cooling mode (kW)															
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																	
		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				
Me 9 (m ³ /min)	10			1.70	1.63	2.04	1.96	2.20	2.11	2.35	2.20	2.63	2.38	2.73	2.33				
	12			1.70	1.63	2.04	1.96	2.20	2.11	2.34	2.19	2.62	2.38	2.72	2.33				
	14			1.70	1.63	2.04	1.96	2.20	2.11	2.34	2.19	2.61	2.37	2.70	2.32				
	16			1.70	1.63	2.04	1.96	2.20	2.11	2.34	2.19	2.60	2.37	2.69	2.32				
	18			1.70	1.63	2.04	1.96	2.20	2.11	2.33	2.19	2.59	2.37	2.68	2.32				
	20			1.70	1.63	2.04	1.96	2.20	2.11	2.33	2.19	2.58	2.36	2.67	2.31				
	22			1.70	1.63	2.04	1.96	2.20	2.11	2.32	2.19	2.55	2.35	2.63	2.30				
	24			1.70	1.63	2.04	1.96	2.20	2.11	2.31	2.18	2.51	2.34	2.60	2.29				
	26			1.70	1.63	2.03	1.95	2.18	2.09	2.28	2.17	2.48	2.33	2.56	2.28				
	28	1.54	1.48	1.70	1.63	2.02	1.94	2.16	2.07	2.25	2.1								

Model **FDUM28KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 13 (m ³ /min)	10			2.30	2.21	2.74	2.63	2.97	2.85	3.16	3.03	3.54	3.35	3.67	3.29
	12			2.30	2.21	2.74	2.63	2.97	2.85	3.15	3.02	3.52	3.34	3.66	3.28
	14			2.30	2.21	2.74	2.63	2.97	2.85	3.15	3.02	3.51	3.34	3.64	3.28
	16			2.30	2.21	2.74	2.63	2.97	2.85	3.14	3.01	3.50	3.34	3.63	3.27
	18			2.30	2.21	2.74	2.63	2.97	2.85	3.14	3.01	3.49	3.33	3.61	3.27
	20			2.30	2.21	2.74	2.63	2.97	2.85	3.14	3.01	3.47	3.33	3.59	3.26
	22			2.29	2.20	2.74	2.63	2.97	2.85	3.12	3.00	3.43	3.29	3.54	3.25
	24			2.29	2.20	2.74	2.63	2.97	2.85	3.11	2.99	3.39	3.25	3.50	3.24
	26			2.29	2.20	2.73	2.62	2.94	2.82	3.07	2.95	3.33	3.20	3.44	3.22
	28	2.07	1.99	2.28	2.19	2.72	2.61	2.91	2.79	3.03	2.91	3.28	3.15	3.39	3.20
	30	2.07	1.99	2.28	2.19	2.70	2.59	2.88	2.76	3.00	2.88	3.23	3.10	3.34	3.19
	32	2.07	1.99	2.27	2.18	2.67	2.56	2.86	2.75	2.96	2.84	3.18	3.05	3.29	3.16
	34	2.07	1.99	2.27	2.18	2.66	2.55	2.82	2.71	2.92	2.80	3.11	2.99	3.22	3.09
35	2.07	1.99	2.26	2.17	2.66	2.55	2.80	2.69	2.89	2.77	3.08	2.96	3.18	3.05	
36	2.07	1.99	2.26	2.17	2.64	2.53	2.79	2.68	2.86	2.75	3.02	2.90	3.12	3.00	
38	2.07	1.99	2.25	2.16	2.60	2.50	2.76	2.65	2.81	2.70	2.91	2.79	3.00	2.88	
39	2.07	1.99	2.25	2.16	2.58	2.48	2.74	2.63	2.78	2.67	2.86	2.75	2.94	2.82	
41	2.07	1.99	2.24	2.15	2.50	2.40	2.63	2.52	2.66	2.55	2.73	2.62	2.80	2.69	
43	2.07	1.99	2.24	2.15	2.43	2.33	2.52	2.42	2.55	2.45	2.60	2.50	2.66	2.55	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16°CDB		18°CDB		20°CDB		22°CDB		24°CDB	
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB							
P-Hi 13 (m ³ /min)	-19.8	-20	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	
	-15.7	-16	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	
	-13.7	-14	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	
	-11.7	-12	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	
	-9.6	-10	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	
	-3.4	-4	2.85	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	
	-1.3	-2	2.94	2.94	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	
	0.8	0	3.10	3.06	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	
	3.9	3	3.37	3.25	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	
	7.0	6	3.68	3.44	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
10.1	9	3.66	3.42	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19		
13.2	12	3.63	3.40	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17		
16.9	15.5	3.60	3.37	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m ³ /min)	10			2.27	2.18	2.71	2.56	2.94	2.60	3.12	2.63	3.50	2.85	3.63	2.79
	12			2.27	2.18	2.71	2.56	2.94	2.60	3.12	2.63	3.49	2.85	3.62	2.79
	14			2.27	2.18	2.71	2.56	2.94	2.60	3.12	2.63	3.47	2.84	3.60	2.78
	16			2.27	2.18	2.71	2.56	2.94	2.60	3.11	2.62	3.46	2.84	3.59	2.78
	18			2.27	2.18	2.71	2.56	2.94	2.60	3.11	2.62	3.45	2.84	3.57	2.76
	20			2.27	2.18	2.71	2.56	2.94	2.60	3.10	2.62	3.44	2.83	3.55	2.75
	22			2.27	2.18	2.71	2.56	2.94	2.60	3.09	2.62	3.39	2.82	3.51	2.74
	24			2.26	2.17	2.71	2.56	2.94	2.60	3.07	2.61	3.35	2.80	3.46	2.72
	26			2.26	2.17	2.70	2.56	2.91	2.59	3.04	2.60	3.30	2.79	3.40	2.70
	28	2.05	1.97	2.26	2.17	2.69	2.55	2.88	2.58	3.00	2.58	3.24	2.77	3.35	2.69
	30	2.05	1.97	2.25	2.16	2.67	2.55	2.85	2.57	2.97	2.57	3.19	2.73	3.30	2.67
	32	2.05	1.97	2.25	2.16	2.65	2.54	2.83	2.56	2.93	2.56	3.14	2.72	3.25	2.66
	34	2.05	1.97	2.24	2.15	2.64	2.53	2.79	2.55	2.89	2.54	3.08	2.69	3.18	2.64
35	2.05	1.97	2.24	2.15	2.63	2.52	2.77	2.54	2.86	2.53	3.04	2.68	3.15	2.63	
36	2.05	1.97	2.24	2.15	2.61	2.51	2.76	2.54	2.83	2.52	2.99	2.66	3.09	2.61	
38	2.05	1.97	2.23	2.14	2.57	2.47	2.73	2.53	2.78	2.50	2.88	2.63	2.97	2.57	
39	2.05	1.97	2.23	2.14	2.55	2.45	2.71	2.52	2.75	2.49	2.83	2.61	2.91	2.55	
41	2.05	1.97	2.22	2.13	2.48	2.38	2.60	2.48	2.64	2.45	2.70	2.57	2.77	2.51	
43	2.05	1.97	2.21	2.12	2.40	2.30	2.49	2.39	2.52	2.41	2.58	2.48	2.63	2.47	

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16°CDB		18°CDB		20°CDB		22°CDB		24°CDB	
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB							
Hi 10 (m ³ /min)	-19.8	-20	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	
	-17.8	-18	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	
	-15.7	-16	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	
	-13.7	-14	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	
	-11.7	-12	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	
	-9.6	-10	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	
	-7.5	-8	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	
	-5.5	-6	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
	-3.4	-4	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	
	-1.3	-2	2.90	2.89	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	
	0.8	0	3.06	3.01	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	
	3.9	3	3.32	3.20	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	
	7.0	6	3.62	3.39	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	
10.1	9	3.60	3.37	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14		
13.2	12	3.58	3.35	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12		
16.9	15.5	3.55	3.32	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m ³ /min)	10			2.21	2.11	2.64	2.38	2.85	2.43	3.03	2.45	3.40	2.65	3.53	2.60
	12			2.21	2.11	2.64	2.38	2.85	2.43	3.03	2.45	3.39	2.65	3.51	2.59
	14			2.21	2.11	2.64	2.38	2.85	2.43	3.03	2.45	3.37	2.64	3.50	2.59
	16			2.21	2.11	2.64	2.38	2.85	2.43	3.02	2.44	3.36	2.64	3.48	2.58
	18			2.21	2.11	2.64	2.38	2.85	2.43	3.02	2.44	3.35	2.64	3.47	2.58
	20			2.21	2.11	2.64	2.38	2.85	2.43	3.01	2.44	3.34	2.63	3.45	2.57
	22			2.20	2.11	2.63	2.38	2.85	2.43	3.00	2.44	3.29	2.62	3.41	2.56
	24			2.20	2.11	2.63	2.38	2.85	2.43	2.99	2.43	3.25	2.60	3.36	2.54
	26			2.20	2.11	2.62	2.38	2.82	2.41	2.95	2.42	3.20	2.59	3.31	2.53
	28	1.99	1.91	2.20	2.11	2.61	2.37	2.80	2.41	2.91	2.40	3.15	2.57	3.25	2.51
	30	1.99	1.91	2.19	2.10	2.59	2.36	2.77	2.40	2.88	2.39	3.10	2.55	3.21</	

Model **FDUM36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 13 (m ³ /min)	10			2.95	2.83	3.53	3.33	3.82	3.38	4.06	3.42	4.55	3.71	4.72	3.63
	12			2.95	2.83	3.53	3.33	3.82	3.38	4.05	3.41	4.53	3.70	4.70	3.63
	14			2.95	2.83	3.53	3.33	3.82	3.38	4.05	3.41	4.51	3.70	4.68	3.62
	16			2.95	2.83	3.53	3.33	3.82	3.38	4.04	3.41	4.50	3.69	4.66	3.59
	18			2.95	2.83	3.53	3.33	3.82	3.38	4.04	3.41	4.48	3.69	4.64	3.58
	20			2.95	2.83	3.53	3.33	3.82	3.38	4.03	3.41	4.47	3.68	4.62	3.58
	22			2.95	2.83	3.53	3.33	3.82	3.38	4.01	3.40	4.41	3.66	4.56	3.56
	24			2.94	2.82	3.52	3.33	3.82	3.38	3.99	3.39	4.35	3.64	4.49	3.54
	26			2.94	2.82	3.51	3.32	3.78	3.37	3.95	3.38	4.28	3.62	4.43	3.52
	28	2.66	2.55	2.94	2.82	3.49	3.32	3.74	3.35	3.90	3.36	4.22	3.60	4.36	3.50
	30	2.66	2.55	2.93	2.81	3.47	3.31	3.71	3.34	3.86	3.35	4.15	3.55	4.29	3.47
	32	2.66	2.55	2.92	2.80	3.44	3.30	3.67	3.33	3.81	3.32	4.09	3.53	4.23	3.46
	34	2.66	2.55	2.91	2.79	3.43	3.29	3.62	3.31	3.75	3.30	4.00	3.50	4.14	3.43
	35	2.66	2.55	2.91	2.79	3.42	3.28	3.60	3.30	3.72	3.29	3.96	3.49	4.09	3.41
36	2.66	2.55	2.91	2.79	3.39	3.25	3.58	3.29	3.68	3.27	3.89	3.47	4.02	3.39	
38	2.66	2.55	2.90	2.78	3.34	3.21	3.55	3.28	3.61	3.25	3.74	3.42	3.86	3.34	
39	2.66	2.55	2.89	2.77	3.32	3.19	3.53	3.28	3.58	3.24	3.67	3.39	3.78	3.32	
41	2.66	2.55	2.88	2.76	3.22	3.09	3.38	3.22	3.43	3.18	3.51	3.34	3.60	3.27	
43	2.66	2.55	2.87	2.76	3.12	3.00	3.24	3.11	3.28	3.13	3.35	3.22	3.42	3.21	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi 13 (m ³ /min)	-19.8	-20	2.32	2.32	2.32	2.32
-17.8	-18		2.47	2.47	2.47	2.47	2.47	
-15.7	-16		2.62	2.62	2.62	2.62	2.62	
-13.7	-14		2.77	2.77	2.77	2.77	2.77	
-11.7	-12		2.92	2.92	2.92	2.92	2.92	
-9.6	-10		3.07	3.07	3.07	3.07	3.07	
-7.5	-8		3.25	3.25	3.25	3.25	3.25	
-5.5	-6		3.44	3.44	3.44	3.44	3.44	
-3.4	-4		3.56	3.56	3.55	3.52	3.48	
-1.3	-2		3.68	3.67	3.66	3.59	3.52	
0.8	0		3.88	3.83	3.77	3.64	3.50	
3.9	3		4.21	4.06	3.91	3.69	3.47	
7.0	6		4.60	4.30	4.00	3.72	3.44	
10.1	9		4.57	4.28	3.99	3.70	3.41	
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m ³ /min)	10			2.91	2.54	3.48	2.87	3.76	2.93	4.00	2.96	4.48	3.20	4.66	3.13
	12			2.91	2.54	3.48	2.87	3.76	2.93	4.00	2.96	4.47	3.20	4.64	3.12
	14			2.91	2.54	3.48	2.87	3.76	2.93	3.99	2.96	4.45	3.19	4.62	3.11
	16			2.91	2.54	3.48	2.87	3.76	2.93	3.99	2.96	4.44	3.19	4.60	3.11
	18			2.91	2.54	3.48	2.87	3.76	2.93	3.98	2.95	4.42	3.18	4.58	3.10
	20			2.91	2.54	3.48	2.87	3.76	2.93	3.98	2.95	4.40	3.17	4.56	3.09
	22			2.91	2.54	3.48	2.87	3.76	2.93	3.96	2.94	4.35	3.15	4.49	3.07
	24			2.90	2.54	3.48	2.87	3.76	2.93	3.94	2.94	4.29	3.13	4.43	3.05
	26			2.90	2.54	3.46	2.87	3.73	2.92	3.89	2.92	4.22	3.11	4.36	3.03
	28	2.63	2.51	2.90	2.54	3.44	2.86	3.69	2.90	3.85	2.90	4.16	3.08	4.30	3.01
	30	2.63	2.51	2.89	2.53	3.42	2.85	3.66	2.89	3.80	2.88	4.09	3.06	4.23	2.99
	32	2.63	2.51	2.88	2.53	3.39	2.84	3.62	2.87	3.76	2.87	4.03	3.04	4.17	2.97
	34	2.63	2.51	2.87	2.52	3.38	2.83	3.57	2.85	3.70	2.84	3.94	3.01	4.08	2.94
	35	2.63	2.51	2.87	2.52	3.37	2.83	3.55	2.84	3.67	2.83	3.90	2.99	4.04	2.92
36	2.63	2.51	2.86	2.52	3.35	2.82	3.53	2.84	3.63	2.82	3.83	2.97	3.96	2.90	
38	2.63	2.51	2.86	2.52	3.30	2.80	3.50	2.82	3.56	2.79	3.69	2.92	3.80	2.85	
39	2.63	2.51	2.85	2.51	3.27	2.79	3.48	2.82	3.53	2.78	3.62	2.90	3.72	2.82	
41	2.63	2.51	2.84	2.51	3.17	2.75	3.34	2.76	3.38	2.72	3.46	2.84	3.55	2.75	
43	2.63	2.51	2.83	2.51	3.07	2.71	3.20	2.71	3.23	2.67	3.30	2.79	3.38	2.70	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi 10 (m ³ /min)	-19.8	-20	2.28	2.28	2.28	2.28
-17.8	-18		2.43	2.43	2.43	2.43	2.43	
-15.7	-16		2.57	2.57	2.57	2.57	2.57	
-13.7	-14		2.72	2.72	2.72	2.72	2.72	
-11.7	-12		2.87	2.87	2.87	2.87	2.87	
-9.6	-10		3.01	3.01	3.01	3.01	3.01	
-7.5	-8		3.20	3.20	3.20	3.20	3.20	
-5.5	-6		3.38	3.38	3.38	3.38	3.38	
-3.4	-4		3.50	3.49	3.49	3.45	3.42	
-1.3	-2		3.62	3.61	3.60	3.53	3.46	
0.8	0		3.81	3.76	3.70	3.57	3.44	
3.9	3		4.14	3.99	3.84	3.63	3.41	
7.0	6		4.52	4.22	3.93	3.65	3.38	
10.1	9		4.49	4.20	3.92	3.63	3.35	
13.2	12	4.46	4.18	3.89	3.61	3.32		
16.9	15.5	4.43	4.14	3.86	3.57	3.29		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m ³ /min)	10			2.79	2.36	3.33	2.67	3.60	2.72	3.83	2.75	4.30	2.98	4.46	2.90
	12			2.79	2.36	3.33	2.67	3.60	2.72	3.83	2.75	4.28	2.97	4.44	2.90
	14			2.79	2.36	3.33	2.67	3.60	2.72	3.82	2.75	4.26	2.96	4.42	2.89
	16			2.79	2.36	3.33	2.67	3.60	2.72	3.82	2.75	4.25	2.96	4.40	2.88
	18			2.79	2.36	3.33	2.67	3.60	2.72	3.81	2.75	4.23	2.95	4.38	2.88
	20			2.79	2.36	3.33	2.67	3.60	2.72	3.81	2.75	4.22	2.95	4.36	2.87
	22			2.78	2.36	3.33	2.67	3.60	2.72	3.79	2.74	4.16	2.93	4.30	2.85
	24			2.78	2.36	3.33	2.67	3.60	2.72	3.77	2.73	4.11	2.91	4.24	2.83
	26			2.78	2.36	3.31	2.66	3.57	2.71	3.73	2.71	4.05	2.89	4.18	2.81
	28	2.52	2.33	2.77	2.35	3.30	2.66	3.54	2.70	3.68	2.70	3.98	2.86	4.11	2.79
	30	2.52	2.33	2.77	2.35	3.27	2.64	3.50	2.68	3.64	2.68	3.92	2.84	4.05	2.77
	32	2.52	2.33	2.76	2.35	3.25	2.63	3.47	2.67	3.60	2.66	3.86	2.82	3.99	2.75
	34	2.52	2.33	2.75	2.34	3.24	2.63	3.42	2.65	3.54	2.64	3.78	2.79	3.91	2.72
	35	2.52	2.33	2.75	2.34	3.23	2.63	3.40	2.64	3.51	2.63	3.74	2.77	3.87	2.71
36	2.52	2.33	2.74	2.34	3.21	2.62	3.38	2.63	3.48	2.62	3.67	2.75	3.79	2.68	
38	2.52	2.33	2.74	2.34	3.16	2.60	3.35	2.62	3.41	2.59	3.54	2.70	3.64	2.63	
39	2.52	2.33	2.73	2.33	3.13	2.59	3.33	2.61	3.38	2.58	3.47	2.68	3.57	2.61	
41	2.52	2.33	2.72	2.33	3.04	2.55	3.20	2.56	3.24	2.53	3.31	2.62	3.40	2.56	
43	2.52	2.33	2.71	2.33	2.94	2.51	3.06	2.51	3.09	2.47	3.16	2.57	3.23	2.49	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me 9 (m ³ /min)	-19.8	-20	2.18	2.18	2.18	2.18
-17.8	-18		2.32	2.32	2.32	2.32	2.32	
-15.7	-16		2.46	2.46	2.46	2.46	2.46	
-13.7	-14		2.60	2.60	2.60	2.60	2.60	
-11.7	-12		2.74	2.74	2.74	2.74	2.74	
-9.6	-10		2.88	2.88	2.88	2.88	2.88	
-7.5	-8		3.05	3.05	3.05	3.05	3.05	
-5.5	-6		3.23	3.23	3.23	3.23	3.23	
-3.4	-4		3.34	3.33	3.33	3.30	3.26	
-1.3	-2		3.45	3.44	3.43	3.37	3.30	
0.8	0		3.64	3.59	3.53	3.41	3.28	
3.9	3		3.95	3.81	3.67	3.46	3.25	
7.0	6		4.31	4.03	3.75	3.49	3.23	
10.1	9		4.28	4.01	3.74			

Model FDUM45KXE6F **Cooling mode** (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 13 (m ³ /min)	10			3.69	3.26	4.41	3.69	4.77	3.76	5.07	3.80	5.68	4.11	5.90	4.01
	12			3.69	3.26	4.41	3.69	4.77	3.76	5.07	3.80	5.66	4.10	5.88	4.00
	14			3.69	3.26	4.41	3.69	4.77	3.76	5.06	3.79	5.64	4.09	5.85	4.00
	16			3.69	3.26	4.41	3.69	4.77	3.76	5.05	3.79	5.62	4.09	5.83	3.99
	18			3.69	3.26	4.41	3.69	4.77	3.76	5.05	3.79	5.60	4.08	5.80	3.98
	20			3.69	3.26	4.41	3.69	4.77	3.76	5.04	3.79	5.58	4.07	5.78	3.97
	22			3.68	3.26	4.41	3.69	4.77	3.76	5.02	3.78	5.51	4.05	5.70	3.95
	24			3.68	3.26	4.41	3.69	4.77	3.76	4.99	3.77	5.44	4.02	5.62	3.92
	26			3.68	3.26	4.39	3.68	4.73	3.74	4.93	3.74	5.35	3.99	5.53	3.89
	28	3.33	3.20	3.67	3.25	4.37	3.67	4.68	3.72	4.88	3.72	5.27	3.96	5.44	3.86
	30	3.33	3.20	3.66	3.25	4.33	3.66	4.64	3.71	4.82	3.70	5.19	3.93	5.36	3.84
	32	3.33	3.20	3.65	3.25	4.30	3.64	4.59	3.69	4.76	3.68	5.11	3.90	5.28	3.81
	34	3.33	3.20	3.64	3.24	4.28	3.64	4.53	3.66	4.69	3.65	5.00	3.87	5.17	3.77
	35	3.33	3.20	3.64	3.24	4.28	3.64	4.50	3.65	4.65	3.64	4.95	3.85	5.12	3.76
	36	3.33	3.20	3.63	3.24	4.24	3.62	4.48	3.64	4.60	3.62	4.86	3.82	5.02	3.73
	38	3.33	3.20	3.62	3.23	4.18	3.60	4.43	3.62	4.52	3.59	4.68	3.75	4.82	3.66
39	3.33	3.20	3.62	3.23	4.15	3.58	4.41	3.62	4.47	3.57	4.59	3.72	4.72	3.63	
41	3.33	3.20	3.61	3.23	4.02	3.53	4.23	3.55	4.28	3.50	4.39	3.66	4.50	3.54	
43	3.33	3.20	3.59	3.22	3.90	3.48	4.05	3.48	4.09	3.43	4.18	3.59	4.28	3.47	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16°CDB	18°CDB	20°CDB	22°CDB	24°CDB	24°CDB
P-Hi 13 (m ³ /min)	-19.8	-20	2.90	2.90	2.90	2.90	2.90
	-17.8	-18	3.09	3.09	3.09	3.09	3.09
	-15.7	-16	3.27	3.27	3.27	3.27	3.27
	-13.7	-14	3.46	3.46	3.46	3.46	3.46
	-11.7	-12	3.65	3.65	3.65	3.65	3.65
	-9.6	-10	3.83	3.83	3.83	3.83	3.83
	-7.5	-8	4.07	4.07	4.07	4.07	4.07
	-5.5	-6	4.30	4.30	4.30	4.30	4.30
	-3.4	-4	4.45	4.44	4.44	4.39	4.35
	-1.3	-2	4.60	4.59	4.58	4.49	4.40
	0.8	0	4.85	4.78	4.71	4.54	4.38
	3.9	3	5.26	5.08	4.89	4.61	4.34
	7.0	6	5.75	5.38	5.00	4.65	4.30
	10.1	9	5.71	5.35	4.98	4.62	4.26
	13.2	12	5.68	5.31	4.95	4.59	4.23
	16.9	15.5	5.63	5.27	4.91	4.54	4.18

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m ³ /min)	10			3.58	2.84	4.28	3.21	4.63	3.29	4.93	3.33	5.52	3.60	5.73	3.50
	12			3.58	2.84	4.28	3.21	4.63	3.29	4.92	3.33	5.50	3.59	5.71	3.50
	14			3.58	2.84	4.28	3.21	4.63	3.29	4.91	3.33	5.48	3.58	5.68	3.49
	16			3.58	2.84	4.28	3.21	4.63	3.29	4.91	3.33	5.46	3.58	5.66	3.48
	18			3.58	2.84	4.28	3.21	4.63	3.29	4.90	3.32	5.44	3.57	5.63	3.47
	20			3.58	2.84	4.28	3.21	4.63	3.29	4.90	3.32	5.42	3.56	5.61	3.46
	22			3.58	2.84	4.28	3.21	4.63	3.29	4.87	3.31	5.35	3.53	5.53	3.43
	24			3.57	2.84	4.28	3.21	4.63	3.29	4.85	3.30	5.28	3.51	5.46	3.41
	26			3.57	2.84	4.26	3.20	4.59	3.27	4.79	3.28	5.20	3.47	5.37	3.37
	28	3.23	2.79	3.57	2.84	4.24	3.19	4.54	3.25	4.74	3.25	5.12	3.44	5.29	3.35
	30	3.23	2.79	3.56	2.83	4.21	3.18	4.50	3.23	4.68	3.23	5.04	3.41	5.21	3.32
	32	3.23	2.79	3.55	2.83	4.17	3.16	4.46	3.21	4.63	3.21	4.96	3.38	5.13	3.29
	34	3.23	2.79	3.54	2.82	4.16	3.16	4.40	3.19	4.55	3.18	4.86	3.34	5.02	3.25
	35	3.23	2.79	3.53	2.82	4.15	3.15	4.37	3.18	4.51	3.16	4.80	3.32	4.97	3.23
	36	3.23	2.79	3.53	2.82	4.12	3.14	4.35	3.17	4.47	3.15	4.72	3.29	4.87	3.20
	38	3.23	2.79	3.52	2.81	4.06	3.12	4.30	3.15	4.38	3.11	4.54	3.22	4.68	3.13
39	3.23	2.79	3.51	2.81	4.03	3.10	4.28	3.14	4.34	3.09	4.46	3.19	4.58	3.10	
41	3.23	2.79	3.50	2.80	3.91	3.05	4.11	3.07	4.16	3.02	4.26	3.12	4.37	3.03	
43	3.23	2.79	3.49	2.80	3.78	3.00	3.93	3.00	3.98	2.95	4.06	3.05	4.15	2.96	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16°CDB	18°CDB	20°CDB	22°CDB	24°CDB	24°CDB
Hi 10 (m ³ /min)	-19.8	-20	2.80	2.80	2.80	2.80	2.80
	-17.8	-18	2.98	2.98	2.98	2.98	2.98
	-15.7	-16	3.16	3.16	3.16	3.16	3.16
	-13.7	-14	3.34	3.34	3.34	3.34	3.34
	-11.7	-12	3.52	3.52	3.52	3.52	3.52
	-9.6	-10	3.70	3.70	3.70	3.70	3.70
	-7.5	-8	3.93	3.93	3.93	3.93	3.93
	-5.5	-6	4.15	4.15	4.15	4.15	4.15
	-3.4	-4	4.30	4.29	4.29	4.24	4.20
	-1.3	-2	4.44	4.43	4.42	4.33	4.25
	0.8	0	4.69	4.62	4.55	4.39	4.23
	3.9	3	5.08	4.90	4.72	4.46	4.19
	7.0	6	5.55	5.19	4.83	4.49	4.15
	10.1	9	5.52	5.17	4.81	4.46	4.12
	13.2	12	5.48	5.13	4.78	4.43	4.08
	16.9	15.5	5.44	5.09	4.74	4.39	4.04

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m ³ /min)	10			3.34	2.61	4.00	2.95	4.32	3.02	4.60	3.07	5.15	3.31	5.35	3.22
	12			3.34	2.61	4.00	2.95	4.32	3.02	4.60	3.07	5.14	3.31	5.33	3.22
	14			3.34	2.61	4.00	2.95	4.32	3.02	4.59	3.07	5.12	3.30	5.31	3.21
	16			3.34	2.61	4.00	2.95	4.32	3.02	4.58	3.06	5.10	3.29	5.28	3.20
	18			3.34	2.61	4.00	2.95	4.32	3.02	4.58	3.06	5.08	3.28	5.26	3.19
	20			3.34	2.61	4.00	2.95	4.32	3.02	4.57	3.06	5.06	3.28	5.24	3.18
	22			3.34	2.61	4.00	2.95	4.32	3.02	4.55	3.05	5.00	3.25	5.16	3.15
	24			3.33	2.60	3.99	2.95	4.32	3.02	4.53	3.04	4.93	3.22	5.09	3.13
	26			3.33	2.60	3.98	2.95	4.28	3.01	4.47	3.02	4.86	3.20	5.02	3.10
	28	3.02	2.57	3.33	2.60	3.96	2.94	4.24	2.99	4.42	2.99	4.78	3.17	4.94	3.08
	30	3.02	2.57	3.32	2.60	3.93	2.92	4.20	2.97	4.37	2.97	4.70	3.13	4.86	3.05
	32	3.02	2.57	3.31	2.60	3.90	2.91	4.16	2.95	4.32	2.95	4.63	3.11	4.79	3.02
	34	3.02	2.57	3.30	2.59	3.88	2.90	4.11	2.93	4.25	2.92	4.53	3.07	4.69	2.99
	35	3.02	2.57	3.30	2.59	3.88	2.90	4.08	2.92	4.21	2.91	4.48	3.05	4.64	2.97
	36	3.02	2.57	3.29	2.59	3.85	2.89	4.06	2.91	4.17	2.89	4.40	3.02	4.55	2.93
	38	3.02	2.57	3.28	2.58	3.79	2.86	4.02	2.90	4.09	2.86	4.24	2.96	4.37	2.87
39	3.02	2.57	3.28	2.58	3.76	2.85	4.00	2.89	4.05	2.84	4.16	2.93	4.28	2.84	
41	3.02	2.57	3.27	2.58	3.65	2.80	3.84	2.82	3.88	2.77	3.98	2.86	4.08	2.78	
43	3.02	2.57	3.26	2.57	3.53	2.75	3.67	2.75	3.71	2.71	3.79	2.79	3.88	2.71	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16°CDB	18°CDB	20°CDB	22°CDB	24°CDB	24°CDB
Me 9 (m ³ /min)	-19.8	-20	2.60	2.60	2.60	2.60	2.60
	-17.8	-18	2.77	2.77	2.77	2.77	2.77
	-15.7	-16	2.94	2.94	2.94	2.94	2.94
	-13.7	-14	3.11	3.11	3.11	3.11	3.11
	-11.7	-12	3.27	3.27	3.27	3.27	3.27
	-9.6	-10	3.44	3.44	3.44	3.44	3.44
	-7.5	-8	3.65	3.65	3.65	3.65	3.65
	-5.5	-6	3.86	3.86	3.86	3.86	3.86
	-3.4	-4	4.00	3.99	3.98	3.95	3.91
	-1.3	-2	4.13	4.12	4.11	4.03	3.95
	0.8	0	4.36	4.29	4.23	4.08	3.93
	3.9	3	4.73	4			

Model **FDUM56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
P-Hi	13 (m³/min)	10			4.59	3.66	5.49	4.14	5.94	4.24	6.32	4.30	7.07	4.64	7.35	4.52
		12			4.59	3.66	5.49	4.14	5.94	4.24	6.31	4.29	7.05	4.63	7.31	4.50
		14			4.59	3.66	5.49	4.14	5.94	4.24	6.30	4.29	7.02	4.62	7.28	4.49
		16			4.59	3.66	5.49	4.14	5.94	4.24	6.29	4.28	7.00	4.61	7.25	4.48
		18			4.59	3.66	5.49	4.14	5.94	4.24	6.28	4.28	6.97	4.60	7.22	4.47
		20			4.59	3.66	5.49	4.14	5.94	4.24	6.27	4.28	6.95	4.59	7.19	4.46
		22			4.58	3.66	5.49	4.14	5.94	4.24	6.24	4.26	6.86	4.56	7.09	4.43
		24			4.58	3.66	5.48	4.14	5.94	4.24	6.21	4.25	6.77	4.52	6.99	4.39
		26			4.57	3.65	5.46	4.13	5.88	4.21	6.14	4.22	6.66	4.48	6.88	4.35
		28	4.14	3.60	4.57	3.65	5.43	4.12	5.82	4.19	6.07	4.19	6.56	4.44	6.78	4.32
		30	4.14	3.60	4.56	3.65	5.39	4.10	5.77	4.17	6.00	4.17	6.46	4.40	6.67	4.27
		32	4.14	3.60	4.55	3.65	5.35	4.08	5.71	4.14	5.93	4.14	6.36	4.36	6.57	4.24
		34	4.14	3.60	4.53	3.64	5.33	4.07	5.64	4.11	5.83	4.10	6.22	4.31	6.44	4.19
		35	4.14	3.60	4.52	3.63	5.32	4.07	5.60	4.10	5.79	4.08	6.16	4.28	6.37	4.17
36	4.14	3.60	4.52	3.63	5.28	4.05	5.57	4.08	5.73	4.06	6.05	4.24	6.25	4.13		
38	4.14	3.60	4.51	3.63	5.20	4.02	5.52	4.06	5.62	4.01	5.82	4.16	6.00	4.05		
39	4.14	3.60	4.50	3.62	5.16	4.00	5.49	4.05	5.56	3.99	5.71	4.12	5.87	4.00		
41	4.14	3.60	4.49	3.62	5.00	3.93	5.26	3.96	5.33	3.90	5.46	4.03	5.60	3.91		
43	4.14	3.60	4.47	3.61	4.85	3.87	5.04	3.87	5.10	3.81	5.21	3.94	5.32	3.82		

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi	13 (m³/min)	-19.8	-20	3.65	3.65	3.65
-17.8	-18			3.89	3.89	3.89	3.89	3.89
-15.7	-16			4.12	4.12	4.12	4.12	4.12
-13.7	-14			4.36	4.36	4.36	4.36	4.36
-11.7	-12			4.59	4.59	4.59	4.59	4.59
-9.6	-10			4.83	4.83	4.83	4.83	4.83
-7.5	-8			5.12	5.12	5.12	5.12	5.12
-5.5	-6			5.42	5.42	5.42	5.42	5.42
-3.4	-4			5.61	5.60	5.59	5.54	5.48
-1.3	-2			5.80	5.78	5.76	5.65	5.54
0.8	0			6.11	6.02	5.94	5.73	5.51
3.9	3			6.63	6.39	6.16	5.81	5.47
7.0	6			7.25	6.77	6.30	5.86	5.42
10.1	9			7.20	6.74	6.28	5.82	5.37
13.2	12	7.15	6.69	6.24	5.78	5.32		
16.9	15.5	7.10	6.64	6.18	5.73	5.27		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
Hi	10 (m³/min)	10			4.41	3.23	5.27	3.66	5.70	3.77	6.07	3.83	6.80	4.13	7.06	4.01
		12			4.41	3.23	5.27	3.66	5.70	3.77	6.06	3.83	6.77	4.12	7.03	4.00
		14			4.41	3.23	5.27	3.66	5.70	3.77	6.05	3.82	6.75	4.11	7.00	3.99
		16			4.41	3.23	5.27	3.66	5.70	3.77	6.04	3.82	6.72	4.10	6.97	3.97
		18			4.41	3.23	5.27	3.66	5.70	3.77	6.03	3.81	6.70	4.09	6.94	3.96
		20			4.41	3.23	5.27	3.66	5.70	3.77	6.03	3.81	6.67	4.08	6.90	3.95
		22			4.40	3.22	5.27	3.66	5.70	3.77	6.00	3.80	6.59	4.04	6.81	3.91
		24			4.40	3.22	5.27	3.66	5.70	3.77	5.97	3.79	6.50	4.00	6.72	3.88
		26			4.39	3.22	5.24	3.65	5.65	3.74	5.90	3.76	6.40	3.96	6.61	3.83
		28	3.98	3.16	4.39	3.22	5.22	3.64	5.60	3.72	5.83	3.72	6.30	3.92	6.51	3.80
		30	3.98	3.16	4.38	3.21	5.18	3.62	5.54	3.69	5.76	3.69	6.20	3.87	6.41	3.75
		32	3.98	3.16	4.37	3.21	5.14	3.60	5.49	3.67	5.69	3.66	6.11	3.84	6.31	3.72
		34	3.98	3.16	4.35	3.20	5.12	3.59	5.42	3.64	5.60	3.62	5.98	3.78	6.18	3.67
		35	3.98	3.16	4.35	3.20	5.11	3.59	5.38	3.62	5.56	3.61	5.91	3.75	6.12	3.65
36	3.98	3.16	4.34	3.19	5.07	3.57	5.35	3.61	5.50	3.58	5.81	3.71	6.00	3.60		
38	3.98	3.16	4.33	3.19	5.00	3.54	5.30	3.58	5.40	3.54	5.60	3.63	5.76	3.51		
39	3.98	3.16	4.33	3.19	4.96	3.52	5.27	3.57	5.34	3.51	5.49	3.59	5.64	3.47		
41	3.98	3.16	4.31	3.18	4.81	3.45	5.06	3.48	5.12	3.42	5.25	3.49	5.38	3.38		
43	3.98	3.16	4.30	3.17	4.66	3.38	4.84	3.38	4.90	3.32	5.00	3.39	5.11	3.28		

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi	10 (m³/min)	-19.8	-20	3.52	3.52	3.52
-17.8	-18			3.75	3.75	3.75	3.75	3.75
-15.7	-16			3.97	3.97	3.97	3.97	3.97
-13.7	-14			4.20	4.20	4.20	4.20	4.20
-11.7	-12			4.43	4.43	4.43	4.43	4.43
-9.6	-10			4.65	4.65	4.65	4.65	4.65
-7.5	-8			4.94	4.94	4.94	4.94	4.94
-5.5	-6			5.22	5.22	5.22	5.22	5.22
-3.4	-4			5.40	5.39	5.39	5.33	5.28
-1.3	-2			5.58	5.57	5.55	5.45	5.34
0.8	0			5.89	5.80	5.72	5.52	5.31
3.9	3			6.39	6.16	5.93	5.60	5.27
7.0	6			6.98	6.53	6.07	5.65	5.22
10.1	9			6.93	6.49	6.05	5.61	5.17
13.2	12	6.89	6.45	6.01	5.57	5.13		
16.9	15.5	6.84	6.40	5.96	5.52	5.08		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
Me	9 (m³/min)	10			4.11	2.97	4.92	3.38	5.32	3.48	5.66	3.54	6.34	3.81	6.58	3.70
		12			4.11	2.97	4.92	3.38	5.32	3.48	5.65	3.54	6.32	3.81	6.56	3.69
		14			4.11	2.97	4.92	3.38	5.32	3.48	5.65	3.54	6.30	3.80	6.53	3.68
		16			4.11	2.97	4.92	3.38	5.32	3.48	5.64	3.53	6.27	3.78	6.50	3.67
		18			4.11	2.97	4.92	3.38	5.32	3.48	5.63	3.53	6.25	3.78	6.47	3.66
		20			4.11	2.97	4.92	3.38	5.32	3.48	5.62	3.53	6.23	3.77	6.44	3.64
		22			4.11	2.97	4.92	3.38	5.32	3.48	5.60	3.52	6.15	3.73	6.35	3.61
		24			4.10	2.97	4.92	3.38	5.32	3.48	5.57	3.50	6.07	3.70	6.27	3.58
		26			4.10	2.97	4.89	3.37	5.27	3.45	5.51	3.47	5.97	3.65	6.17	3.54
		28	3.71	2.91	4.10	2.97	4.87	3.36	5.22	3.43	5.44	3.44	5.88	3.62	6.07	3.50
		30	3.71	2.91	4.09	2.96	4.83	3.34	5.17	3.41	5.38	3.41	5.79	3.58	5.98	3.46
		32	3.71	2.91	4.08	2.96	4.79	3.32	5.12	3.39	5.31	3.38	5.70	3.54	5.89	3.43
		34	3.71	2.91	4.06	2.95	4.78	3.31	5.05	3.35	5.23	3.34	5.58	3.49	5.77	3.38
		35	3.71	2.91	4.06	2.95	4.77	3.31	5.02	3.34	5.19	3.33	5.52	3.46	5.71	3.36
36	3.71	2.91	4.05	2.94	4.73	3.29	4.99	3.33	5.14	3.31	5.42	3.42	5.60	3.31		
38	3.71	2.91	4.04	2.94	4.66	3.26	4.94	3.30	5.04	3.26	5.22	3.34	5.38	3.23		
39	3.71	2.91	4.04	2.94	4.63	3.24	4.92	3.29	4.99	3.24	5.12	3.30	5.27	3.19		
41	3.71	2.91	4.02	2.93	4.49	3.18	4.72	3.20	4.78	3.15	4.89	3.21	5.02	3.10		
43	3.71	2.91	4.01	2.92	4.35	3.11	4.52	3.11	4.57	3.06	4.67	3.12	4.77	3.02		

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me	9 (m³/min)	-19.8	-20	3.22	3.22	3.22
-17.8	-18			3.43	3.43	3.43	3.43	3.43
-15.7	-16			3.64	3.64	3.64	3.64	3.64
-13.7	-14			3.85	3.85	3.85	3.85	3.85
-11.7	-12			4.06	4.06	4.06	4.06	4.06
-9.6	-10			4.26	4.26	4.26	4.26	4.26
-7.5	-8			4.52	4.52	4.52	4.52	4.52
-5.5	-6			4.78	4.78	4.78	4.78	4.78
-3.4	-4			4.95	4.94	4.93	4.89	4.84
-1.3	-2			5.12	5.10	5.09	4.99	4.89
0.8	0			5.39	5.32	5.24	5.05	4.87
3.9	3			5.85	5.64	5.43	5.13	4.82
7.0	6			6.39	5.98	5.56	5.17	4.78
10.1	9			6.35	5.95	5.54	5.1	

Model **FDUM71KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 24 (m ³ /min)	10			5.82	5.32	6.96	6.01	7.53	6.12	8.01	6.19	8.97	6.70	9.31	6.54
	12			5.82	5.32	6.96	6.01	7.53	6.12	8.00	6.19	8.94	6.69	9.27	6.52
	14			5.82	5.32	6.96	6.01	7.53	6.12	7.99	6.18	8.90	6.68	9.23	6.51
	16			5.82	5.32	6.96	6.01	7.53	6.12	7.97	6.16	8.87	6.67	9.19	6.50
	18			5.82	5.32	6.96	6.01	7.53	6.12	7.96	6.16	8.84	6.66	9.15	6.49
	20			5.82	5.32	6.96	6.01	7.53	6.12	7.95	6.15	8.81	6.63	9.11	6.48
	22			5.81	5.31	6.95	6.00	7.53	6.12	7.92	6.14	8.70	6.60	8.99	6.44
	24			5.80	5.31	6.95	6.00	7.53	6.12	7.88	6.13	8.58	6.56	8.86	6.40
	26			5.80	5.31	6.92	5.99	7.46	6.10	7.79	6.10	8.45	6.51	8.73	6.35
	28	5.25	5.04	5.79	5.31	6.89	5.98	7.38	6.07	7.69	6.06	8.31	6.46	8.59	6.31
	30	5.25	5.04	5.78	5.30	6.83	5.96	7.31	6.03	7.60	6.03	8.19	6.42	8.46	6.27
	32	5.25	5.04	5.77	5.30	6.78	5.94	7.24	6.00	7.51	6.00	8.06	6.38	8.33	6.23
	34	5.25	5.04	5.75	5.29	6.76	5.93	7.15	5.97	7.39	5.94	7.89	6.32	8.16	6.17
	35	5.25	5.04	5.74	5.29	6.75	5.93	7.10	5.95	7.33	5.92	7.80	6.28	8.08	6.14
36	5.25	5.04	5.73	5.28	6.69	5.91	7.06	5.94	7.26	5.90	7.66	6.23	7.92	6.10	
38	5.25	5.04	5.72	5.28	6.59	5.86	6.99	5.91	7.12	5.85	7.38	6.14	7.61	5.99	
39	5.25	5.04	5.71	5.27	6.54	5.84	6.96	5.90	7.05	5.83	7.24	6.08	7.45	5.95	
41	5.25	5.04	5.69	5.27	6.35	5.77	6.67	5.78	6.76	5.71	6.92	5.98	7.10	5.84	
43	5.25	5.04	5.67	5.26	6.15	5.69	6.39	5.68	6.46	5.61	6.60	5.87	6.75	5.73	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi 24 (m ³ /min)	-19.8	-20	4.64	4.64	4.64	4.64
-17.8	-18		4.94	4.94	4.94	4.94	4.94	
-15.7	-16		5.24	5.24	5.24	5.24	5.24	
-13.7	-14		5.54	5.54	5.54	5.54	5.54	
-11.7	-12		5.83	5.83	5.83	5.83	5.83	
-9.6	-10		6.13	6.13	6.13	6.13	6.13	
-7.5	-8		6.51	6.51	6.51	6.51	6.51	
-5.5	-6		6.88	6.88	6.88	6.88	6.88	
-3.4	-4		7.12	7.11	7.10	7.03	6.96	
-1.3	-2		7.36	7.34	7.32	7.18	7.04	
0.8	0		7.76	7.65	7.54	7.27	7.00	
3.9	3		8.42	8.12	7.82	7.38	6.94	
7.0	6		9.20	8.60	8.00	7.44	6.88	
10.1	9		9.14	8.56	7.97	7.40	6.82	
13.2	12	9.08	8.50	7.92	7.34	6.76		
16.9	15.5	9.01	8.43	7.85	7.27	6.69		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 19 (m ³ /min)	10			5.65	4.71	6.75	5.33	7.30	5.44	7.77	5.50	8.70	5.95	9.04	5.81
	12			5.65	4.71	6.75	5.33	7.30	5.44	7.76	5.50	8.67	5.94	9.00	5.79
	14			5.65	4.71	6.75	5.33	7.30	5.44	7.75	5.50	8.64	5.93	8.96	5.77
	16			5.65	4.71	6.75	5.33	7.30	5.44	7.74	5.49	8.61	5.92	8.92	5.76
	18			5.65	4.71	6.75	5.33	7.30	5.44	7.73	5.49	8.58	5.91	8.88	5.75
	20			5.65	4.71	6.75	5.33	7.30	5.44	7.72	5.49	8.55	5.90	8.84	5.74
	22			5.64	4.71	6.75	5.33	7.30	5.44	7.68	5.47	8.44	5.85	8.72	5.70
	24			5.63	4.70	6.75	5.33	7.30	5.44	7.65	5.46	8.33	5.81	8.60	5.65
	26			5.63	4.70	6.71	5.30	7.23	5.41	7.56	5.43	8.20	5.77	8.47	5.61
	28	5.10	4.65	5.62	4.70	6.68	5.29	7.17	5.38	7.47	5.39	8.07	5.71	8.34	5.57
	30	5.10	4.65	5.61	4.69	6.63	5.27	7.10	5.36	7.38	5.35	7.94	5.67	8.21	5.51
	32	5.10	4.65	5.59	4.68	6.58	5.25	7.03	5.33	7.29	5.32	7.82	5.63	8.09	5.48
	34	5.10	4.65	5.58	4.68	6.56	5.24	6.94	5.29	7.18	5.28	7.66	5.56	7.92	5.42
	35	5.10	4.65	5.57	4.68	6.55	5.24	6.89	5.27	7.12	5.25	7.57	5.53	7.84	5.40
36	5.10	4.65	5.56	4.67	6.50	5.22	6.86	5.25	7.05	5.22	7.44	5.49	7.68	5.34	
38	5.10	4.65	5.55	4.67	6.40	5.18	6.79	5.23	6.91	5.17	7.17	5.39	7.38	5.25	
39	5.10	4.65	5.54	4.66	6.35	5.16	6.75	5.21	6.84	5.14	7.03	5.34	7.23	5.19	
41	5.10	4.65	5.52	4.65	6.16	5.08	6.48	5.11	6.56	5.03	6.72	5.23	6.89	5.09	
43	5.10	4.65	5.50	4.65	5.97	5.00	6.20	5.00	6.27	4.92	6.41	5.11	6.55	4.98	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi 19 (m ³ /min)	-19.8	-20	4.49	4.49	4.49	4.49
-17.8	-18		4.78	4.78	4.78	4.78	4.78	
-15.7	-16		5.07	5.07	5.07	5.07	5.07	
-13.7	-14		5.36	5.36	5.36	5.36	5.36	
-11.7	-12		5.65	5.65	5.65	5.65	5.65	
-9.6	-10		5.93	5.93	5.93	5.93	5.93	
-7.5	-8		6.30	6.30	6.30	6.30	6.30	
-5.5	-6		6.66	6.66	6.66	6.66	6.66	
-3.4	-4		6.89	6.88	6.87	6.80	6.73	
-1.3	-2		7.12	7.10	7.08	6.95	6.81	
0.8	0		7.51	7.40	7.29	7.03	6.77	
3.9	3		8.15	7.86	7.57	7.14	6.71	
7.0	6		8.90	8.32	7.74	7.20	6.66	
10.1	9		8.84	8.28	7.71	7.15	6.60	
13.2	12	8.78	8.22	7.66	7.10	6.54		
16.9	15.5	8.72	8.16	7.59	7.03	6.47		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 15 (m ³ /min)	10			5.37	4.17	6.42	4.71	6.94	4.84	7.39	4.91	8.27	5.29	8.59	5.15
	12			5.37	4.17	6.42	4.71	6.94	4.84	7.38	4.91	8.24	5.28	8.55	5.13
	14			5.37	4.17	6.42	4.71	6.94	4.84	7.37	4.90	8.21	5.27	8.52	5.12
	16			5.37	4.17	6.42	4.71	6.94	4.84	7.36	4.90	8.18	5.25	8.48	5.11
	18			5.37	4.17	6.42	4.71	6.94	4.84	7.35	4.89	8.15	5.24	8.44	5.10
	20			5.37	4.17	6.42	4.71	6.94	4.84	7.34	4.88	8.12	5.23	8.41	5.08
	22			5.36	4.16	6.42	4.71	6.94	4.84	7.30	4.87	8.02	5.19	8.29	5.04
	24			5.35	4.16	6.41	4.70	6.94	4.84	7.27	4.86	7.92	5.15	8.18	5.00
	26			5.35	4.16	6.38	4.69	6.88	4.81	7.18	4.82	7.79	5.10	8.05	4.95
	28	4.85	4.10	5.34	4.15	6.35	4.68	6.81	4.78	7.10	4.79	7.67	5.05	7.93	4.91
	30	4.85	4.10	5.33	4.15	6.30	4.66	6.75	4.74	7.02	4.75	7.55	5.00	7.81	4.87
	32	4.85	4.10	5.32	4.14	6.26	4.64	6.68	4.71	6.93	4.70	7.44	4.96	7.69	4.82
	34	4.85	4.10	5.30	4.14	6.23	4.63	6.59	4.67	6.82	4.66	7.28	4.90	7.53	4.77
	35	4.85	4.10	5.29	4.13	6.22	4.62	6.59	4.66	6.77	4.64	7.20	4.87	7.45	4.74
36	4.85	4.10	5.29	4.13	6.18	4.61	6.52	4.64	6.70	4.61	7.07	4.82	7.31	4.69	
38	4.85	4.10	5.27	4.12	6.08	4.57	6.45	4.62	6.57	4.56	6.81	4.72	7.02	4.58	
39	4.85	4.10	5.27	4.12	6.03	4.54	6.42	4.60	6.51	4.53	6.68	4.67	6.87	4.53	
41	4.85	4.10	5.25	4.11	5.85	4.47	6.16	4.50	6.23	4.43	6.39	4.57	6.55	4.42	
43	4.85	4.10	5.23	4.11	5.67	4.39	5.90	4.39	5.96	4.32	6.09	4.45	6.23	4.30	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me 15 (m ³ /min)	-19.8	-20	4.22	4.22	4.22	4.22
-17.8	-18		4.49	4.49	4.49	4.49	4.49	
-15.7	-16		4.76	4.76	4.76	4.76	4.76	
-13.7	-14		5.03	5.03	5.03	5.03	5.03	
-11.7	-12		5.30	5.30	5.30	5.30	5.30	
-9.6	-10		5.57	5.57	5.57	5.57	5.57	
-7.5	-8		5.91	5.91	5.91	5.91	5.91	
-5.5	-6		6.25	6.25	6.25	6.25	6.25	
-3.4	-4		6.47	6.46	6.45	6.39	6.32	
-1.3	-2		6.69	6.67	6.65	6.52	6.40	
0.8	0		7.05	6.95	6.85	6.61	6.36	
3.9	3		7.65	7.38	7.11	6.71	6.31	
7.0	6		8.36	7.82	7.27	6.76	6.25	
10.1	9		8.31	7.77	7.24			

Model **FDUM90KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 24 (m ³ /min)	10			7.38	6.01	8.82	6.77	9.54	6.94	10.15	7.03	11.37	7.59	11.80	7.40
	12			7.38	6.01	8.82	6.77	9.54	6.94	10.14	7.03	11.33	7.58	11.75	7.39
	14			7.38	6.01	8.82	6.77	9.54	6.94	10.12	7.02	11.29	7.56	11.70	7.36
	16			7.38	6.01	8.82	6.77	9.54	6.94	10.11	7.02	11.25	7.55	11.65	7.34
	18			7.38	6.01	8.82	6.77	9.54	6.94	10.09	7.01	11.20	7.53	11.60	7.33
	20			7.38	6.01	8.82	6.77	9.54	6.94	10.08	7.01	11.16	7.52	11.55	7.31
	22			7.37	6.00	8.82	6.77	9.54	6.94	10.03	6.99	11.02	7.45	11.39	7.24
	24			7.36	6.00	8.81	6.76	9.54	6.94	9.99	6.97	10.88	7.41	11.24	7.20
	26			7.35	5.99	8.77	6.75	9.45	6.91	9.87	6.91	10.71	7.33	11.06	7.14
	28	6.66	5.92	7.34	5.99	8.73	6.73	9.36	6.86	9.75	6.87	10.54	7.28	10.89	7.08
	30	6.66	5.92	7.33	5.97	8.66	6.70	9.27	6.80	9.64	6.83	10.38	7.21	10.73	7.03
	32	6.66	5.92	7.31	5.97	8.60	6.68	9.18	6.77	9.53	6.75	10.22	7.15	10.56	6.93
	34	6.66	5.92	7.28	5.95	8.57	6.67	9.06	6.72	9.37	6.69	10.00	7.04	10.35	6.87
	35	6.66	5.92	7.27	5.95	8.55	6.66	9.00	6.70	9.30	6.67	9.89	7.01	10.24	6.83
36	6.66	5.92	7.26	5.94	8.49	6.64	8.96	6.68	9.21	6.63	9.72	6.95	10.04	6.77	
38	6.66	5.92	7.25	5.94	8.36	6.59	8.87	6.65	9.03	6.57	9.36	6.83	9.64	6.65	
39	6.66	5.92	7.24	5.94	8.29	6.56	8.82	6.63	8.94	6.54	9.18	6.77	9.44	6.59	
41	6.66	5.92	7.21	5.92	8.04	6.45	8.46	6.49	8.56	6.40	8.77	6.62	9.00	6.44	
43	6.66	5.92	7.19	5.92	7.80	6.36	8.10	6.34	8.19	6.25	8.37	6.49	8.56	6.30	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi 24 (m ³ /min)	-19.8	-20	5.80	5.80	5.80	5.80
-17.8	-18		6.17	6.17	6.17	6.17	6.17	
-15.7	-16		6.55	6.55	6.55	6.55	6.55	
-13.7	-14		6.92	6.92	6.92	6.92	6.92	
-11.7	-12		7.29	7.29	7.29	7.29	7.29	
-9.6	-10		7.67	7.67	7.67	7.67	7.67	
-7.5	-8		8.13	8.13	8.13	8.13	8.13	
-5.5	-6		8.60	8.60	8.60	8.60	8.60	
-3.4	-4		8.90	8.89	8.88	8.79	8.70	
-1.3	-2		9.20	9.18	9.15	8.98	8.80	
0.8	0		9.70	9.56	9.43	9.09	8.75	
3.9	3		10.53	10.15	9.78	9.23	8.68	
7.0	6		11.50	10.75	10.00	9.30	8.60	
10.1	9		11.43	10.69	9.96	9.24	8.53	
13.2	12	11.35	10.63	9.90	9.18	8.45		
16.9	15.5	11.26	10.54	9.81	9.09	8.36		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 19 (m ³ /min)	10			7.25	5.45	8.67	6.17	9.38	6.35	9.98	6.44	11.18	6.94	11.61	6.75
	12			7.25	5.45	8.67	6.17	9.38	6.35	9.97	6.44	11.14	6.93	11.56	6.73
	14			7.25	5.45	8.67	6.17	9.38	6.35	9.95	6.43	11.10	6.91	11.51	6.71
	16			7.25	5.45	8.67	6.17	9.38	6.35	9.94	6.43	11.06	6.90	11.46	6.69
	18			7.25	5.45	8.67	6.17	9.38	6.35	9.93	6.42	11.02	6.87	11.41	6.68
	20			7.25	5.45	8.67	6.17	9.38	6.35	9.91	6.41	10.98	6.86	11.36	6.65
	22			7.24	5.44	8.67	6.17	9.38	6.35	9.87	6.40	10.84	6.81	11.20	6.59
	24			7.23	5.44	8.67	6.17	9.38	6.35	9.82	6.37	10.70	6.74	11.05	6.53
	26			7.23	5.44	8.62	6.15	9.29	6.30	9.71	6.32	10.53	6.67	10.88	6.47
	28	6.55	5.34	7.22	5.43	8.58	6.13	9.20	6.24	9.59	6.27	10.36	6.51	10.71	6.41
	30	6.55	5.34	7.20	5.42	8.52	6.10	9.12	6.21	9.48	6.21	10.20	6.54	10.55	6.35
	32	6.55	5.34	7.19	5.42	8.45	6.07	9.03	6.17	9.37	6.16	10.05	6.47	10.39	6.29
	34	6.55	5.34	7.16	5.40	8.42	6.06	8.91	6.12	9.22	6.10	9.83	6.39	10.17	6.21
	35	6.55	5.34	7.15	5.39	8.41	6.06	8.85	6.10	9.14	6.07	9.73	6.35	10.07	6.17
36	6.55	5.34	7.14	5.39	8.34	6.02	8.81	6.08	9.05	6.04	9.55	6.28	9.87	6.08	
38	6.55	5.34	7.12	5.38	8.22	5.97	8.72	6.05	8.88	5.97	9.20	6.13	9.48	5.95	
39	6.55	5.34	7.12	5.38	8.15	5.94	8.67	6.02	8.79	5.93	9.03	6.07	9.28	5.89	
41	6.55	5.34	7.09	5.37	7.91	5.83	8.32	5.87	8.42	5.77	8.63	5.93	8.85	5.74	
43	6.55	5.34	7.07	5.36	7.67	5.72	7.97	5.72	8.05	5.62	8.23	5.78	8.41	5.59	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi 19 (m ³ /min)	-19.8	-20	5.66	5.66	5.66	5.66
-17.8	-18		6.02	6.02	6.02	6.02	6.02	
-15.7	-16		6.38	6.38	6.38	6.38	6.38	
-13.7	-14		6.75	6.75	6.75	6.75	6.75	
-11.7	-12		7.11	7.11	7.11	7.11	7.11	
-9.6	-10		7.48	7.48	7.48	7.48	7.48	
-7.5	-8		7.93	7.93	7.93	7.93	7.93	
-5.5	-6		8.39	8.39	8.39	8.39	8.39	
-3.4	-4		8.68	8.67	8.65	8.57	8.48	
-1.3	-2		8.97	8.95	8.92	8.75	8.58	
0.8	0		9.46	9.32	9.19	8.86	8.53	
3.9	3		10.26	9.90	9.53	8.99	8.46	
7.0	6		11.21	10.48	9.75	9.07	8.39	
10.1	9		11.14	10.43	9.71	9.01	8.31	
13.2	12	11.07	10.36	9.65	8.95	8.24		
16.9	15.5	10.98	10.27	9.57	8.86	8.15		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 15 (m ³ /min)	10			6.89	4.90	8.23	5.57	8.90	5.74	9.47	5.85	10.61	6.30	11.02	6.12
	12			6.89	4.90	8.23	5.57	8.90	5.74	9.46	5.84	10.57	6.29	10.97	6.09
	14			6.89	4.90	8.23	5.57	8.90	5.74	9.45	5.84	10.53	6.27	10.92	6.07
	16			6.89	4.90	8.23	5.57	8.90	5.74	9.43	5.83	10.50	6.26	10.88	6.06
	18			6.89	4.90	8.23	5.57	8.90	5.74	9.42	5.83	10.46	6.23	10.83	6.04
	20			6.89	4.90	8.23	5.57	8.90	5.74	9.41	5.82	10.42	6.22	10.78	6.01
	22			6.88	4.89	8.23	5.57	8.90	5.74	9.37	5.80	10.29	6.16	10.63	5.95
	24			6.87	4.89	8.22	5.56	8.90	5.74	9.32	5.78	10.16	6.10	10.49	5.89
	26			6.86	4.88	8.19	5.55	8.82	5.70	9.21	5.72	10.00	6.03	10.33	5.83
	28	6.22	4.79	6.85	4.88	8.15	5.53	8.74	5.66	9.10	5.67	9.84	5.96	10.16	5.76
	30	6.22	4.79	6.84	4.87	8.09	5.50	8.65	5.62	9.00	5.63	9.69	5.89	10.01	5.70
	32	6.22	4.79	6.82	4.86	8.02	5.46	8.57	5.58	8.89	5.58	9.54	5.83	9.86	5.64
	34	6.22	4.79	6.80	4.85	7.99	5.45	8.46	5.53	8.75	5.51	9.33	5.74	9.66	5.56
	35	6.22	4.79	6.79	4.84	7.98	5.44	8.40	5.50	8.68	5.48	9.23	5.69	9.55	5.52
36	6.22	4.79	6.78	4.84	7.92	5.42	8.36	5.48	8.59	5.44	9.07	5.63	9.37	5.43	
38	6.22	4.79	6.76	4.83	7.80	5.35	8.27	5.44	8.43	5.37	8.74	5.48	9.00	5.30	
39	6.22	4.79	6.75	4.82	7.74	5.33	8.23	5.42	8.34	5.32	8.57	5.41	8.81	5.23	
41	6.22	4.79	6.73	4.81	7.51	5.22	7.90	5.27	7.99	5.17	8.19	5.26	8.40	5.08	
43	6.22	4.79	6.71	4.81	7.28	5.11	7.56	5.11	7.64	5.01	7.81	5.11	7.99	4.93	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me 15 (m ³ /min)	-19.8	-20	5.34	5.34	5.34	5.34
-17.8	-18		5.68	5.68	5.68	5.68	5.68	
-15.7	-16		6.02	6.02	6.02	6.02	6.02	
-13.7	-14		6.37	6.37	6.37	6.37	6.37	
-11.7	-12		6.71	6.71	6.71	6.71	6.71	
-9.6	-10		7.05	7.05	7.05	7.05	7.05	
-7.5	-8		7.48	7.48	7.48	7.48	7.48	
-5.5	-6		7.91	7.91	7.91	7.91	7.91	
-3.4	-4		8.19	8.18	8.17	8.08	8.00	
-1.3	-2		8.46	8.44	8.42	8.26	8.10	
0.8	0		8.92	8.80	8.67	8.36	8.05	
3.9	3		9.68	9.34	8.99	8.49	7.98	

Model **FDUM112KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 36 (m ³ /min)	10			9.18	7.72	10.97	8.72	11.87	8.91	12.63	9.01	14.15	9.75	14.69	9.51
	12			9.18	7.72	10.97	8.72	11.87	8.91	12.61	9.00	14.10	9.71	14.63	9.43
	14			9.18	7.72	10.97	8.72	11.87	8.91	12.60	9.00	14.05	9.70	14.56	9.41
	16			9.18	7.72	10.97	8.72	11.87	8.91	12.58	8.99	14.00	9.69	14.50	9.40
	18			9.18	7.72	10.97	8.72	11.87	8.91	12.56	8.98	13.94	9.67	14.44	9.38
	20			9.18	7.72	10.97	8.72	11.87	8.91	12.55	8.98	13.89	9.65	14.37	9.36
	22			9.17	7.72	10.97	8.72	11.87	8.91	12.49	8.96	13.72	9.54	14.18	9.31
	24			9.15	7.71	10.97	8.72	11.87	8.91	12.43	8.94	13.54	9.48	13.98	9.25
	26			9.15	7.71	10.92	8.70	11.76	8.87	12.28	8.87	13.33	9.42	13.77	9.19
	28	8.29	7.59	9.14	7.71	10.86	8.66	11.65	8.81	12.14	8.82	13.11	9.35	13.55	9.11
	30	8.29	7.59	9.12	7.68	10.78	8.63	11.54	8.77	12.00	8.76	12.91	9.27	13.35	9.04
	32	8.29	7.59	9.09	7.67	10.70	8.60	11.42	8.71	11.85	8.71	12.71	9.21	13.15	8.98
	34	8.29	7.59	9.06	7.66	10.66	8.59	11.27	8.66	11.66	8.62	12.45	9.11	12.87	8.88
	35	8.29	7.59	9.05	7.65	10.64	8.58	11.20	8.63	11.57	8.59	12.31	9.05	12.74	8.85
36	8.29	7.59	9.04	7.65	10.56	8.55	11.14	8.61	11.46	8.56	12.09	8.98	12.49	8.76	
38	8.29	7.59	9.02	7.64	10.40	8.48	11.03	8.56	11.24	8.47	11.65	8.83	12.00	8.60	
39	8.29	7.59	9.00	7.60	10.32	8.45	10.98	8.54	11.13	8.43	11.43	8.75	11.75	8.52	
41	8.29	7.59	8.97	7.59	10.01	8.32	10.53	8.37	10.66	8.24	10.92	8.58	11.20	8.28	
43	8.29	7.59	8.94	7.58	9.70	8.19	10.08	8.17	10.19	8.06	10.41	8.34	10.65	8.13	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi 36 (m ³ /min)	-19.8	-20	7.25	7.25	7.25	7.25
-17.8	-18		7.72	7.72	7.72	7.72	7.72	
-15.7	-16		8.18	8.18	8.18	8.18	8.18	
-13.7	-14		8.65	8.65	8.65	8.65	8.65	
-11.7	-12		9.12	9.12	9.12	9.12	9.12	
-9.6	-10		9.58	9.58	9.58	9.58	9.58	
-7.5	-8		10.17	10.17	10.17	10.17	10.17	
-5.5	-6		10.75	10.75	10.75	10.75	10.75	
-3.4	-4		11.13	11.11	11.09	10.98	10.88	
-1.3	-2		11.50	11.47	11.44	11.22	11.00	
0.8	0		12.13	11.95	11.78	11.36	10.94	
3.9	3		13.16	12.69	12.22	11.53	10.84	
7.0	6		14.38	13.44	12.50	11.63	10.75	
10.1	9		14.28	13.37	12.45	11.55	10.66	
13.2	12	14.19	13.28	12.38	11.47	10.56		
16.9	15.5	14.08	13.17	12.27	11.36	10.45		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 28 (m ³ /min)	10			8.94	6.86	10.69	7.79	11.56	7.99	12.30	8.12	13.78	8.76	14.31	8.50
	12			8.94	6.86	10.69	7.79	11.56	7.99	12.29	8.11	13.73	8.74	14.25	8.48
	14			8.94	6.86	10.69	7.79	11.56	7.99	12.27	8.11	13.68	8.68	14.19	8.46
	16			8.94	6.86	10.69	7.79	11.56	7.99	12.25	8.10	13.63	8.67	14.13	8.44
	18			8.94	6.86	10.69	7.79	11.56	7.99	12.24	8.10	13.58	8.65	14.06	8.42
	20			8.94	6.86	10.69	7.79	11.56	7.99	12.22	8.08	13.53	8.63	14.00	8.41
	22			8.93	6.85	10.69	7.79	11.56	7.99	12.16	8.05	13.36	8.58	13.81	8.33
	24			8.92	6.85	10.68	7.79	11.56	7.99	12.11	8.04	13.19	8.51	13.62	8.26
	26			8.91	6.84	10.63	7.77	11.46	7.95	11.96	7.97	12.98	8.43	13.41	8.19
	28	8.07	6.77	8.90	6.84	10.58	7.75	11.35	7.90	11.82	7.91	12.77	8.34	13.20	8.11
	30	8.07	6.77	8.88	6.83	10.50	7.71	11.24	7.83	11.68	7.86	12.58	8.27	13.00	8.04
	32	8.07	6.77	8.86	6.82	10.42	7.68	11.13	7.79	11.55	7.77	12.39	8.19	12.81	7.97
	34	8.07	6.77	8.83	6.81	10.38	7.66	10.98	7.73	11.36	7.70	12.12	8.09	12.54	7.83
	35	8.07	6.77	8.82	6.81	10.36	7.65	10.91	7.71	11.27	7.67	11.99	8.04	12.41	7.79
36	8.07	6.77	8.80	6.80	10.29	7.61	10.86	7.69	11.16	7.63	11.78	7.92	12.17	7.72	
38	8.07	6.77	8.78	6.79	10.13	7.55	10.75	7.64	10.95	7.55	11.35	7.79	11.69	7.57	
39	8.07	6.77	8.77	6.79	10.05	7.51	10.69	7.61	10.84	7.49	11.13	7.70	11.45	7.48	
41	8.07	6.77	8.74	6.77	9.75	7.38	10.26	7.43	10.38	7.31	10.64	7.52	10.91	7.30	
43	8.07	6.77	8.71	6.76	9.45	7.24	9.82	7.24	9.93	7.14	10.14	7.33	10.37	7.12	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi 28 (m ³ /min)	-19.8	-20	7.05	7.05	7.05	7.05
-17.8	-18		7.51	7.51	7.51	7.51	7.51	
-15.7	-16		7.96	7.96	7.96	7.96	7.96	
-13.7	-14		8.41	8.41	8.41	8.41	8.41	
-11.7	-12		8.87	8.87	8.87	8.87	8.87	
-9.6	-10		9.32	9.32	9.32	9.32	9.32	
-7.5	-8		9.89	9.89	9.89	9.89	9.89	
-5.5	-6		10.46	10.46	10.46	10.46	10.46	
-3.4	-4		10.82	10.81	10.79	10.69	10.58	
-1.3	-2		11.19	11.16	11.13	10.91	10.70	
0.8	0		11.80	11.63	11.46	11.05	10.64	
3.9	3		12.80	12.34	11.89	11.22	10.55	
7.0	6		13.98	13.07	12.16	11.31	10.46	
10.1	9		13.89	13.00	12.11	11.24	10.37	
13.2	12	13.80	12.92	12.04	11.16	10.28		
16.9	15.5	13.70	12.81	11.93	11.05	10.17		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 25 (m ³ /min)	10			8.43	6.41	10.07	7.26	10.90	7.46	11.59	7.55	12.99	8.16	13.48	7.94
	12			8.43	6.41	10.07	7.26	10.90	7.46	11.58	7.55	12.94	8.15	13.43	7.92
	14			8.43	6.41	10.07	7.26	10.90	7.46	11.56	7.54	12.89	8.13	13.37	7.89
	16			8.43	6.41	10.07	7.26	10.90	7.46	11.55	7.54	12.85	8.10	13.31	7.87
	18			8.43	6.41	10.07	7.26	10.90	7.46	11.53	7.53	12.80	8.09	13.25	7.86
	20			8.43	6.41	10.07	7.26	10.90	7.46	11.52	7.53	12.75	8.07	13.19	7.82
	22			8.41	6.40	10.07	7.26	10.90	7.46	11.46	7.51	12.59	8.00	13.01	7.76
	24			8.40	6.39	10.07	7.26	10.90	7.46	11.41	7.49	12.43	7.94	12.83	7.69
	26			8.40	6.39	10.02	7.23	10.79	7.40	11.27	7.44	12.23	7.86	12.64	7.62
	28	7.61	6.29	8.39	6.39	9.97	7.21	10.69	7.36	11.14	7.38	12.04	7.78	12.44	7.54
	30	7.61	6.29	8.37	6.38	9.89	7.18	10.59	7.31	11.01	7.32	11.85	7.70	12.25	7.45
	32	7.61	6.29	8.35	6.37	9.82	7.14	10.49	7.28	10.88	7.26	11.67	7.63	12.07	7.39
	34	7.61	6.29	8.32	6.36	9.78	7.13	10.35	7.21	10.71	7.20	11.42	7.51	11.82	7.32
	35	7.61	6.29	8.31	6.35	9.77	7.12	10.28	7.19	10.62	7.15	11.30	7.47	11.69	7.28
36	7.61	6.29	8.30	6.35	9.69	7.09	10.23	7.16	10.52	7.12	11.10	7.41	11.47	7.20	
38	7.61	6.29	8.28	6.34	9.55	7.03	10.13	7.12	10.31	7.02	10.69	7.25	11.01	7.04	
39	7.61	6.29	8.27	6.34	9.47	7.00	10.07	7.10	10.21	6.98	10.49	7.17	10.78	6.96	
41	7.61	6.29	8.24	6.32	9.19	6.85	9.66	6.92	9.78	6.78	10.02	6.99	10.28	6.78	
43	7.61	6.29	8.21	6.31	8.90	6.74	9.25	6.73	9.35	6.63	9.56	6.82	9.77	6.58	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me 25 (m ³ /min)	-19.8	-20	6.59	6.59	6.59	6.59
-17.8	-18		7.01	7.01	7.01	7.01	7.01	
-15.7	-16		7.44	7.44	7.44	7.44	7.44	
-13.7	-14		7.86	7.86	7.86	7.86	7.86	
-11.7	-12		8.29	8.29	8.29	8.29	8.29	
-9.6	-10		8.71	8.71	8.71	8.71	8.71	
-7.5	-8		9.24	9.24	9.24	9.24	9.24	
-5.5	-6		9.77	9.77	9.77	9.77	9.77	

Model **FDUM140KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 39 (m ³ /min)	10	11.48	9.96	13.72	11.27	14.84	11.49	15.79	11.62	17.69	12.56	18.36	12.26		
	12	11.48	9.96	13.72	11.27	14.84	11.49	15.77	11.61	17.62	12.53	18.28	12.23		
	14	11.48	9.96	13.72	11.27	14.84	11.49	15.75	11.60	17.56	12.51	18.20	12.20		
	16	11.48	9.96	13.72	11.27	14.84	11.49	15.72	11.59	17.49	12.49	18.13	12.18		
	18	11.48	9.96	13.72	11.27	14.84	11.49	15.70	11.58	17.43	12.46	18.05	12.15		
	20	11.48	9.96	13.72	11.27	14.84	11.49	15.68	11.57	17.37	12.44	17.97	12.13		
	22	11.46	9.96	13.71	11.26	14.84	11.49	15.61	11.55	17.15	12.36	17.72	12.04		
	24	11.44	9.95	13.71	11.26	14.84	11.49	15.54	11.52	16.93	12.28	17.48	11.96		
	26	11.43	9.94	13.64	11.23	14.70	11.43	15.35	11.45	16.66	12.18	17.21	11.87		
	28	10.36	9.84	11.42	9.94	13.58	11.21	14.56	11.38	15.17	11.38	16.39	12.09	16.94	11.79
	30	10.36	9.84	11.40	9.93	13.48	11.17	14.42	11.32	14.99	11.31	16.14	12.00	16.69	11.70
	32	10.36	9.84	11.37	9.92	13.37	11.12	14.28	11.26	14.82	11.24	15.89	11.91	16.43	11.62
	34	10.36	9.84	11.33	9.90	13.32	11.10	14.09	11.19	14.58	11.15	15.56	11.79	16.09	11.51
	35	10.36	9.84	11.31	9.89	13.30	11.09	14.00	11.15	14.46	11.10	15.39	11.73	15.92	11.45
36	10.36	9.84	11.30	9.89	13.20	11.05	13.93	11.12	14.32	11.05	15.11	11.64	15.61	11.35	
38	10.36	9.84	11.27	9.87	13.00	10.97	13.79	11.07	14.05	10.95	14.56	11.44	15.00	11.16	
39	10.36	9.84	11.26	9.87	12.90	10.93	13.72	11.04	13.91	10.90	14.28	11.35	14.69	11.06	
41	10.36	9.84	11.22	9.85	12.51	10.78	13.16	10.82	13.32	10.68	13.65	11.13	14.00	10.84	
43	10.36	9.84	11.18	9.84	12.13	10.62	12.60	10.61	12.74	10.46	13.02	10.92	13.31	10.56	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi 39 (m ³ /min)	-19.8	-20	9.28	9.28	9.28	9.28
-17.8	-18		9.88	9.88	9.88	9.88	9.88	
-15.7	-16		10.47	10.47	10.47	10.47	10.47	
-13.7	-14		11.07	11.07	11.07	11.07	11.07	
-11.7	-12		11.67	11.67	11.67	11.67	11.67	
-9.6	-10		12.27	12.27	12.27	12.27	12.27	
-7.5	-8		13.01	13.01	13.01	13.01	13.01	
-5.5	-6		13.76	13.76	13.76	13.76	13.76	
-3.4	-4		14.24	14.22	14.20	14.06	13.92	
-1.3	-2		14.72	14.68	14.64	14.36	14.08	
0.8	0		15.52	15.30	15.08	14.54	14.00	
3.9	3		16.84	16.24	15.64	14.76	13.88	
7.0	6		18.40	17.20	16.00	14.88	13.76	
10.1	9		18.28	17.11	15.94	14.79	13.64	
13.2	12	18.16	17.00	15.84	14.68	13.52		
16.9	15.5	18.02	16.86	15.70	14.54	13.38		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 32 (m ³ /min)	10	11.29	9.01	13.49	10.19	14.60	10.42	15.53	10.56	17.40	11.41	18.06	11.11		
	12	11.29	9.01	13.49	10.19	14.60	10.42	15.51	10.56	17.33	11.38	17.98	11.08		
	14	11.29	9.01	13.49	10.19	14.60	10.42	15.49	10.55	17.27	11.36	17.91	11.06		
	16	11.29	9.01	13.49	10.19	14.60	10.42	15.47	10.54	17.21	11.34	17.83	11.03		
	18	11.29	9.01	13.49	10.19	14.60	10.42	15.45	10.53	17.14	11.31	17.75	11.00		
	20	11.29	9.01	13.49	10.19	14.60	10.42	15.42	10.52	17.08	11.29	17.67	10.97		
	22	11.27	9.00	13.49	10.19	14.60	10.42	15.35	10.49	16.86	11.20	17.43	10.89		
	24	11.26	9.00	13.48	10.18	14.60	10.42	15.28	10.46	16.65	11.12	17.19	10.80		
	26	11.25	8.99	13.42	10.16	14.46	10.37	15.10	10.39	16.39	11.02	16.93	10.71		
	28	10.19	8.86	11.24	8.99	13.36	10.13	14.32	10.31	14.92	10.31	16.12	10.92	16.66	10.62
	30	10.19	8.86	11.21	8.98	13.25	10.08	14.18	10.25	14.75	10.24	15.88	10.81	16.41	10.51
	32	10.19	8.86	11.18	8.96	13.15	10.04	14.05	10.19	14.57	10.17	15.63	10.72	16.16	10.43
	34	10.19	8.86	11.14	8.95	13.10	10.02	13.86	10.11	14.34	10.08	15.30	10.59	15.83	10.32
	35	10.19	8.86	11.13	8.94	13.08	10.01	13.77	10.08	14.23	10.04	15.14	10.54	15.66	10.26
36	10.19	8.86	11.11	8.93	12.98	9.97	13.70	10.05	14.09	9.98	14.86	10.43	15.36	10.16	
38	10.19	8.86	11.08	8.92	12.79	9.88	13.56	9.99	13.82	9.87	14.32	10.23	14.75	9.95	
39	10.19	8.86	11.07	8.91	12.69	9.84	13.49	9.96	13.68	9.82	14.05	10.14	14.45	9.85	
41	10.19	8.86	11.03	8.90	12.31	9.68	12.94	9.73	13.10	9.59	13.43	9.91	13.77	9.63	
43	10.19	8.86	10.99	8.88	11.93	9.52	12.39	9.51	12.53	9.37	12.80	9.89	13.09	9.41	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi 32 (m ³ /min)	-19.8	-20	9.09	9.09	9.09	9.09
-17.8	-18		9.68	9.68	9.68	9.68	9.68	
-15.7	-16		10.27	10.27	10.27	10.27	10.27	
-13.7	-14		10.85	10.85	10.85	10.85	10.85	
-11.7	-12		11.44	11.44	11.44	11.44	11.44	
-9.6	-10		12.02	12.02	12.02	12.02	12.02	
-7.5	-8		12.75	12.75	12.75	12.75	12.75	
-5.5	-6		13.48	13.48	13.48	13.48	13.48	
-3.4	-4		13.96	13.94	13.92	13.78	13.64	
-1.3	-2		14.43	14.39	14.35	14.07	13.80	
0.8	0		15.21	14.99	14.78	14.25	13.72	
3.9	3		16.50	15.92	15.33	14.46	13.60	
7.0	6		18.03	16.86	15.68	14.58	13.48	
10.1	9		17.91	16.77	15.62	14.49	13.37	
13.2	12	17.80	16.66	15.52	14.39	13.25		
16.9	15.5	17.66	16.52	15.39	14.25	13.11		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 26 (m ³ /min)	10	10.75	8.05	12.86	9.13	13.91	9.38	14.80	9.53	16.57	10.27	17.21	9.98		
	12	10.75	8.05	12.86	9.13	13.91	9.38	14.78	9.52	16.51	10.24	17.13	9.95		
	14	10.75	8.05	12.86	9.13	13.91	9.38	14.76	9.51	16.45	10.22	17.06	9.92		
	16	10.75	8.05	12.86	9.13	13.91	9.38	14.74	9.50	16.39	10.19	16.99	9.89		
	18	10.75	8.05	12.86	9.13	13.91	9.38	14.72	9.49	16.33	10.17	16.91	9.86		
	20	10.75	8.05	12.86	9.13	13.91	9.38	14.70	9.48	16.27	10.13	16.84	9.82		
	22	10.74	8.04	12.85	9.13	13.91	9.38	14.63	9.45	16.07	10.05	16.61	9.74		
	24	10.72	8.03	12.85	9.13	13.91	9.38	14.56	9.42	15.86	9.96	16.38	9.65		
	26	10.72	8.03	12.79	9.10	13.78	9.32	14.39	9.35	15.61	9.86	16.13	9.56		
	28	9.71	7.91	10.71	8.03	12.73	9.07	13.64	9.26	14.22	9.27	15.36	9.76	15.88	9.47
	30	9.71	7.91	10.68	8.01	12.63	9.03	13.51	9.20	14.05	9.20	15.13	9.67	15.64	9.38
	32	9.71	7.91	10.65	8.00	12.53	8.97	13.38	9.14	13.89	9.13	14.89	9.57	15.40	9.29
	34	9.71	7.91	10.62	7.98	12.49	8.95	13.21	9.06	13.66	9.03	14.58	9.45	15.08	9.17
	35	9.71	7.91	10.60	7.98	12.46	8.94	13.12	9.02	13.55	8.99	14.42	9.38	14.92	9.11
36	9.71	7.91	10.59	7.97	12.37	8.90	13.05	8.99	13.42	8.93	14.16	9.28	14.63	9.01	
38	9.71	7.91	10.56	7.96	12.18	8.81	12.92	8.94	13.16	8.82	13.64	9.08	14.05	8.81	
39	9.71	7.91	10.55	7.95	12.09	8.77	12.86	8.91	13.03	8.77	13.39	8.98	13.76	8.70	
41	9.71	7.91	10.51	7.93	11.73	8.61	12.33	8.67	12.49	8.53	12.79	8.74	13.12	8.47	
43	9.71	7.91	10.47	7.91	11.36	8.45	11.81	8.45	11.94	8.31	12.20	8.52	12.47	8.25	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me 26 (m ³ /min)	-19.8	-20	8.61	8.61	8.61	8.61
-17.8	-18		9.17	9.17	9.17	9.17	9.17	
-15.7	-16		9.72	9.72	9.72	9.72	9.72	
-13.7	-14		10.28	10.28	10.28	10.28	10.28	
-11.7	-12		10.83	10.83	10.83	10.83	10.83	
-9.6	-10		11.39	11.39	11.39	11.39	11.39	
-7.5								

Model **FDUM160KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
P-Hi	48 (m ³ /min)	10	13.12	11.09	15.68	12.51	16.96	12.79	18.04	12.94	20.21	13.99	20.99	13.66		
		12	13.12	11.09	15.68	12.51	16.96	12.79	18.02	12.93	20.14	13.96	20.90	13.61		
		14	13.12	11.09	15.68	12.51	16.96	12.79	18.00	12.93	20.07	13.94	20.81	13.58		
		16	13.12	11.09	15.68	12.51	16.96	12.79	17.97	12.92	19.99	13.91	20.72	13.56		
		18	13.12	11.09	15.68	12.51	16.96	12.79	17.95	12.91	19.92	13.89	20.62	13.53		
		20	13.12	11.09	15.68	12.51	16.96	12.79	17.92	12.90	19.85	13.84	20.53	13.50		
		22	13.10	11.08	15.67	12.51	16.96	12.79	17.84	12.87	19.60	13.76	20.25	13.39		
		24	13.08	11.08	15.67	12.51	16.96	12.79	17.75	12.84	19.34	13.67	19.97	13.30		
		26	13.07	11.07	15.59	12.48	16.80	12.73	17.55	12.74	19.04	13.55	19.67	13.19		
		28	11.84	10.95	13.06	11.07	15.52	12.45	16.64	12.65	17.34	12.67	18.73	13.45	19.36	13.09
		30	11.84	10.95	13.02	11.05	15.40	12.41	16.48	12.59	17.14	12.59	18.45	13.33	19.07	12.98
		32	11.84	10.95	12.99	11.04	15.28	12.36	16.32	12.53	16.93	12.50	18.16	13.24	18.78	12.90
		34	11.84	10.95	12.95	11.00	15.23	12.34	16.11	12.45	16.66	12.40	17.78	13.09	18.39	12.76
		35	11.84	10.95	12.93	10.99	15.20	12.33	16.00	12.39	16.53	12.36	17.59	13.03	18.20	12.70
36	11.84	10.95	12.91	10.98	15.09	12.29	15.92	12.36	16.37	12.27	17.27	12.90	17.85	12.60		
38	11.84	10.95	12.88	10.97	14.96	12.18	15.76	12.30	16.05	12.16	16.64	12.62	17.14	12.30		
39	11.84	10.95	12.86	10.96	14.74	12.13	15.68	12.27	15.89	12.11	16.32	12.52	16.79	12.20		
41	11.84	10.95	12.82	10.95	14.30	11.94	15.04	12.01	15.23	11.85	15.60	12.29	16.00	11.98		
43	11.84	10.95	12.77	10.93	13.86	11.78	14.40	11.76	14.56	11.60	14.87	12.06	15.21	11.75		

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		P-Hi	48 (m ³ /min)	-19.8	-20	10.44	10.44	10.44
-17.8	-18			11.11	11.11	11.11	11.11	11.11
-15.7	-16			11.78	11.78	11.78	11.78	11.78
-13.7	-14			12.46	12.46	12.46	12.46	12.46
-11.7	-12			13.13	13.13	13.13	13.13	13.13
-9.6	-10			13.80	13.80	13.80	13.80	13.80
-7.5	-8			14.64	14.64	14.64	14.64	14.64
-5.5	-6			15.48	15.48	15.48	15.48	15.48
-3.4	-4			16.02	16.00	15.98	15.82	15.66
-1.3	-2			16.56	16.52	16.47	16.16	15.84
0.8	0			17.46	17.21	16.97	16.36	15.75
3.9	3			18.95	18.27	17.60	16.61	15.62
7.0	6			20.70	19.35	18.00	16.74	15.48
10.1	9			20.57	19.25	17.93	16.64	15.35
13.2	12	20.43	19.13	17.82	16.52	15.21		
16.9	15.5	20.27	18.97	17.66	16.36	15.05		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
Hi	35 (m ³ /min)	10	12.90	9.64	15.42	10.94	16.68	11.24	17.75	11.43	19.88	12.29	20.65	11.97		
		12	12.90	9.64	15.42	10.94	16.68	11.24	17.73	11.42	19.81	12.27	20.56	11.94		
		14	12.90	9.64	15.42	10.94	16.68	11.24	17.70	11.41	19.74	12.24	20.47	11.89		
		16	12.90	9.64	15.42	10.94	16.68	11.24	17.68	11.40	19.67	12.22	20.38	11.86		
		18	12.90	9.64	15.42	10.94	16.68	11.24	17.65	11.37	19.60	12.19	20.29	11.83		
		20	12.90	9.64	15.42	10.94	16.68	11.24	17.63	11.36	19.52	12.16	20.20	11.78		
		22	12.88	9.63	15.42	10.94	16.68	11.24	17.55	11.33	19.28	12.06	19.92	11.68		
		24	12.87	9.63	15.41	10.94	16.68	11.24	17.47	11.30	19.03	11.95	19.65	11.59		
		26	12.85	9.62	15.34	10.89	16.53	11.17	17.26	11.20	18.73	11.83	19.35	11.47		
		28	11.65	9.47	12.84	9.62	15.27	10.86	16.37	11.10	17.06	11.11	18.43	11.70	19.05	11.36
		30	11.65	9.47	12.81	9.60	15.15	10.82	16.21	11.02	16.86	11.03	18.15	11.59	18.76	11.25
		32	11.65	9.47	12.78	9.59	15.03	10.75	16.05	10.96	16.66	10.94	17.87	11.47	18.48	11.14
		34	11.65	9.47	12.74	9.57	14.98	10.73	15.84	10.86	16.39	10.82	17.49	11.32	18.09	10.96
		35	11.65	9.47	12.72	9.56	14.95	10.72	15.74	10.82	16.26	10.77	17.30	11.24	17.90	10.90
36	11.65	9.47	12.70	9.55	14.84	10.64	15.66	10.77	16.10	10.69	16.99	11.09	17.56	10.79		
38	11.65	9.47	12.67	9.54	14.61	10.55	15.50	10.71	15.79	10.58	16.37	10.88	16.86	10.56		
39	11.65	9.47	12.65	9.53	14.50	10.50	15.43	10.68	15.64	10.47	16.06	10.76	16.51	10.43		
41	11.65	9.47	12.61	9.50	14.07	10.33	14.80	10.39	14.98	10.22	15.35	10.48	15.74	10.15		
43	11.65	9.47	12.57	9.48	13.63	10.14	14.17	10.12	14.32	9.96	14.63	10.20	14.96	9.88		

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Hi	35 (m ³ /min)	-19.8	-20	10.23	10.23	10.23
-17.8	-18			10.89	10.89	10.89	10.89	10.89
-15.7	-16			11.55	11.55	11.55	11.55	11.55
-13.7	-14			12.21	12.21	12.21	12.21	12.21
-11.7	-12			12.87	12.87	12.87	12.87	12.87
-9.6	-10			13.52	13.52	13.52	13.52	13.52
-7.5	-8			14.35	14.35	14.35	14.35	14.35
-5.5	-6			15.17	15.17	15.17	15.17	15.17
-3.4	-4			15.70	15.68	15.66	15.50	15.35
-1.3	-2			16.23	16.18	16.14	15.83	15.52
0.8	0			17.11	16.87	16.63	16.03	15.44
3.9	3			18.57	17.90	17.24	16.27	15.30
7.0	6			20.29	18.96	17.64	16.41	15.17
10.1	9			20.15	18.86	17.57	16.31	15.04
13.2	12	20.02	18.74	17.46	16.18	14.91		
16.9	15.5	19.87	18.59	17.31	16.03	14.75		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature														
		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	
Me	28 (m ³ /min)	10	12.07	8.60	14.42	9.77	15.60	10.08	16.80	10.27	18.60	11.07	19.31	10.74		
		12	12.07	8.60	14.42	9.77	15.60	10.08	16.58	10.27	18.53	11.04	19.22	10.70		
		14	12.07	8.60	14.42	9.77	15.60	10.08	16.56	10.26	18.46	11.02	19.14	10.67		
		16	12.07	8.60	14.42	9.77	15.60	10.08	16.53	10.25	18.39	10.98	19.06	10.64		
		18	12.07	8.60	14.42	9.77	15.60	10.08	16.51	10.24	18.33	10.95	18.97	10.59		
		20	12.07	8.60	14.42	9.77	15.60	10.08	16.49	10.23	18.26	10.93	18.89	10.56		
		22	12.05	8.57	14.42	9.77	15.60	10.08	16.41	10.18	18.03	10.81	18.63	10.45		
		24	12.03	8.56	14.41	9.77	15.60	10.08	16.33	10.15	17.80	10.71	18.38	10.35		
		26	12.02	8.55	14.35	9.74	15.46	10.00	16.14	10.06	17.52	10.59	18.09	10.23		
		28	10.89	8.41	12.01	8.55	14.28	9.70	15.31	9.93	15.95	9.97	17.24	10.46	17.81	10.10
		30	10.89	8.41	11.98	8.54	14.17	9.65	15.16	9.87	15.77	9.87	16.97	10.32	17.54	10.00
		32	10.89	8.41	11.95	8.52	14.06	9.59	15.01	9.79	15.58	9.79	16.71	10.22	17.28	9.90
		34	10.89	8.41	11.91	8.50	14.01	9.57	14.82	9.70	15.33	9.68	16.36	10.08	16.92	9.77
		35	10.89	8.41	11.89	8.50	13.98	9.56	14.72	9.66	15.21	9.63	16.18	10.00	16.74	9.69
36	10.89	8.41	11.88	8.49	13.88	9.52	14.65	9.63	15.06	9.56	15.89	9.87	16.42	9.57		
38	10.89	8.41	11.85	8.48	13.67	9.41	14.50	9.56	14.77	9.43	15.31	9.64	15.77	9.31		
39	10.89	8.41	11.83	8.47	13.56	9.35	14.43	9.53	14.62	9.36	15.02	9.52	15.44	9.16		
41	10.89	8.41	11.79	8.45	13.16	9.17	13.84	9.25	14.01	9.09	14.35	9.22	14.72	8.93		
43	10.89	8.41	11.75	8.43	12.75	8.96	13.25	8.95	13.39	8.80	13.68	8.97	13.99	8.67		

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16°CDB	18°CDB	20°CDB	22°CDB	24°CDB
		Me	28 (m ³ /min)	-19.8	-20	9.60	9.60	9.60
-17.8	-18			10.22	10.22	10.22	10.22	10.22
-15.7	-16			10.84	10.84	10.84	10.84	10.84

(8) Duct connected (thin)-Low static pressure type (FDUT)

Model		FDUT15KXE6F-E												Cooling mode		(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC	Air flow	Outdoor air temperature (°CDB)	Indoor air temperature									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB						33 °CDB		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC					SHC	TC								SHC
Hi (6 m ² /min)	10			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.89	1.33	1.97	1.30												
	12			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.89	1.33	1.96	1.29												
	14			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.88	1.32	1.95	1.29												
	16			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.87	1.32	1.94	1.29												
	18			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.87	1.32	1.93	1.28												
	20			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.86	1.31	1.93	1.28												
	22			1.23	1.05	1.47	1.19	1.59	1.21	1.67	1.22	1.84	1.31	1.90	1.27												
	24			1.23	1.05	1.47	1.19	1.59	1.21	1.66	1.22	1.81	1.30	1.87	1.26												
	26			1.23	1.05	1.46	1.18	1.58	1.21	1.64	1.21	1.78	1.29	1.84	1.26												
	28	1.11	1.04	1.22	1.05	1.46	1.18	1.56	1.20	1.63	1.20	1.76	1.28	1.81	1.25												
	30	1.11	1.04	1.22	1.05	1.44	1.18	1.55	1.20	1.61	1.20	1.73	1.27	1.79	1.24												
	32	1.11	1.04	1.22	1.05	1.43	1.17	1.53	1.19	1.59	1.19	1.70	1.26	1.76	1.22												
	34	1.11	1.04	1.21	1.04	1.43	1.17	1.51	1.18	1.56	1.18	1.67	1.24	1.72	1.21												
	35	1.11	1.04	1.21	1.04	1.43	1.17	1.50	1.18	1.55	1.17	1.65	1.23	1.71	1.21												
	36	1.11	1.04	1.21	1.04	1.41	1.17	1.49	1.17	1.53	1.17	1.62	1.22	1.67	1.20												
	38	1.11	1.04	1.21	1.04	1.39	1.15	1.48	1.17	1.51	1.16	1.56	1.21	1.61	1.18												
	39	1.11	1.04	1.21	1.04	1.38	1.15	1.47	1.17	1.49	1.15	1.53	1.20	1.57	1.17												
	41	1.11	1.04	1.20	1.03	1.34	1.13	1.41	1.14	1.43	1.12	1.46	1.17	1.50	1.14												
43	1.11	1.04	1.20	1.03	1.30	1.12	1.35	1.12	1.36	1.10	1.39	1.15	1.43	1.12													

Model		FDUT15KXE6F-E												Heating mode		(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC	Air flow	Outdoor air temperature (°CDB)	Indoor air temperature									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB						33 °CDB		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC					SHC	TC								SHC
Hi (6 m ² /min)	10			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.89	1.33	1.97	1.30												
	12			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.89	1.33	1.96	1.29												
	14			1.23	1.05	1.47	1.19	1.59	1.21	1.69	1.23	1.88	1.32	1.95	1.29												
	16			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.87	1.32	1.94	1.29												
	18			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.87	1.32	1.93	1.28												
	20			1.23	1.05	1.47	1.19	1.59	1.21	1.68	1.23	1.86	1.31	1.93	1.28												
	22			1.23	1.05	1.47	1.19	1.59	1.21	1.67	1.22	1.84	1.31	1.90	1.27												
	24			1.23	1.05	1.47	1.19	1.59	1.21	1.66	1.22	1.81	1.30	1.87	1.26												
	26			1.23	1.05	1.46	1.18	1.58	1.21	1.64	1.21	1.78	1.29	1.84	1.26												
	28	1.11	1.04	1.22	1.05	1.46	1.18	1.56	1.20	1.63	1.20	1.76	1.28	1.81	1.25												
	30	1.11	1.04	1.22	1.05	1.44	1.18	1.55	1.20	1.61	1.20	1.73	1.27	1.79	1.24												
	32	1.11	1.04	1.22	1.05	1.43	1.17	1.53	1.19	1.59	1.19	1.70	1.26	1.76	1.22												
	34	1.11	1.04	1.21	1.04	1.43	1.17	1.51	1.18	1.56	1.18	1.67	1.24	1.72	1.21												
	35	1.11	1.04	1.21	1.04	1.43	1.17	1.50	1.18	1.55	1.17	1.65	1.23	1.71	1.21												
	36	1.11	1.04	1.21	1.04	1.41	1.17	1.49	1.17	1.53	1.17	1.62	1.22	1.67	1.20												
	38	1.11	1.04	1.21	1.04	1.39	1.15	1.48	1.17	1.51	1.16	1.56	1.21	1.61	1.18												
	39	1.11	1.04	1.21	1.04	1.38	1.15	1.47	1.17	1.49	1.15	1.53	1.20	1.57	1.17												
	41	1.11	1.04	1.20	1.03	1.34	1.13	1.41	1.14	1.43	1.12	1.46	1.17	1.50	1.14												
43	1.11	1.04	1.20	1.03	1.30	1.12	1.35	1.12	1.36	1.10	1.39	1.15	1.43	1.12													

Model		FDUT15KXE6F-E												Cooling mode		(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC	Air flow	Outdoor air temperature (°CDB)	Indoor air temperature									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB						33 °CDB		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC					SHC	TC								SHC
Me (5 m ² /min)	10			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.67	1.16	1.74	1.13												
	12			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.67	1.16	1.73	1.13												
	14			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.66	1.15	1.72	1.12												
	16			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.65	1.15	1.71	1.12												
	18			1.09	0.92	1.30	1.04	1.40	1.05	1.48	1.06	1.65	1.15	1.71	1.12												
	20			1.09	0.92	1.30	1.04	1.40	1.05	1.48	1.06	1.64	1.14	1.70	1.11												
	22			1.08	0.91	1.30	1.04	1.40	1.05	1.48	1.06	1.62	1.14	1.68	1.11												
	24			1.08	0.91	1.30	1.04	1.40	1.05	1.47	1.06	1.60	1.13	1.65	1.09												
	26			1.08	0.91	1.29	1.03	1.39	1.05	1.45	1.05	1.58	1.12	1.63	1.09												
	28	0.98	0.90	1.08	0.91	1.28	1.03	1.38	1.04	1.43	1.04	1.55	1.10	1.60	1.08												
	30	0.98	0.90	1.08	0.91	1.27	1.02	1.36	1.04	1.42	1.04	1.53	1.10	1.58	1.07												
	32	0.98	0.90	1.07	0.91	1.26	1.02	1.35	1.03	1.40	1.03	1.50	1.09	1.55	1.06												
	34	0.98	0.90	1.07	0.91	1.26	1.02	1.33	1.03	1.38	1.02	1.47	1.08	1.52	1.05												
	35	0.98	0.90	1.07	0.91	1.26	1.02	1.32	1.02	1.37	1.02	1.46	1.08	1.51	1.05												
	36	0.98	0.90	1.07	0.91	1.25	1.01	1.32	1.02	1.35	1.01	1.43	1.07	1.48	1.04												
	38	0.98	0.90	1.07	0.91	1.23	1.01	1.30	1.01	1.33	1.00	1.38	1.05	1.42	1.02												
	39	0.98	0.90	1.06	0.90	1.22	1.00	1.30	1.01	1.32	1.00	1.35	1.04	1.39	1.01												
	41	0.98	0.90	1.06	0.90	1.18	0.99	1.24	0.99	1.26	0.98	1.29	1.02	1.32	0.98												
43	0.98	0.90	1.06	0.90	1.15	0.97	1.19	0.97	1.20	0.95	1.23	0.99	1.26	0.97													

Model		FDUT15KXE6F-E												Heating mode		(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC	Air flow	Outdoor air temperature (°CDB)	Indoor air temperature									
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB						33 °CDB		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC					SHC	TC								SHC
Me (5 m ² /min)	10			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.67	1.16	1.74	1.13												
	12			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.67	1.16	1.73	1.13												
	14			1.09	0.92	1.30	1.04	1.40	1.05	1.49	1.07	1.66	1.15	1.72	1.12												
	16			1.09	0.92	1.3																					

Model **FDUT22KXE6F-E** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 7.5 (m ³ /min)	10			1.80	1.49	2.16	1.69	2.33	1.72	2.48	1.75	2.78	1.89	2.89	1.85
	12			1.80	1.49	2.16	1.69	2.33	1.72	2.48	1.75	2.77	1.89	2.87	1.84
	14			1.80	1.49	2.16	1.69	2.33	1.72	2.47	1.75	2.76	1.89	2.86	1.83
	16			1.80	1.49	2.16	1.69	2.33	1.72	2.47	1.75	2.75	1.88	2.85	1.83
	18			1.80	1.49	2.16	1.69	2.33	1.72	2.47	1.75	2.74	1.88	2.84	1.83
	20			1.80	1.49	2.16	1.69	2.33	1.72	2.46	1.73	2.73	1.87	2.82	1.82
	22			1.80	1.49	2.15	1.69	2.33	1.72	2.45	1.73	2.69	1.86	2.78	1.81
	24			1.80	1.49	2.15	1.69	2.33	1.72	2.44	1.73	2.66	1.84	2.75	1.80
	26			1.80	1.49	2.14	1.69	2.31	1.72	2.41	1.72	2.62	1.83	2.70	1.78
	28	1.63	1.47	1.80	1.49	2.13	1.68	2.29	1.71	2.38	1.71	2.58	1.81	2.66	1.77
	30	1.63	1.47	1.79	1.49	2.12	1.67	2.27	1.70	2.36	1.70	2.54	1.80	2.62	1.75
	32	1.63	1.47	1.79	1.49	2.10	1.67	2.24	1.69	2.33	1.69	2.50	1.79	2.58	1.73
	34	1.63	1.47	1.78	1.49	2.09	1.66	2.21	1.68	2.29	1.68	2.44	1.75	2.53	1.72
	35	1.63	1.47	1.78	1.49	2.09	1.66	2.20	1.67	2.27	1.67	2.42	1.75	2.50	1.71
	36	1.63	1.47	1.78	1.49	2.07	1.65	2.19	1.67	2.25	1.66	2.37	1.73	2.45	1.70
	38	1.63	1.47	1.77	1.48	2.04	1.64	2.17	1.66	2.21	1.64	2.29	1.71	2.36	1.67
39	1.63	1.47	1.77	1.48	2.03	1.64	2.16	1.66	2.19	1.64	2.24	1.69	2.31	1.65	
41	1.63	1.47	1.76	1.48	1.97	1.61	2.07	1.62	2.09	1.60	2.14	1.66	2.20	1.61	
43	1.63	1.47	1.76	1.48	1.91	1.59	1.98	1.59	2.00	1.56	2.05	1.62	2.09	1.58	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 7.5 (m ³ /min)	-19.8	-20	1.45	1.45	1.45	1.45
-17.8	-18		1.54	1.54	1.54	1.54	1.54	
-15.7	-16		1.64	1.64	1.64	1.64	1.64	
-13.7	-14		1.73	1.73	1.73	1.73	1.73	
-11.7	-12		1.82	1.82	1.82	1.82	1.82	
-9.6	-10		1.92	1.92	1.92	1.92	1.92	
-7.5	-8		2.03	2.03	2.03	2.03	2.03	
-5.5	-6		2.15	2.15	2.15	2.15	2.15	
-3.4	-4		2.23	2.22	2.22	2.20	2.18	
-1.3	-2		2.30	2.29	2.29	2.24	2.20	
0.8	0		2.43	2.39	2.36	2.27	2.19	
3.9	3		2.63	2.54	2.44	2.31	2.17	
7.0	6		2.88	2.69	2.50	2.33	2.15	
10.1	9		2.86	2.67	2.49	2.31	2.13	
13.2	12		2.84	2.66	2.48	2.29	2.11	
16.9	15.5		2.82	2.63	2.45	2.27	2.09	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		21 °CDB 16 °CWB		23 °CDB 18 °CWB		26 °CDB 19 °CWB		27 °CDB 20 °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
Me 6 (m ³ /min)	10			1.55	1.26	1.85	1.42	2.00	1.45	2.13	1.48	2.38	1.59	2.48	1.55
	12			1.55	1.26	1.85	1.42	2.00	1.45	2.13	1.48	2.38	1.59	2.47	1.55
	14			1.55	1.26	1.85	1.42	2.00	1.45	2.12	1.47	2.37	1.59	2.45	1.54
	16			1.55	1.26	1.85	1.42	2.00	1.45	2.12	1.47	2.36	1.58	2.44	1.54
	18			1.55	1.26	1.85	1.42	2.00	1.45	2.12	1.47	2.35	1.58	2.43	1.54
	20			1.55	1.26	1.85	1.42	2.00	1.45	2.11	1.47	2.34	1.58	2.42	1.53
	22			1.55	1.26	1.85	1.42	2.00	1.45	2.10	1.46	2.31	1.56	2.39	1.52
	24			1.54	1.25	1.85	1.42	2.00	1.45	2.09	1.46	2.28	1.55	2.36	1.51
	26			1.54	1.25	1.84	1.42	1.98	1.45	2.07	1.45	2.25	1.54	2.32	1.50
	28	1.40	1.24	1.54	1.25	1.83	1.41	1.96	1.44	2.05	1.44	2.21	1.52	2.28	1.47
	30	1.40	1.24	1.54	1.25	1.82	1.41	1.94	1.43	2.02	1.43	2.18	1.51	2.25	1.47
	32	1.40	1.24	1.53	1.25	1.80	1.40	1.93	1.43	2.00	1.42	2.14	1.49	2.22	1.46
	34	1.40	1.24	1.53	1.25	1.80	1.40	1.90	1.41	1.97	1.41	2.10	1.48	2.17	1.44
	35	1.40	1.24	1.53	1.25	1.79	1.40	1.89	1.41	1.95	1.40	2.07	1.47	2.15	1.44
	36	1.40	1.24	1.52	1.25	1.78	1.39	1.88	1.40	1.93	1.39	2.04	1.46	2.11	1.43
	38	1.40	1.24	1.52	1.25	1.75	1.37	1.86	1.40	1.89	1.38	1.96	1.43	2.02	1.40
39	1.40	1.24	1.52	1.25	1.74	1.37	1.85	1.39	1.88	1.37	1.93	1.42	1.98	1.38	
41	1.40	1.24	1.51	1.24	1.69	1.35	1.77	1.35	1.80	1.34	1.84	1.39	1.89	1.35	
43	1.40	1.24	1.51	1.24	1.63	1.33	1.70	1.33	1.72	1.31	1.75	1.36	1.79	1.31	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 6 (m ³ /min)	-19.8	-20	1.21	1.21	1.21	1.21
-17.8	-18		1.29	1.29	1.29	1.29	1.29	
-15.7	-16		1.36	1.36	1.36	1.36	1.36	
-13.7	-14		1.44	1.44	1.44	1.44	1.44	
-11.7	-12		1.52	1.52	1.52	1.52	1.52	
-9.6	-10		1.60	1.60	1.60	1.60	1.60	
-7.5	-8		1.69	1.69	1.69	1.69	1.69	
-5.5	-6		1.79	1.79	1.79	1.79	1.79	
-3.4	-4		1.85	1.85	1.85	1.83	1.81	
-1.3	-2		1.92	1.91	1.91	1.87	1.83	
0.8	0		2.02	1.99	1.96	1.89	1.82	
3.9	3		2.19	2.12	2.04	1.92	1.81	
7.0	6		2.40	2.24	2.08	1.94	1.79	
10.1	9		2.38	2.23	2.08	1.93	1.78	
13.2	12		2.37	2.21	2.06	1.91	1.76	
16.9	15.5		2.35	2.20	2.04	1.89	1.74	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 5 (m ³ /min)	10			1.35	1.08	1.62	1.23	1.75	1.25	1.86	1.27	2.08	1.37	2.16	1.34
	12			1.35	1.08	1.62	1.23	1.75	1.25	1.86	1.27	2.08	1.37	2.15	1.33
	14			1.35	1.08	1.62	1.23	1.75	1.25	1.86	1.27	2.07	1.37	2.14	1.33
	16			1.35	1.08	1.62	1.23	1.75	1.25	1.85	1.27	2.06	1.36	2.14	1.33
	18			1.35	1.08	1.62	1.23	1.75	1.25	1.85	1.27	2.05	1.36	2.13	1.33
	20			1.35	1.08	1.62	1.23	1.75	1.25	1.85	1.27	2.05	1.36	2.12	1.32
	22			1.35	1.08	1.62	1.23	1.75	1.25	1.84	1.26	2.02	1.35	2.09	1.31
	24			1.35	1.08	1.61	1.22	1.75	1.25	1.83	1.26	1.99	1.34	2.06	1.30
	26			1.35	1.08	1.61	1.22	1.73	1.25	1.81	1.25	1.96	1.32	2.03	1.29
	28	1.22	1.07	1.35	1.08	1.60	1.22	1.72	1.24	1.79	1.24	1.93	1.31	2.00	1.28
	30	1.22	1.07	1.34	1.07	1.59	1.21	1.70	1.23	1.77	1.24	1.90	1.30	1.97	1.27
	32	1.22	1.07	1.34	1.07	1.58	1.21	1.68	1.22	1.75	1.23	1.87	1.29	1.94	1.25
	34	1.22	1.07	1.33	1.07	1.57	1.21	1.66	1.22	1.72	1.21	1.83	1.27	1.90	1.24
	35	1.22	1.07	1.33	1.07	1.57	1.21	1.65	1.21	1.70	1.20	1.81	1.26	1.88	1.24
	36	1.22	1.07	1.33	1.07	1.56	1.20	1.64	1.21	1.69	1.20	1.78	1.25	1.84	1.22
	38	1.22	1.07	1.33	1.07	1.53	1.18	1.62	1.20	1.65	1.19	1.72	1.23	1.77	1.20
39	1.22	1.07	1.33	1.07	1.52	1.18	1.62	1.20	1.64	1.18	1.68	1.22	1.73	1.19	
41	1.22	1.07	1.32	1.07	1.47	1.16	1.55	1.17	1.57	1.15	1.61	1.19	1.65	1.16	
43	1.22	1.07	1.32	1.07	1.43	1.15	1.48	1.14	1.50	1.13	1.53	1.16	1.57	1.13	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Lo 5 (m ³ /min)	-19.8	-20	1.04	1.04	1.04	1.04
-17.8	-18		1.10	1.10	1.10	1.10	1.10	
-15.7	-16		1.17	1.17	1.17	1.17	1.17	
-13.7	-14		1.24	1.24	1.24	1.24	1.24	
-11.7	-12		1.30	1.30	1.30	1.30	1.30	
-9.6	-10		1.37	1.37	1.37	1.37	1.37	
-7.5	-8		1.45	1.45	1.45	1.45	1.45	
-5.5	-6		1.54	1.54	1.54	1.54	1.54	
-3.4	-4		1.59	1.59	1.59	1.57	1.55	
-1.3	-2		1.64	1.64	1.63	1.60	1.57	
0.8	0		1.73	1.71	1.68	1.62	1.56	
3.9	3		1.88	1.81	1.75	1.65	1.55	
7.0	6		2.05	1.92	1.79	1.66		

Model **FDUT28KXE6F-E** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			2.30	1.81	2.74	2.05	2.97	2.10	3.16	2.14	3.54	2.29	3.67	2.23
	12			2.30	1.81	2.74	2.05	2.97	2.10	3.15	2.13	3.52	2.29	3.66	2.23
	14			2.30	1.81	2.74	2.05	2.97	2.10	3.15	2.13	3.51	2.28	3.64	2.23
	16			2.30	1.81	2.74	2.05	2.97	2.10	3.14	2.12	3.50	2.28	3.63	2.22
	18			2.30	1.81	2.74	2.05	2.97	2.10	3.14	2.12	3.49	2.28	3.61	2.22
	20			2.30	1.81	2.74	2.05	2.97	2.10	3.14	2.12	3.47	2.27	3.59	2.21
	22			2.29	1.81	2.74	2.05	2.97	2.10	3.12	2.12	3.43	2.26	3.54	2.19
	24			2.29	1.81	2.74	2.05	2.97	2.10	3.11	2.11	3.39	2.24	3.50	2.18
	26			2.29	1.81	2.73	2.05	2.94	2.09	3.07	2.10	3.33	2.22	3.44	2.15
	28	2.07	1.78	2.28	1.80	2.72	2.04	2.91	2.07	3.03	2.08	3.28	2.20	3.39	2.14
	30	2.07	1.78	2.28	1.80	2.70	2.03	2.88	2.06	3.00	2.06	3.23	2.18	3.34	2.12
	32	2.07	1.78	2.27	1.80	2.67	2.02	2.86	2.05	2.96	2.04	3.18	2.16	3.29	2.10
	34	2.07	1.78	2.27	1.80	2.66	2.02	2.82	2.04	2.92	2.03	3.11	2.13	3.22	2.08
	35	2.07	1.78	2.26	1.80	2.66	2.02	2.80	2.03	2.89	2.02	3.08	2.12	3.18	2.07
36	2.07	1.78	2.26	1.80	2.64	2.01	2.79	2.03	2.86	2.01	3.02	2.10	3.12	2.04	
38	2.07	1.78	2.25	1.79	2.60	1.99	2.76	2.01	2.81	1.99	2.91	2.05	3.00	2.00	
39	2.07	1.78	2.25	1.79	2.58	1.98	2.74	2.01	2.78	1.98	2.86	2.03	2.94	1.98	
41	2.07	1.78	2.24	1.79	2.50	1.95	2.63	1.96	2.66	1.93	2.73	1.99	2.80	1.94	
43	2.07	1.78	2.24	1.79	2.43	1.92	2.52	1.91	2.55	1.89	2.60	1.95	2.66	1.89	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi	-19.8	-20	1.86	1.86	1.86	1.86
-17.8	-18		1.98	1.98	1.98	1.98	1.98	
-15.7	-16		2.09	2.09	2.09	2.09	2.09	
-13.7	-14		2.21	2.21	2.21	2.21	2.21	
-11.7	-12		2.33	2.33	2.33	2.33	2.33	
-9.6	-10		2.45	2.45	2.45	2.45	2.45	
-7.5	-8		2.60	2.60	2.60	2.60	2.60	
-5.5	-6		2.75	2.75	2.75	2.75	2.75	
-3.4	-4		2.85	2.84	2.84	2.84	2.84	
-1.3	-2		2.94	2.94	2.93	2.93	2.93	
0.8	0		3.10	3.06	3.02	3.02	3.02	
3.9	3		3.37	3.25	3.13	3.13	3.13	
7.0	6		3.68	3.44	3.20	3.20	3.20	
10.1	9		3.66	3.42	3.19	3.19	3.19	
13.2	12	3.63	3.40	3.17	3.17	3.17		
16.9	15.5	3.60	3.37	3.14	3.14	3.14		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			1.97	1.52	2.35	1.72	2.55	1.77	2.71	1.80	3.03	1.94	3.15	1.88
	12			1.97	1.52	2.35	1.72	2.55	1.77	2.71	1.80	3.02	1.93	3.14	1.88
	14			1.97	1.52	2.35	1.72	2.55	1.77	2.70	1.79	3.01	1.93	3.12	1.87
	16			1.97	1.52	2.35	1.72	2.55	1.77	2.70	1.79	3.00	1.92	3.11	1.87
	18			1.97	1.52	2.35	1.72	2.55	1.77	2.69	1.79	2.99	1.92	3.10	1.86
	20			1.97	1.52	2.35	1.72	2.55	1.77	2.69	1.79	2.98	1.91	3.08	1.86
	22			1.97	1.52	2.35	1.72	2.55	1.77	2.68	1.78	2.94	1.90	3.04	1.84
	24			1.96	1.52	2.35	1.72	2.55	1.77	2.67	1.78	2.90	1.88	3.00	1.83
	26			1.96	1.52	2.34	1.72	2.52	1.76	2.63	1.76	2.86	1.87	2.95	1.80
	28	1.78	1.50	1.96	1.52	2.33	1.71	2.50	1.75	2.60	1.75	2.81	1.85	2.91	1.79
	30	1.78	1.50	1.96	1.52	2.31	1.71	2.47	1.74	2.57	1.74	2.77	1.82	2.86	1.77
	32	1.78	1.50	1.95	1.52	2.29	1.70	2.45	1.73	2.54	1.72	2.73	1.81	2.82	1.76
	34	1.78	1.50	1.94	1.51	2.29	1.70	2.42	1.71	2.50	1.71	2.67	1.79	2.76	1.74
	35	1.78	1.50	1.94	1.51	2.28	1.69	2.40	1.71	2.48	1.70	2.64	1.78	2.73	1.73
36	1.78	1.50	1.94	1.51	2.27	1.68	2.39	1.70	2.46	1.69	2.59	1.76	2.68	1.71	
38	1.78	1.50	1.93	1.50	2.23	1.67	2.37	1.69	2.41	1.67	2.50	1.73	2.57	1.67	
39	1.78	1.50	1.93	1.50	2.21	1.66	2.35	1.68	2.39	1.66	2.45	1.71	2.52	1.66	
41	1.78	1.50	1.92	1.50	2.15	1.64	2.26	1.64	2.29	1.62	2.34	1.67	2.40	1.62	
43	1.78	1.50	1.92	1.50	2.08	1.61	2.16	1.60	2.19	1.58	2.23	1.63	2.28	1.57	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me	-19.8	-20	1.55	1.55	1.55	1.55
-17.8	-18		1.65	1.65	1.65	1.65	1.65	
-15.7	-16		1.75	1.75	1.75	1.75	1.75	
-13.7	-14		1.85	1.85	1.85	1.85	1.85	
-11.7	-12		1.95	1.95	1.95	1.95	1.95	
-9.6	-10		2.05	2.05	2.05	2.05	2.05	
-7.5	-8		2.17	2.17	2.17	2.17	2.17	
-5.5	-6		2.29	2.29	2.29	2.29	2.29	
-3.4	-4		2.37	2.37	2.37	2.37	2.37	
-1.3	-2		2.45	2.45	2.44	2.44	2.44	
0.8	0		2.59	2.55	2.51	2.51	2.51	
3.9	3		2.81	2.71	2.61	2.61	2.61	
7.0	6		3.07	2.87	2.67	2.67	2.67	
10.1	9		3.05	2.85	2.66	2.66	2.66	
13.2	12	3.03	2.83	2.64	2.64	2.64		
16.9	15.5	3.00	2.81	2.62	2.62	2.62		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo	10			1.72	1.31	2.06	1.49	2.23	1.53	2.37	1.55	2.65	1.67	2.75	1.62
	12			1.72	1.31	2.06	1.49	2.23	1.53	2.36	1.54	2.64	1.67	2.74	1.62
	14			1.72	1.31	2.06	1.49	2.23	1.53	2.36	1.54	2.63	1.66	2.73	1.61
	16			1.72	1.31	2.06	1.49	2.23	1.53	2.36	1.54	2.62	1.66	2.72	1.61
	18			1.72	1.31	2.06	1.49	2.23	1.53	2.35	1.54	2.61	1.65	2.71	1.61
	20			1.72	1.31	2.06	1.49	2.23	1.53	2.35	1.54	2.60	1.65	2.69	1.60
	22			1.72	1.31	2.06	1.49	2.23	1.53	2.34	1.54	2.57	1.64	2.66	1.58
	24			1.72	1.31	2.06	1.49	2.23	1.53	2.33	1.53	2.54	1.62	2.62	1.57
	26			1.71	1.31	2.05	1.48	2.20	1.51	2.30	1.52	2.50	1.60	2.58	1.56
	28	1.55	1.29	1.71	1.31	2.04	1.48	2.18	1.50	2.27	1.51	2.46	1.59	2.54	1.54
	30	1.55	1.29	1.71	1.31	2.02	1.47	2.16	1.49	2.25	1.50	2.42	1.58	2.50	1.53
	32	1.55	1.29	1.70	1.30	2.00	1.46	2.14	1.48	2.22	1.48	2.38	1.56	2.46	1.51
	34	1.55	1.29	1.70	1.30	2.00	1.46	2.11	1.47	2.19	1.47	2.33	1.54	2.41	1.50
	35	1.55	1.29	1.70	1.30	1.99	1.46	2.10	1.47	2.17	1.46	2.31	1.53	2.39	1.49
36	1.55	1.29	1.69	1.30	1.98	1.45	2.09	1.46	2.15	1.45	2.27	1.52	2.34	1.47	
38	1.55	1.29	1.69	1.30	1.95	1.44	2.07	1.46	2.11	1.44	2.18	1.48	2.25	1.44	
39	1.55	1.29	1.69	1.30	1.93	1.43	2.06	1.45	2.09	1.43	2.14	1.47	2.20	1.42	
41	1.55	1.29	1.68	1.29	1.88	1.41	1.97	1.41	2.00	1.39	2.05	1.43	2.10	1.38	
43	1.55	1.29	1.68	1.29	1.82	1.38	1.89	1.38	1.91	1.36	1.95	1.39	2.00	1.35	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Lo	-19.8	-20	1.33	1.33	1.33	1.33
-17.8	-18		1.41	1.41	1.41	1.41	1.41	
-15.7	-16		1.50	1.50	1.50	1.50	1.50	
-13.7	-14		1.58	1.58	1.58	1.58	1.58	
-11.7	-12		1.67	1.67	1.67	1.67	1.67	
-9.6	-10		1.75	1.75	1.75	1.75	1.75	
-7.5	-8		1.86	1.86	1.86	1.86	1.86	
-5.5	-6		1.97	1.97	1.97	1.97	1.97	
-3.4	-4		2.04	2.03	2.03	2.03	2.03	
-1.3	-2		2.10	2.10	2.09	2.09	2.09	
0.8	0		2.22	2.19	2.16	2.16	2.16	
3.9	3		2.41	2.32	2.24	2.24	2.24	
7.0	6		2.63	2.46	2.29	2.29	2.29	
10.1	9		2.61	2.45	2.28	2.28	2.28	
13.2	12							

Model **FDUT36KXE6F-E** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 8.5 (m³/min)	10			2.95	2.25	3.53	2.55	3.82	2.61	4.05	2.65	4.55	2.86	4.72	2.78
	12			2.95	2.25	3.53	2.55	3.82	2.61	4.05	2.65	4.53	2.85	4.70	2.78
	14			2.95	2.25	3.53	2.55	3.82	2.61	4.05	2.65	4.51	2.84	4.68	2.77
	16			2.95	2.25	3.53	2.55	3.82	2.61	4.04	2.65	4.50	2.84	4.66	2.76
	18			2.95	2.25	3.53	2.55	3.82	2.61	4.04	2.65	4.48	2.83	4.64	2.75
	20			2.95	2.25	3.53	2.55	3.82	2.61	4.03	2.64	4.47	2.83	4.62	2.75
	22			2.95	2.25	3.53	2.55	3.82	2.61	4.01	2.63	4.41	2.80	4.56	2.72
	24			2.94	2.24	3.52	2.54	3.82	2.61	3.99	2.62	4.35	2.78	4.49	2.70
	26			2.94	2.24	3.51	2.54	3.78	2.60	3.95	2.61	4.28	2.75	4.43	2.67
	28	2.66	2.20	2.94	2.24	3.49	2.53	3.74	2.58	3.90	2.59	4.22	2.73	4.36	2.65
	30	2.66	2.20	2.93	2.24	3.47	2.52	3.71	2.57	3.86	2.57	4.15	2.70	4.29	2.62
	32	2.66	2.20	2.92	2.23	3.44	2.51	3.67	2.55	3.81	2.55	4.09	2.68	4.23	2.60
	34	2.66	2.20	2.91	2.23	3.43	2.50	3.62	2.53	3.75	2.52	4.00	2.64	4.14	2.57
	35	2.66	2.20	2.91	2.23	3.42	2.50	3.60	2.52	3.72	2.51	3.96	2.62	4.09	2.54
36	2.66	2.20	2.91	2.23	3.39	2.49	3.58	2.51	3.68	2.49	3.89	2.60	4.02	2.52	
38	2.66	2.20	2.90	2.22	3.34	2.46	3.55	2.50	3.61	2.47	3.74	2.54	3.86	2.47	
39	2.66	2.20	2.89	2.22	3.32	2.45	3.53	2.49	3.58	2.45	3.67	2.51	3.78	2.44	
41	2.66	2.20	2.88	2.22	3.22	2.40	3.38	2.42	3.43	2.39	3.51	2.45	3.60	2.38	
43	2.66	2.20	2.87	2.21	3.12	2.36	3.24	2.36	3.28	2.32	3.35	2.39	3.42	2.32	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 8.5 (m³/min)	-19.8	-20	2.32	2.32	2.32	2.32	2.32	2.32
	-17.8	-18	2.47	2.47	2.47	2.47	2.47	
	-15.7	-16	2.62	2.62	2.62	2.62	2.62	
	-13.7	-14	2.77	2.77	2.77	2.77	2.77	
	-11.7	-12	2.92	2.92	2.92	2.92	2.92	
	-9.6	-10	3.07	3.07	3.07	3.07	3.07	
	-7.5	-8	3.25	3.25	3.25	3.25	3.25	
	-5.5	-6	3.44	3.44	3.44	3.44	3.44	
	-3.4	-4	3.56	3.56	3.55	3.52	3.48	
	-1.3	-2	3.68	3.67	3.66	3.59	3.52	
	0.8	0	3.88	3.83	3.77	3.64	3.50	
	3.9	3	4.21	4.06	3.91	3.69	3.47	
	7.0	6	4.60	4.30	4.00	3.72	3.44	
	10.1	9	4.57	4.28	3.99	3.70	3.41	
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		21 °CDB 16 °CWB		23 °CDB 18 °CWB		26 °CDB 19 °CWB		27 °CDB 20 °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
Me 7 (m³/min)	10			2.52	1.90	3.02	2.16	3.26	2.21	3.47	2.25	3.89	2.43	4.04	2.36
	12			2.52	1.90	3.02	2.16	3.26	2.21	3.47	2.25	3.87	2.42	4.02	2.35
	14			2.52	1.90	3.02	2.16	3.26	2.21	3.46	2.25	3.86	2.41	4.00	2.34
	16			2.52	1.90	3.02	2.16	3.26	2.21	3.46	2.25	3.85	2.41	3.99	2.34
	18			2.52	1.90	3.02	2.16	3.26	2.21	3.45	2.24	3.83	2.40	3.97	2.33
	20			2.52	1.90	3.02	2.16	3.26	2.21	3.45	2.24	3.82	2.40	3.95	2.32
	22			2.52	1.90	3.02	2.16	3.26	2.21	3.43	2.23	3.77	2.38	3.90	2.30
	24			2.52	1.90	3.01	2.16	3.26	2.21	3.42	2.23	3.72	2.36	3.84	2.28
	26			2.51	1.90	3.00	2.15	3.23	2.20	3.38	2.21	3.66	2.33	3.78	2.26
	28	2.28	1.87	2.51	1.90	2.99	2.14	3.20	2.19	3.34	2.19	3.60	2.31	3.73	2.24
	30	2.28	1.87	2.51	1.90	2.96	2.13	3.17	2.17	3.30	2.18	3.55	2.29	3.67	2.22
	32	2.28	1.87	2.50	1.89	2.94	2.12	3.14	2.16	3.26	2.16	3.49	2.26	3.61	2.20
	34	2.28	1.87	2.49	1.89	2.93	2.12	3.10	2.14	3.21	2.14	3.42	2.23	3.54	2.16
	35	2.28	1.87	2.49	1.89	2.92	2.11	3.08	2.13	3.18	2.12	3.38	2.22	3.50	2.15
36	2.28	1.87	2.48	1.88	2.90	2.10	3.06	2.12	3.15	2.11	3.32	2.19	3.43	2.13	
38	2.28	1.87	2.48	1.88	2.86	2.08	3.03	2.11	3.09	2.09	3.20	2.15	3.30	2.09	
39	2.28	1.87	2.48	1.88	2.84	2.07	3.02	2.11	3.06	2.07	3.14	2.12	3.23	2.06	
41	2.28	1.87	2.47	1.88	2.75	2.04	2.89	2.05	2.93	2.02	3.00	2.07	3.08	2.01	
43	2.28	1.87	2.46	1.87	2.67	2.00	2.77	2.00	2.80	1.97	2.86	2.02	2.93	1.96	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 7 (m³/min)	-19.8	-20	1.96	1.96	1.96	1.96	1.96	1.96
	-17.8	-18	2.09	2.09	2.09	2.09	2.09	2.09
	-15.7	-16	2.21	2.21	2.21	2.21	2.21	2.21
	-13.7	-14	2.34	2.34	2.34	2.34	2.34	2.34
	-11.7	-12	2.47	2.47	2.47	2.47	2.47	2.47
	-9.6	-10	2.59	2.59	2.59	2.59	2.59	2.59
	-7.5	-8	2.75	2.75	2.75	2.75	2.75	2.75
	-5.5	-6	2.91	2.91	2.91	2.91	2.91	2.91
	-3.4	-4	3.01	3.00	3.00	2.97	2.94	
	-1.3	-2	3.11	3.10	3.09	3.03	2.98	
	0.8	0	3.28	3.23	3.19	3.07	2.96	
	3.9	3	3.56	3.43	3.30	3.12	2.93	
	7.0	6	3.89	3.63	3.38	3.14	2.91	
	10.1	9	3.86	3.62	3.37	3.13	2.88	
13.2	12	3.84	3.59	3.35	3.10	2.86		
16.9	15.5	3.81	3.56	3.32	3.07	2.83		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 5.5 (m³/min)	10			2.06	1.54	2.46	1.74	2.66	1.78	2.83	1.82	3.17	1.96	3.29	1.90
	12			2.06	1.54	2.46	1.74	2.66	1.78	2.83	1.82	3.16	1.95	3.28	1.90
	14			2.06	1.54	2.46	1.74	2.66	1.78	2.82	1.81	3.15	1.95	3.26	1.89
	16			2.06	1.54	2.46	1.74	2.66	1.78	2.82	1.81	3.13	1.94	3.25	1.89
	18			2.06	1.54	2.46	1.74	2.66	1.78	2.81	1.81	3.12	1.94	3.23	1.88
	20			2.06	1.54	2.46	1.74	2.66	1.78	2.81	1.81	3.11	1.93	3.22	1.88
	22			2.05	1.53	2.46	1.74	2.66	1.78	2.80	1.80	3.07	1.92	3.18	1.86
	24			2.05	1.53	2.46	1.74	2.66	1.78	2.78	1.80	3.03	1.90	3.13	1.83
	26			2.05	1.53	2.44	1.73	2.63	1.77	2.75	1.78	2.99	1.88	3.08	1.82
	28	1.86	1.51	2.05	1.53	2.43	1.73	2.61	1.76	2.72	1.76	2.94	1.86	3.04	1.81
	30	1.86	1.51	2.04	1.53	2.41	1.72	2.58	1.75	2.69	1.75	2.89	1.84	2.99	1.79
	32	1.86	1.51	2.04	1.53	2.40	1.71	2.56	1.74	2.66	1.74	2.85	1.83	2.94	1.77
	34	1.86	1.51	2.03	1.52	2.39	1.71	2.53	1.73	2.61	1.72	2.79	1.80	2.88	1.75
	35	1.86	1.51	2.03	1.52	2.38	1.70	2.51	1.72	2.59	1.71	2.76	1.79	2.85	1.74
36	1.86	1.51	2.02	1.52	2.37	1.70	2.50	1.72	2.57	1.70	2.71	1.77	2.80	1.72	
38	1.86	1.51	2.02	1.52	2.33	1.68	2.47	1.70	2.52	1.68	2.61	1.73	2.69	1.68	
39	1.86	1.51	2.02	1.52	2.31	1.67	2.46	1.70	2.49	1.67	2.56	1.71	2.63	1.66	
41	1.86	1.51	2.01	1.51	2.24	1.64	2.36	1.65	2.39	1.63	2.45	1.67	2.51	1.61	
43	1.86	1.51	2.00	1.51	2.17	1.61	2.26	1.61	2.28	1.58	2.33	1.62	2.39	1.57	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Lo 5.5 (m³/min)	-19.8	-20	1.58	1.58	1.58	1.58	1.58	1.58
	-17.8	-18	1.68	1.68	1.68	1.68	1.68	1.68
	-15.7	-16	1.78	1.78	1.78	1.78	1.78	1.78
	-13.7	-14	1.88	1.88	1.88	1.88	1.88	1.88
	-11.7	-12	1.99	1.99	1.99	1.99	1.99	1.99
	-9.6	-10	2.09	2.09	2.09	2.09	2.09	2.09
	-7.5	-8	2.22	2.22	2.22	2.22	2.22	2.22
	-5.5	-6	2.34	2.34	2.34	2.34	2.34	2.34
	-3.4	-4	2.42	2.42	2.42	2.42	2.39	2.37
	-1.3	-2	2.51	2.50	2.49	2.44	2.40	
	0.8	0	2.64	2.60	2.57	2.47		

Model		FDUT45KXE6F-E Cooling mode (kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			3.69	2.86	4.41	3.25	4.77	3.32	5.07	3.37	5.68	3.64	5.90	3.54
	12			3.69	2.86	4.41	3.25	4.77	3.32	5.07	3.37	5.68	3.63	5.88	3.53
	14			3.69	2.86	4.41	3.25	4.77	3.32	5.06	3.37	5.64	3.62	5.85	3.52
	16			3.69	2.86	4.41	3.25	4.77	3.32	5.05	3.36	5.62	3.61	5.83	3.52
	18			3.69	2.86	4.41	3.25	4.77	3.32	5.05	3.36	5.60	3.61	5.80	3.51
	20			3.69	2.86	4.41	3.25	4.77	3.32	5.04	3.36	5.58	3.60	5.78	3.49
	22			3.68	2.86	4.41	3.25	4.77	3.32	5.02	3.35	5.51	3.57	5.70	3.46
	24			3.68	2.86	4.41	3.25	4.77	3.32	4.99	3.34	5.44	3.54	5.62	3.44
	26			3.68	2.86	4.39	3.23	4.73	3.31	4.93	3.31	5.35	3.51	5.53	3.41
	28	3.33	2.82	3.67	2.86	4.37	3.22	4.68	3.28	4.88	3.29	5.27	3.47	5.44	3.36
	30	3.33	2.82	3.66	2.85	4.33	3.21	4.64	3.27	4.82	3.27	5.19	3.43	5.36	3.34
	32	3.33	2.82	3.65	2.85	4.30	3.19	4.59	3.24	4.76	3.24	5.11	3.40	5.28	3.31
	34	3.33	2.82	3.64	2.84	4.28	3.18	4.53	3.22	4.69	3.21	5.00	3.37	5.17	3.28
	35	3.33	2.82	3.64	2.84	4.28	3.18	4.50	3.20	4.65	3.20	4.95	3.35	5.12	3.26
36	3.33	2.82	3.63	2.83	4.24	3.17	4.48	3.20	4.60	3.17	4.86	3.32	5.02	3.22	
38	3.33	2.82	3.62	2.83	4.18	3.14	4.43	3.18	4.52	3.14	4.68	3.25	4.82	3.15	
39	3.33	2.82	3.62	2.83	4.15	3.12	4.41	3.17	4.47	3.12	4.59	3.21	4.72	3.12	
41	3.33	2.82	3.61	2.83	4.02	3.07	4.23	3.08	4.28	3.04	4.39	3.14	4.50	3.05	
43	3.33	2.82	3.59	2.82	3.90	3.02	4.05	3.02	4.09	2.97	4.18	3.06	4.28	2.96	

Model		FDUT45KXE6F-E Heating mode (kW)									
Air flow	Outdoor air temperature	Indoor air temperature									
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB			
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB			
Hi	-19.8	-20	2.90	2.90	2.90	2.90	2.90				
	-17.8	-18	3.09	3.09	3.09	3.09	3.09				
	-15.7	-16	3.27	3.27	3.27	3.27	3.27				
	-13.7	-14	3.46	3.46	3.46	3.46	3.46				
	-11.7	-12	3.65	3.65	3.65	3.65	3.65				
	-9.6	-10	3.83	3.83	3.83	3.83	3.83				
	-7.5	-8	4.07	4.07	4.07	4.07	4.07				
	-5.5	-6	4.30	4.30	4.30	4.30	4.30				
	-3.4	-4	4.45	4.44	4.44	4.39	4.35				
	-1.3	-2	4.60	4.59	4.58	4.49	4.40				
	0.8	0	4.85	4.78	4.71	4.54	4.38				
	3.9	3	5.26	5.08	4.89	4.61	4.34				
	7.0	6	5.75	5.38	5.00	4.65	4.30				
	10.1	9	5.71	5.35	4.98	4.62	4.26				
13.2	12	5.68	5.31	4.95	4.59	4.23					
16.9	15.5	5.63	5.27	4.91	4.54	4.18					

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			3.05	2.33	3.65	2.64	3.94	2.71	4.20	2.75	4.70	2.96	4.88	2.89
	12			3.05	2.33	3.65	2.64	3.94	2.71	4.19	2.75	4.68	2.96	4.86	2.88
	14			3.05	2.33	3.65	2.64	3.94	2.71	4.19	2.75	4.67	2.95	4.84	2.87
	16			3.05	2.33	3.65	2.64	3.94	2.71	4.18	2.74	4.65	2.95	4.82	2.86
	18			3.05	2.33	3.65	2.64	3.94	2.71	4.17	2.74	4.63	2.94	4.80	2.86
	20			3.05	2.33	3.65	2.64	3.94	2.71	4.17	2.74	4.62	2.94	4.78	2.85
	22			3.05	2.33	3.65	2.64	3.94	2.71	4.15	2.73	4.56	2.91	4.71	2.83
	24			3.04	2.33	3.64	2.64	3.94	2.71	4.13	2.72	4.50	2.89	4.65	2.80
	26			3.04	2.33	3.63	2.63	3.91	2.69	4.08	2.70	4.43	2.86	4.57	2.77
	28	2.75	2.29	3.04	2.33	3.61	2.63	3.87	2.68	4.03	2.68	4.36	2.83	4.50	2.75
	30	2.75	2.29	3.03	2.32	3.58	2.61	3.83	2.66	3.99	2.66	4.29	2.80	4.44	2.72
	32	2.75	2.29	3.02	2.32	3.55	2.60	3.80	2.65	3.94	2.64	4.22	2.77	4.37	2.70
	34	2.75	2.29	3.01	2.32	3.54	2.60	3.75	2.62	3.88	2.62	4.14	2.74	4.28	2.65
	35	2.75	2.29	3.01	2.32	3.54	2.60	3.72	2.61	3.84	2.60	4.09	2.72	4.23	2.64
36	2.75	2.29	3.00	2.31	3.51	2.58	3.70	2.60	3.81	2.59	4.02	2.69	4.15	2.62	
38	2.75	2.29	3.00	2.31	3.46	2.56	3.67	2.59	3.73	2.55	3.87	2.64	3.99	2.56	
39	2.75	2.29	2.99	2.30	3.43	2.54	3.65	2.58	3.70	2.54	3.80	2.61	3.90	2.53	
41	2.75	2.29	2.98	2.30	3.33	2.50	3.50	2.52	3.54	2.48	3.63	2.54	3.72	2.47	
43	2.75	2.29	2.97	2.29	3.22	2.45	3.35	2.45	3.39	2.41	3.46	2.49	3.54	2.41	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	2.34	2.34	2.34	2.34	2.34	
	-17.8	-18	2.49	2.49	2.49	2.49	2.49	
	-15.7	-16	2.64	2.64	2.64	2.64	2.64	
	-13.7	-14	2.79	2.79	2.79	2.79	2.79	
	-11.7	-12	2.94	2.94	2.94	2.94	2.94	
	-9.6	-10	3.09	3.09	3.09	3.09	3.09	
	-7.5	-8	3.28	3.28	3.28	3.28	3.28	
	-5.5	-6	3.46	3.46	3.46	3.46	3.46	
	-3.4	-4	3.58	3.58	3.57	3.54	3.50	
	-1.3	-2	3.71	3.69	3.68	3.61	3.54	
	0.8	0	3.91	3.85	3.80	3.66	3.52	
	3.9	3	4.24	4.09	3.94	3.72	3.49	
	7.0	6	4.63	4.33	4.03	3.75	3.46	
	10.1	9	4.60	4.31	4.01	3.72	3.43	
13.2	12	4.57	4.28	3.99	3.69	3.40		
16.9	15.5	4.54	4.24	3.95	3.66	3.37		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo	10			2.48	1.87	2.96	2.12	3.20	2.17	3.41	2.21	3.82	2.38	3.96	2.32
	12			2.48	1.87	2.96	2.12	3.20	2.17	3.40	2.21	3.80	2.38	3.95	2.31
	14			2.48	1.87	2.96	2.12	3.20	2.17	3.40	2.21	3.79	2.37	3.93	2.30
	16			2.48	1.87	2.96	2.12	3.20	2.17	3.39	2.20	3.77	2.36	3.91	2.30
	18			2.48	1.87	2.96	2.12	3.20	2.17	3.39	2.20	3.76	2.36	3.89	2.29
	20			2.48	1.87	2.96	2.12	3.20	2.17	3.38	2.20	3.75	2.36	3.88	2.28
	22			2.47	1.86	2.96	2.12	3.20	2.17	3.37	2.19	3.70	2.33	3.82	2.26
	24			2.47	1.86	2.96	2.12	3.20	2.17	3.35	2.18	3.65	2.31	3.77	2.24
	26			2.47	1.86	2.94	2.11	3.17	2.16	3.31	2.17	3.59	2.29	3.71	2.22
	28	2.24	1.84	2.47	1.86	2.93	2.10	3.14	2.15	3.27	2.15	3.54	2.27	3.66	2.19
	30	2.24	1.84	2.46	1.86	2.91	2.09	3.11	2.13	3.24	2.14	3.48	2.24	3.60	2.17
	32	2.24	1.84	2.45	1.85	2.88	2.08	3.08	2.12	3.20	2.12	3.43	2.22	3.55	2.16
	34	2.24	1.84	2.44	1.85	2.87	2.07	3.04	2.10	3.15	2.10	3.36	2.19	3.47	2.13
	35	2.24	1.84	2.44	1.85	2.87	2.07	3.02	2.09	3.12	2.09	3.32	2.18	3.44	2.12
36	2.24	1.84	2.44	1.85	2.85	2.06	3.01	2.09	3.09	2.07	3.26	2.16	3.37	2.09	
38	2.24	1.84	2.43	1.85	2.80	2.04	2.98	2.07	3.03	2.04	3.14	2.11	3.24	2.05	
39	2.24	1.84	2.43	1.85	2.78	2.04	2.96	2.06	3.00	2.03	3.08	2.09	3.17	2.02	
41	2.24	1.84	2.42	1.84	2.70	2.00	2.84	2.02	2.87	1.98	2.95	2.04	3.02	1.97	
43	2.24	1.84	2.41	1.84	2.62	1.97	2.72	1.96	2.75	1.93	2.81	1.98	2.87	1.91	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Lo	-19.8	-20	1.86	1.86	1.86	1.86	1.86	
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	
	-15.7	-16	2.10	2.10	2.10	2.10	2.10	
	-13.7	-14	2.22	2.22	2.22	2.22	2.22	
	-11.7	-12	2.34	2.34	2.34	2.34	2.34	
	-9.6	-10	2.46	2.46	2.46	2.46	2.46	
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	
	-3.4	-4	2.85	2.85	2.84	2.81	2.79	
	-1.3	-2	2.95	2.94	2.93	2.87	2.82	
	0.8	0	3.11	3.06	3.02	2.91	2.80	
	3.							

Model **FDUT56KXE6F-E** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			4.59	3.47	5.49	3.94	5.94	4.04	6.32	4.11	7.07	4.43	7.35	4.30
	12			4.59	3.47	5.49	3.94	5.94	4.04	6.31	4.10	7.05	4.41	7.31	4.29
	14			4.59	3.47	5.49	3.94	5.94	4.04	6.30	4.10	7.02	4.40	7.28	4.27
	16			4.59	3.47	5.49	3.94	5.94	4.04	6.29	4.10	7.00	4.39	7.25	4.26
	18			4.59	3.47	5.49	3.94	5.94	4.04	6.28	4.09	6.97	4.38	7.22	4.26
	20			4.59	3.47	5.49	3.94	5.94	4.04	6.27	4.09	6.95	4.38	7.19	4.24
	22			4.58	3.47	5.49	3.94	5.94	4.04	6.24	4.07	6.86	4.34	7.09	4.20
	24			4.58	3.47	5.48	3.93	5.94	4.04	6.21	4.06	6.77	4.30	6.99	4.17
	26			4.57	3.46	5.46	3.92	5.88	4.01	6.14	4.02	6.66	4.25	6.88	4.13
	28	4.14	3.41	4.57	3.46	5.43	3.91	5.82	3.99	6.07	3.99	6.56	4.22	6.78	4.08
	30	4.14	3.41	4.56	3.46	5.39	3.89	5.77	3.97	6.00	3.96	6.46	4.16	6.67	4.04
	32	4.14	3.41	4.55	3.45	5.35	3.87	5.71	3.94	5.93	3.94	6.36	4.12	6.57	4.01
	34	4.14	3.41	4.53	3.44	5.33	3.86	5.64	3.91	5.83	3.90	6.22	4.07	6.44	3.97
	35	4.14	3.41	4.52	3.44	5.32	3.86	5.60	3.89	5.79	3.88	6.16	4.05	6.37	3.94
	36	4.14	3.41	4.52	3.44	5.28	3.84	5.57	3.88	5.73	3.85	6.05	4.01	6.25	3.90
	38	4.14	3.41	4.51	3.44	5.20	3.81	5.52	3.85	5.62	3.80	5.82	3.92	6.00	3.80
	39	4.14	3.41	4.50	3.43	5.16	3.79	5.49	3.84	5.56	3.78	5.71	3.88	5.87	3.76
41	4.14	3.41	4.49	3.43	5.00	3.72	5.26	3.75	5.33	3.68	5.46	3.78	5.60	3.67	
43	4.14	3.41	4.47	3.42	4.85	3.65	5.04	3.65	5.10	3.59	5.21	3.69	5.32	3.57	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi	-19.8	-20	3.48	3.48	3.48	3.48	3.48	
	-17.8	-18	3.70	3.70	3.70	3.70	3.70	
	-15.7	-16	3.93	3.93	3.93	3.93	3.93	
	-13.7	-14	4.15	4.15	4.15	4.15	4.15	
	-11.7	-12	4.38	4.38	4.38	4.38	4.38	
	-9.6	-10	4.60	4.60	4.60	4.60	4.60	
	-7.5	-8	4.88	4.88	4.88	4.88	4.88	
	-5.5	-6	5.16	5.16	5.16	5.16	5.16	
	-3.4	-4	5.34	5.33	5.33	5.33	5.27	
	-1.3	-2	5.52	5.51	5.49	5.39	5.28	
	0.8	0	5.82	5.74	5.66	5.45	5.25	
	3.9	3	6.32	6.09	5.87	5.54	5.21	
	7.0	6	6.90	6.45	6.00	5.58	5.16	
	10.1	9	6.86	6.42	5.98	5.55	5.12	
	13.2	12	6.81	6.38	5.94	5.51	5.07	
	16.9	15.5	6.76	6.32	5.89	5.45	5.02	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			3.57	2.64	4.27	2.99	4.62	3.08	4.91	3.13	5.50	3.38	5.71	3.28
	12			3.57	2.64	4.27	2.99	4.62	3.08	4.90	3.13	5.48	3.37	5.69	3.27
	14			3.57	2.64	4.27	2.99	4.62	3.08	4.90	3.13	5.46	3.36	5.66	3.26
	16			3.57	2.64	4.27	2.99	4.62	3.08	4.89	3.12	5.44	3.35	5.64	3.25
	18			3.57	2.64	4.27	2.99	4.62	3.08	4.88	3.12	5.42	3.34	5.61	3.24
	20			3.57	2.64	4.27	2.99	4.62	3.08	4.88	3.12	5.40	3.33	5.59	3.23
	22			3.56	2.63	4.27	2.99	4.62	3.08	4.86	3.11	5.33	3.30	5.51	3.20
	24			3.56	2.63	4.26	2.99	4.62	3.08	4.83	3.10	5.27	3.28	5.44	3.17
	26			3.56	2.63	4.24	2.98	4.57	3.06	4.78	3.07	5.18	3.24	5.35	3.14
	28	3.22	2.59	3.55	2.63	4.22	2.97	4.53	3.04	4.72	3.05	5.10	3.21	5.27	3.11
	30	3.22	2.59	3.54	2.63	4.19	2.96	4.49	3.02	4.66	3.02	5.02	3.17	5.19	3.07
	32	3.22	2.59	3.54	2.63	4.16	2.95	4.44	2.99	4.61	2.99	4.94	3.14	5.11	3.05
	34	3.22	2.59	3.52	2.62	4.14	2.94	4.38	2.97	4.54	2.96	4.84	3.10	5.01	3.01
	35	3.22	2.59	3.52	2.62	4.14	2.94	4.36	2.96	4.50	2.95	4.79	3.08	4.95	2.99
	36	3.22	2.59	3.51	2.61	4.11	2.92	4.33	2.95	4.46	2.93	4.70	3.04	4.86	2.94
	38	3.22	2.59	3.51	2.61	4.04	2.89	4.29	2.93	4.37	2.89	4.53	2.97	4.66	2.88
	39	3.22	2.59	3.50	2.61	4.01	2.88	4.27	2.92	4.33	2.88	4.44	2.94	4.57	2.85
41	3.22	2.59	3.49	2.60	3.89	2.82	4.09	2.84	4.14	2.80	4.25	2.86	4.35	2.77	
43	3.22	2.59	3.48	2.60	3.77	2.77	3.92	2.77	3.96	2.72	4.05	2.79	4.14	2.70	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	2.61	2.61	2.61	2.61	2.61	
	-17.8	-18	2.78	2.78	2.78	2.78	2.78	
	-15.7	-16	2.94	2.94	2.94	2.94	2.94	
	-13.7	-14	3.11	3.11	3.11	3.11	3.11	
	-11.7	-12	3.28	3.28	3.28	3.28	3.28	
	-9.6	-10	3.45	3.45	3.45	3.45	3.45	
	-7.5	-8	3.66	3.66	3.66	3.66	3.66	
	-5.5	-6	3.87	3.87	3.87	3.87	3.87	
	-3.4	-4	4.00	4.00	3.99	3.95	3.91	
	-1.3	-2	4.14	4.13	4.12	4.04	3.96	
	0.8	0	4.36	4.30	4.24	4.09	3.94	
	3.9	3	4.73	4.57	4.40	4.15	3.90	
	7.0	6	5.17	4.84	4.50	4.18	3.87	
	10.1	9	5.14	4.81	4.48	4.16	3.83	
	13.2	12	5.11	4.78	4.45	4.13	3.80	
	16.9	15.5	5.07	4.74	4.41	4.09	3.76	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo	10			2.97	2.17	3.55	2.47	3.84	2.54	4.08	2.58	4.57	2.78	4.75	2.70
	12			2.97	2.17	3.55	2.47	3.84	2.54	4.08	2.58	4.56	2.77	4.73	2.69
	14			2.97	2.17	3.55	2.47	3.84	2.54	4.07	2.57	4.54	2.76	4.71	2.68
	16			2.97	2.17	3.55	2.47	3.84	2.54	4.07	2.57	4.52	2.76	4.69	2.67
	18			2.97	2.17	3.55	2.47	3.84	2.54	4.06	2.57	4.51	2.75	4.67	2.67
	20			2.97	2.17	3.55	2.47	3.84	2.54	4.06	2.57	4.49	2.74	4.65	2.66
	22			2.96	2.17	3.55	2.47	3.84	2.54	4.04	2.56	4.43	2.72	4.58	2.62
	24			2.96	2.17	3.55	2.47	3.84	2.54	4.02	2.55	4.38	2.69	4.52	2.60
	26			2.96	2.17	3.53	2.45	3.80	2.52	3.97	2.53	4.31	2.66	4.45	2.58
	28	2.68	2.13	2.95	2.16	3.51	2.45	3.77	2.50	3.92	2.51	4.24	2.63	4.38	2.55
	30	2.68	2.13	2.95	2.16	3.48	2.43	3.73	2.49	3.88	2.49	4.17	2.61	4.32	2.53
	32	2.68	2.13	2.94	2.16	3.46	2.42	3.69	2.47	3.83	2.47	4.11	2.58	4.25	2.50
	34	2.68	2.13	2.93	2.15	3.45	2.42	3.64	2.44	3.77	2.44	4.02	2.54	4.16	2.47
	35	2.68	2.13	2.93	2.15	3.44	2.41	3.62	2.43	3.74	2.43	3.98	2.53	4.12	2.45
	36	2.68	2.13	2.92	2.15	3.41	2.40	3.60	2.42	3.70	2.41	3.91	2.50	4.04	2.42
	38	2.68	2.13	2.91	2.14	3.36	2.38	3.57	2.41	3.63	2.38	3.77	2.44	3.88	2.37
	39	2.68	2.13	2.91	2.14	3.34	2.36	3.55	2.40	3.60	2.36	3.69	2.41	3.80	2.33
41	2.68	2.13	2.90	2.14	3.24	2.32	3.40	2.33	3.45	2.29	3.53	2.35	3.62	2.27	
43	2.68	2.13	2.89	2.13	3.14	2.27	3.26	2.27	3.29	2.23	3.37	2.28	3.44	2.20	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Lo	-19.8	-20	2.13	2.13	2.13	2.13	2.13	
	-17.8	-18	2.27	2.27	2.27	2.27	2.27	
	-15.7	-16	2.40	2.40	2.40	2.40	2.40	
	-13.7	-14	2.54	2.54	2.54	2.54	2.54	
	-11.7	-12	2.68	2.68	2.68	2.68	2.68	
	-9.6	-10	2.81	2.81	2.81	2.81	2.81	
	-7.5	-8	2.99	2.99	2.99	2.99	2.99	
	-5.5	-6	3.16	3.16	3.16	3.16	3.16	
	-3.4	-4	3.27	3.26	3.26	3.23	3.19	
	-1.3	-2	3.38	3.37	3.36	3.29	3.23	
	0.8	0	3.56	3.51	3.46	3.34	3.21	
	3.9	3	3.86	3.73	3.59	3.39	3.18	
	7.0	6	4.22	3.95	3.67	3.41	3.16	
	10.1	9	4.19	3.93	3.66	3.39	3.13	
	13.2	12						

Model **FDUT71KXE6F-E** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 16 (m ³ /min)	10			5.82	4.40	6.96	4.98	7.53	5.12	8.01	5.20	8.97	5.60	9.31	5.45
	12			5.82	4.40	6.96	4.98	7.53	5.12	8.00	5.19	8.94	5.59	9.27	5.43
	14			5.82	4.40	6.96	4.98	7.53	5.12	7.99	5.19	8.90	5.57	9.23	5.41
	16			5.82	4.40	6.96	4.98	7.53	5.12	7.97	5.18	8.87	5.56	9.19	5.40
	18			5.82	4.40	6.96	4.98	7.53	5.12	7.96	5.18	8.84	5.55	9.15	5.39
	20			5.82	4.40	6.96	4.98	7.53	5.12	7.95	5.17	8.81	5.54	9.11	5.36
	22			5.81	4.39	6.95	4.97	7.53	5.12	7.92	5.16	8.70	5.49	8.99	5.32
	24			5.80	4.39	6.95	4.97	7.53	5.12	7.88	5.14	8.58	5.44	8.86	5.27
	26			5.80	4.39	6.92	4.96	7.46	5.09	7.79	5.11	8.45	5.38	8.73	5.22
	28	5.25	4.31	5.79	4.36	6.89	4.95	7.38	5.05	7.69	5.06	8.31	5.33	8.59	5.15
	30	5.25	4.31	5.78	4.37	6.83	4.92	7.31	5.01	7.60	5.02	8.19	5.28	8.46	5.11
	32	5.25	4.31	5.77	4.37	6.78	4.90	7.24	4.98	7.51	4.97	8.06	5.21	8.33	5.07
	34	5.25	4.31	5.75	4.36	6.76	4.89	7.15	4.94	7.39	4.92	7.89	5.15	8.16	5.01
	35	5.25	4.31	5.74	4.35	6.75	4.89	7.10	4.92	7.33	4.90	7.80	5.12	8.08	4.99
36	5.25	4.31	5.73	4.35	6.69	4.86	7.06	4.91	7.26	4.87	7.66	5.07	7.92	4.93	
38	5.25	4.31	5.72	4.35	6.59	4.81	6.99	4.88	7.12	4.82	7.38	4.96	7.61	4.81	
39	5.25	4.31	5.71	4.34	6.54	4.79	6.96	4.87	7.05	4.78	7.24	4.90	7.45	4.77	
41	5.25	4.31	5.69	4.33	6.35	4.71	6.67	4.74	6.76	4.67	6.92	4.79	7.10	4.64	
43	5.25	4.31	5.67	4.32	6.15	4.62	6.39	4.62	6.46	4.54	6.60	4.66	6.75	4.52	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature								
		°CDB		°CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
Hi 16 (m ³ /min)	-19.8	-20	4.64	4.64	4.64	4.64	4.64	4.64	4.64	
	-17.8	-18	4.94	4.94	4.94	4.94	4.94	4.94	4.94	
	-15.7	-16	5.24	5.24	5.24	5.24	5.24	5.24	5.24	
	-13.7	-14	5.54	5.54	5.54	5.54	5.54	5.54	5.54	
	-11.7	-12	5.83	5.83	5.83	5.83	5.83	5.83	5.83	
	-9.6	-10	6.13	6.13	6.13	6.13	6.13	6.13	6.13	
	-7.5	-8	6.51	6.51	6.51	6.51	6.51	6.51	6.51	
	-5.5	-6	6.88	6.88	6.88	6.88	6.88	6.88	6.88	
	-3.4	-4	7.12	7.11	7.10	7.03	6.96			
	-1.3	-2	7.36	7.34	7.32	7.18	7.04			
	0.8	0	7.76	7.65	7.54	7.27	7.00			
	3.9	3	8.42	8.12	7.82	7.38	6.94			
	7.0	6	9.20	8.60	8.00	7.44	6.88			
	10.1	9	9.14	8.56	7.97	7.40	6.82			
13.2	12	9.08	8.50	7.92	7.34	6.76				
16.9	15.5	9.01	8.43	7.85	7.27	6.69				

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 13 (m ³ /min)	10			4.94	3.69	5.91	4.18	6.39	4.29	6.80	4.37	7.62	4.71	7.91	4.57
	12			4.94	3.69	5.91	4.18	6.39	4.29	6.79	4.36	7.59	4.70	7.88	4.56
	14			4.94	3.69	5.91	4.18	6.39	4.29	6.78	4.36	7.56	4.69	7.84	4.55
	16			4.94	3.69	5.91	4.18	6.39	4.29	6.77	4.35	7.54	4.68	7.81	4.54
	18			4.94	3.69	5.91	4.18	6.39	4.29	6.77	4.35	7.51	4.66	7.77	4.52
	20			4.94	3.69	5.91	4.18	6.39	4.29	6.76	4.35	7.48	4.65	7.74	4.51
	22			4.94	3.69	5.91	4.18	6.39	4.29	6.72	4.33	7.39	4.61	7.63	4.47
	24			4.93	3.68	5.91	4.18	6.39	4.29	6.69	4.32	7.29	4.57	7.53	4.43
	26			4.93	3.68	5.88	4.17	6.33	4.26	6.61	4.27	7.18	4.53	7.41	4.39
	28	4.46	3.62	4.92	3.68	5.85	4.15	6.27	4.24	6.54	4.25	7.06	4.48	7.30	4.33
	30	4.46	3.62	4.91	3.67	5.81	4.14	6.21	4.21	6.46	4.21	6.95	4.42	7.19	4.29
	32	4.46	3.62	4.90	3.67	5.76	4.11	6.15	4.19	6.38	4.18	6.85	4.38	7.08	4.26
	34	4.46	3.62	4.88	3.66	5.74	4.11	6.07	4.15	6.28	4.14	6.70	4.33	6.93	4.20
	35	4.46	3.62	4.87	3.66	5.73	4.10	6.03	4.14	6.23	4.12	6.63	4.30	6.86	4.18
36	4.46	3.62	4.87	3.66	5.69	4.08	6.00	4.12	6.17	4.09	6.51	4.25	6.73	4.13	
38	4.46	3.62	4.86	3.65	5.60	4.04	5.94	4.09	6.05	4.04	6.27	4.16	6.46	4.03	
39	4.46	3.62	4.85	3.64	5.56	4.03	5.91	4.08	5.99	4.02	6.15	4.11	6.33	3.99	
41	4.46	3.62	4.83	3.63	5.39	3.95	5.67	3.97	5.74	3.91	5.88	4.00	6.03	3.88	
43	4.46	3.62	4.82	3.63	5.22	3.87	5.43	3.87	5.49	3.81	5.61	3.90	5.73	3.78	

Air flow	Outdoor air temperature	Indoor air temperature								
		°CDB		°CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
Me 13 (m ³ /min)	-19.8	-20	3.87	3.87	3.87	3.87	3.87	3.87	3.87	
	-17.8	-18	4.11	4.11	4.11	4.11	4.11	4.11	4.11	
	-15.7	-16	4.36	4.36	4.36	4.36	4.36	4.36	4.36	
	-13.7	-14	4.61	4.61	4.61	4.61	4.61	4.61	4.61	
	-11.7	-12	4.86	4.86	4.86	4.86	4.86	4.86	4.86	
	-9.6	-10	5.11	5.11	5.11	5.11	5.11	5.11	5.11	
	-7.5	-8	5.42	5.42	5.42	5.42	5.42	5.42	5.42	
	-5.5	-6	5.73	5.73	5.73	5.73	5.73	5.73	5.73	
	-3.4	-4	5.93	5.92	5.91	5.86	5.80			
	-1.3	-2	6.13	6.11	6.10	5.98	5.86			
	0.8	0	6.46	6.37	6.28	6.06	5.83			
	3.9	3	7.01	6.76	6.51	6.15	5.78			
	7.0	6	7.66	7.16	6.66	6.20	5.73			
	10.1	9	7.61	7.13	6.64	6.16	5.68			
13.2	12	7.56	7.08	6.60	6.11	5.63				
16.9	15.5	7.51	7.02	6.54	6.06	5.57				

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 9.5 (m ³ /min)	10			3.80	2.79	4.54	3.17	4.91	3.26	5.23	3.32	5.85	3.57	6.08	3.47
	12			3.80	2.79	4.54	3.17	4.91	3.26	5.22	3.31	5.83	3.56	6.05	3.46
	14			3.80	2.79	4.54	3.17	4.91	3.26	5.21	3.31	5.81	3.55	6.03	3.45
	16			3.80	2.79	4.54	3.17	4.91	3.26	5.20	3.30	5.79	3.55	6.00	3.44
	18			3.80	2.79	4.54	3.17	4.91	3.26	5.20	3.30	5.77	3.54	5.97	3.41
	20			3.80	2.79	4.54	3.17	4.91	3.26	5.19	3.30	5.75	3.53	5.95	3.41
	22			3.79	2.79	4.54	3.17	4.91	3.26	5.17	3.29	5.68	3.50	5.87	3.38
	24			3.79	2.79	4.54	3.17	4.91	3.26	5.14	3.28	5.60	3.46	5.78	3.35
	26			3.78	2.78	4.52	3.16	4.87	3.24	5.08	3.25	5.51	3.42	5.70	3.32
	28	3.43	2.74	3.78	2.78	4.49	3.14	4.82	3.22	5.02	3.22	5.43	3.39	5.61	3.29
	30	3.43	2.74	3.77	2.78	4.46	3.13	4.77	3.19	4.96	3.20	5.34	3.35	5.52	3.25
	32	3.43	2.74	3.76	2.77	4.43	3.12	4.73	3.18	4.90	3.17	5.26	3.32	5.44	3.22
	34	3.43	2.74	3.75	2.77	4.41	3.11	4.66	3.14	4.83	3.14	5.15	3.27	5.33	3.16
	35	3.43	2.74	3.74	2.76	4.40	3.10	4.63	3.13	4.79	3.12	5.09	3.25	5.27	3.16
36	3.43	2.74	3.74	2.76	4.37	3.09	4.61	3.12	4.74	3.10	5.00	3.21	5.17	3.12	
38	3.43	2.74	3.73	2.76	4.30	3.06	4.56	3.10	4.65	3.06	4.82	3.14	4.96	3.04	
39	3.43	2.74	3.73	2.76	4.27	3.04	4.54	3.09	4.60	3.04	4.73	3.11	4.86	3.01	
41	3.43	2.74	3.71	2.75	4.14	2.98	4.36	3.01	4.41	2.95	4.52	3.01	4.63	2.92	
43	3.43	2.74	3.70	2.74	4.01	2.92	4.17	2.92	4.22	2.87	4.31	2.94	4.41	2.85	

Air flow	Outdoor air temperature	Indoor air temperature								
		°CDB		°CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB		
Lo 9.5 (m ³ /min)	-19.8	-20	2.90	2.90	2.90	2.90	2.90	2.90	2.90	
	-17.8	-18	3.09	3.09	3.09	3.09	3.09	3.09	3.09	
	-									

Model **FDUH28KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi	10			2.30	1.97	2.74	2.22	2.97	2.27	3.16	2.29	3.54	2.48	3.67	2.41
	12			2.30	1.97	2.74	2.22	2.97	2.27	3.15	2.29	3.52	2.47	3.66	2.41
	14			2.30	1.97	2.74	2.22	2.97	2.27	3.15	2.29	3.51	2.47	3.64	2.41
	16			2.30	1.97	2.74	2.22	2.97	2.27	3.14	2.29	3.50	2.47	3.63	2.40
	18			2.30	1.97	2.74	2.22	2.97	2.27	3.14	2.29	3.49	2.46	3.61	2.40
	20			2.30	1.97	2.74	2.22	2.97	2.27	3.14	2.29	3.47	2.45	3.59	2.39
	22			2.29	1.96	2.74	2.22	2.97	2.27	3.12	2.28	3.43	2.44	3.54	2.37
	24			2.29	1.96	2.74	2.22	2.97	2.27	3.11	2.27	3.39	2.42	3.50	2.36
	26			2.29	1.96	2.73	2.21	2.94	2.25	3.07	2.26	3.33	2.40	3.44	2.34
	28	2.07	1.94	2.28	1.96	2.72	2.21	2.91	2.24	3.03	2.24	3.28	2.38	3.39	2.32
	30	2.07	1.94	2.28	1.96	2.70	2.20	2.88	2.23	3.00	2.23	3.23	2.36	3.34	2.31
	32	2.07	1.94	2.27	1.95	2.67	2.19	2.86	2.22	2.96	2.21	3.18	2.35	3.29	2.29
	34	2.07	1.94	2.27	1.95	2.66	2.18	2.82	2.21	2.92	2.20	3.11	2.32	3.22	2.27
	35	2.07	1.94	2.26	1.95	2.66	2.18	2.80	2.20	2.89	2.19	3.08	2.31	3.18	2.24
36	2.07	1.94	2.26	1.95	2.64	2.18	2.79	2.19	2.86	2.18	3.02	2.29	3.12	2.22	
38	2.07	1.94	2.25	1.95	2.60	2.16	2.76	2.18	2.81	2.15	2.91	2.24	3.00	2.19	
39	2.07	1.94	2.25	1.95	2.58	2.15	2.74	2.17	2.78	2.14	2.86	2.22	2.94	2.17	
41	2.07	1.94	2.24	1.94	2.50	2.12	2.63	2.13	2.66	2.10	2.73	2.18	2.80	2.13	
43	2.07	1.94	2.24	1.94	2.43	2.09	2.52	2.09	2.55	2.05	2.60	2.14	2.66	2.08	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi	-19.8	-20	1.86	1.86	1.86	1.86	1.86	
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	
	-15.7	-16	2.09	2.09	2.09	2.09	2.09	
	-13.7	-14	2.21	2.21	2.21	2.21	2.21	
	-11.7	-12	2.33	2.33	2.33	2.33	2.33	
	-9.6	-10	2.45	2.45	2.45	2.45	2.45	
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	
	-3.4	-4	2.85	2.84	2.84	2.81	2.78	
	-1.3	-2	2.94	2.94	2.93	2.87	2.82	
	0.8	0	3.10	3.06	3.02	2.91	2.80	
	3.9	3	3.37	3.25	3.13	2.95	2.78	
	7.0	6	3.68	3.44	3.20	2.98	2.75	
	10.1	9	3.66	3.42	3.19	2.96	2.73	
13.2	12	3.63	3.40	3.17	2.94	2.70		
16.9	15.5	3.60	3.37	3.14	2.91	2.68		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			2.21	1.77	2.65	2.00	2.86	2.05	3.04	2.08	3.41	2.24	3.54	2.18
	12			2.21	1.77	2.65	2.00	2.86	2.05	3.04	2.08	3.40	2.24	3.53	2.18
	14			2.21	1.77	2.65	2.00	2.86	2.05	3.04	2.08	3.39	2.23	3.51	2.17
	16			2.21	1.77	2.65	2.00	2.86	2.05	3.03	2.07	3.37	2.23	3.50	2.17
	18			2.21	1.77	2.65	2.00	2.86	2.05	3.03	2.07	3.36	2.22	3.48	2.16
	20			2.21	1.77	2.65	2.00	2.86	2.05	3.02	2.07	3.35	2.22	3.47	2.16
	22			2.21	1.77	2.64	2.00	2.86	2.05	3.01	2.06	3.31	2.20	3.42	2.14
	24			2.21	1.77	2.64	2.00	2.86	2.05	3.00	2.06	3.26	2.18	3.37	2.12
	26			2.21	1.77	2.63	1.99	2.84	2.04	2.96	2.04	3.21	2.16	3.32	2.10
	28	2.00	1.74	2.20	1.76	2.62	1.99	2.81	2.03	2.93	2.03	3.16	2.14	3.27	2.08
	30	2.00	1.74	2.20	1.76	2.60	1.98	2.78	2.01	2.89	2.01	3.11	2.13	3.22	2.07
	32	2.00	1.74	2.19	1.76	2.58	1.97	2.75	2.00	2.86	2.00	3.07	2.11	3.17	2.05
	34	2.00	1.74	2.19	1.76	2.57	1.97	2.72	1.99	2.81	1.98	3.00	2.08	3.10	2.03
	35	2.00	1.74	2.18	1.75	2.57	1.97	2.70	1.98	2.79	1.97	2.97	2.07	3.07	2.01
36	2.00	1.74	2.18	1.75	2.55	1.96	2.69	1.97	2.76	1.96	2.91	2.05	3.01	2.00	
38	2.00	1.74	2.17	1.75	2.51	1.94	2.66	1.96	2.71	1.94	2.81	2.01	2.89	1.96	
39	2.00	1.74	2.17	1.75	2.49	1.93	2.65	1.96	2.68	1.93	2.75	1.99	2.83	1.93	
41	2.00	1.74	2.16	1.75	2.41	1.90	2.54	1.91	2.57	1.88	2.63	1.94	2.70	1.89	
43	2.00	1.74	2.16	1.75	2.34	1.87	2.43	1.87	2.46	1.84	2.51	1.90	2.57	1.85	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi	-19.8	-20	1.75	1.75	1.75	1.75	1.75	
	-17.8	-18	1.86	1.86	1.86	1.86	1.86	
	-15.7	-16	1.97	1.97	1.97	1.97	1.97	
	-13.7	-14	2.08	2.08	2.08	2.08	2.08	
	-11.7	-12	2.20	2.20	2.20	2.20	2.20	
	-9.6	-10	2.31	2.31	2.31	2.31	2.31	
	-7.5	-8	2.45	2.45	2.45	2.45	2.45	
	-5.5	-6	2.59	2.59	2.59	2.59	2.59	
	-3.4	-4	2.68	2.68	2.67	2.65	2.62	
	-1.3	-2	2.77	2.76	2.75	2.70	2.65	
	0.8	0	2.92	2.88	2.84	2.74	2.63	
	3.9	3	3.17	3.06	2.94	2.78	2.61	
	7.0	6	3.46	3.24	3.01	2.80	2.59	
	10.1	9	3.44	3.22	3.00	2.78	2.57	
13.2	12	3.42	3.20	2.98	2.76	2.54		
16.9	15.5	3.39	3.17	2.95	2.74	2.52		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			2.12	1.67	2.54	1.90	2.75	1.94	2.92	1.97	3.27	2.12	3.40	2.06
	12			2.12	1.67	2.54	1.90	2.75	1.94	2.92	1.97	3.26	2.11	3.38	2.06
	14			2.12	1.67	2.54	1.90	2.75	1.94	2.91	1.96	3.25	2.11	3.37	2.05
	16			2.12	1.67	2.54	1.90	2.75	1.94	2.91	1.96	3.24	2.11	3.35	2.05
	18			2.12	1.67	2.54	1.90	2.75	1.94	2.91	1.96	3.22	2.10	3.34	2.04
	20			2.12	1.67	2.54	1.90	2.75	1.94	2.90	1.96	3.21	2.10	3.32	2.04
	22			2.12	1.67	2.54	1.90	2.75	1.94	2.89	1.95	3.17	2.08	3.28	2.02
	24			2.12	1.67	2.54	1.90	2.75	1.94	2.87	1.95	3.13	2.07	3.23	2.01
	26			2.12	1.67	2.52	1.89	2.72	1.93	2.84	1.93	3.08	2.05	3.18	1.99
	28	1.92	1.65	2.11	1.67	2.51	1.88	2.69	1.92	2.81	1.92	3.03	2.03	3.13	1.97
	30	1.92	1.65	2.11	1.67	2.49	1.87	2.67	1.91	2.77	1.91	2.99	2.01	3.09	1.96
	32	1.92	1.65	2.10	1.66	2.47	1.87	2.64	1.89	2.74	1.89	2.94	1.99	3.04	1.94
	34	1.92	1.65	2.10	1.66	2.46	1.86	2.61	1.88	2.70	1.88	2.88	1.97	2.98	1.92
	35	1.92	1.65	2.09	1.66	2.46	1.86	2.59	1.87	2.68	1.87	2.85	1.96	2.95	1.91
36	1.92	1.65	2.09	1.66	2.44	1.85	2.58	1.87	2.65	1.85	2.80	1.94	2.89	1.89	
38	1.92	1.65	2.08	1.65	2.40	1.83	2.55	1.86	2.60	1.84	2.69	1.90	2.77	1.85	
39	1.92	1.65	2.08	1.65	2.39	1.83	2.54	1.85	2.67	1.82	2.64	1.88	2.72	1.83	
41	1.92	1.65	2.08	1.65	2.31	1.80	2.43	1.81	2.46	1.78	2.53	1.84	2.59	1.78	
43	1.92	1.65	2.07	1.65	2.24	1.76	2.33	1.76	2.36	1.74	2.41	1.79	2.46	1.74	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	1.66	1.66	1.66	1.66	1.66	
	-17.8	-18	1.77	1.77	1.77	1.77	1.77	
	-15.7	-16	1.87	1.87	1.87	1.87	1.87	
	-13.7	-14	1.98	1.98	1.98	1.98	1.98	
	-11.7	-12	2.09	2.09	2.09	2.09	2.09	
	-9.6	-10	2.19	2.19	2.19	2.19	2.19	
	-7.5	-8	2.33	2.33	2.33	2.33	2.33	
	-5.5	-6	2.46	2.46	2.46	2.46	2.46	
	-3.4	-4	2.55	2.54	2.54	2.51	2.49	
	-1.3	-2	2.63	2.62	2.62	2.57	2.52	
	0.8	0	2.77	2.73	2.70	2.60	2.50	
	3.9	3	3.01	2.90	2.80	2.64	2.48	
	7.0	6	3.29	3.07	2.86	2.66	2.46	
	10.1	9	3.27	3.06	2.85	2.64	2.44	
13.2	12							

Model **FDUH36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi	10			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	12			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	14			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	16			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	18			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	20			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	22			2.95	2.27	3.53	2.58	3.82	2.65	4.06	2.68	4.55	2.89	4.72	2.81
	24			2.94	2.27	3.52	2.58	3.82	2.65	3.99	2.66	4.35	2.82	4.49	2.73
	26			2.94	2.27	3.51	2.57	3.78	2.63	3.95	2.64	4.28	2.79	4.43	2.71
	28	2.66	2.24	2.94	2.27	3.49	2.57	3.74	2.61	3.90	2.62	4.22	2.76	4.36	2.68
	30	2.66	2.24	2.93	2.27	3.47	2.55	3.71	2.60	3.86	2.60	4.15	2.74	4.29	2.66
	32	2.66	2.24	2.92	2.26	3.44	2.54	3.67	2.58	3.81	2.58	4.09	2.71	4.23	2.64
	34	2.66	2.24	2.91	2.26	3.43	2.54	3.62	2.56	3.75	2.55	4.00	2.68	4.14	2.60
	35	2.66	2.24	2.91	2.26	3.42	2.53	3.60	2.55	3.72	2.54	3.96	2.66	4.09	2.59
36	2.66	2.24	2.91	2.26	3.39	2.52	3.58	2.54	3.68	2.53	3.89	2.64	4.02	2.56	
38	2.66	2.24	2.90	2.25	3.34	2.50	3.55	2.53	3.61	2.50	3.74	2.58	3.96	2.51	
39	2.66	2.24	2.89	2.25	3.32	2.49	3.53	2.52	3.58	2.48	3.67	2.55	3.78	2.47	
41	2.66	2.24	2.88	2.24	3.22	2.44	3.38	2.46	3.43	2.42	3.51	2.48	3.60	2.41	
43	2.66	2.24	2.87	2.24	3.12	2.40	3.24	2.39	3.28	2.36	3.35	2.43	3.42	2.36	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi	-19.8	-20	2.32	2.32	2.32	2.32	2.32	
	-17.8	-18	2.47	2.47	2.47	2.47	2.47	
	-15.7	-16	2.62	2.62	2.62	2.62	2.62	
	-13.7	-14	2.77	2.77	2.77	2.77	2.77	
	-11.7	-12	2.92	2.92	2.92	2.92	2.92	
	-9.6	-10	3.07	3.07	3.07	3.07	3.07	
	-7.5	-8	3.25	3.25	3.25	3.25	3.25	
	-5.5	-6	3.44	3.44	3.44	3.44	3.44	
	-3.4	-4	3.56	3.56	3.55	3.52	3.48	
	-1.3	-2	3.68	3.67	3.66	3.59	3.52	
	0.8	0	3.88	3.83	3.77	3.64	3.50	
	3.9	3	4.21	4.06	3.91	3.69	3.47	
	7.0	6	4.60	4.30	4.00	3.72	3.44	
	10.1	9	4.57	4.28	3.99	3.70	3.41	
13.2	12	4.54	4.25	3.96	3.67	3.38		
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			2.80	2.06	3.35	2.34	3.63	2.41	3.86	2.45	4.32	2.64	4.49	2.56
	12			2.80	2.06	3.35	2.34	3.63	2.41	3.85	2.44	4.30	2.63	4.47	2.56
	14			2.80	2.06	3.35	2.34	3.63	2.41	3.85	2.44	4.29	2.62	4.45	2.54
	16			2.80	2.06	3.35	2.34	3.63	2.41	3.84	2.44	4.27	2.61	4.43	2.54
	18			2.80	2.06	3.35	2.34	3.63	2.41	3.84	2.44	4.26	2.61	4.41	2.53
	20			2.80	2.06	3.35	2.34	3.63	2.41	3.83	2.43	4.24	2.60	4.39	2.52
	22			2.80	2.06	3.35	2.34	3.63	2.41	3.81	2.43	4.19	2.58	4.33	2.50
	24			2.80	2.06	3.35	2.34	3.63	2.41	3.80	2.42	4.13	2.55	4.27	2.47
	26			2.79	2.05	3.33	2.33	3.59	2.39	3.75	2.40	4.07	2.53	4.20	2.44
	28	2.53	2.02	2.79	2.05	3.32	2.32	3.56	2.38	3.71	2.38	4.00	2.50	4.14	2.42
	30	2.53	2.02	2.78	2.05	3.29	2.31	3.52	2.36	3.66	2.36	3.94	2.47	4.08	2.40
	32	2.53	2.02	2.78	2.05	3.27	2.30	3.49	2.34	3.62	2.34	3.88	2.45	4.01	2.38
	34	2.53	2.02	2.77	2.04	3.25	2.29	3.44	2.32	3.56	2.31	3.80	2.42	3.93	2.35
	35	2.53	2.02	2.76	2.04	3.25	2.29	3.42	2.31	3.53	2.30	3.76	2.40	3.89	2.33
36	2.53	2.02	2.76	2.04	3.22	2.28	3.40	2.30	3.50	2.29	3.69	2.37	3.81	2.30	
38	2.53	2.02	2.75	2.04	3.18	2.26	3.37	2.28	3.43	2.26	3.56	2.32	3.66	2.25	
39	2.53	2.02	2.75	2.04	3.15	2.25	3.35	2.28	3.40	2.24	3.49	2.29	3.59	2.22	
41	2.53	2.02	2.74	2.03	3.06	2.20	3.21	2.22	3.25	2.18	3.33	2.23	3.42	2.16	
43	2.53	2.02	2.73	2.03	2.96	2.15	3.08	2.16	3.11	2.11	3.33	2.16	3.25	2.09	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi	-19.8	-20	2.22	2.22	2.22	2.22	2.22	
	-17.8	-18	2.36	2.36	2.36	2.36	2.36	
	-15.7	-16	2.51	2.51	2.51	2.51	2.51	
	-13.7	-14	2.65	2.65	2.65	2.65	2.65	
	-11.7	-12	2.79	2.79	2.79	2.79	2.79	
	-9.6	-10	2.94	2.94	2.94	2.94	2.94	
	-7.5	-8	3.12	3.12	3.12	3.12	3.12	
	-5.5	-6	3.29	3.29	3.29	3.29	3.29	
	-3.4	-4	3.41	3.40	3.40	3.37	3.33	
	-1.3	-2	3.52	3.51	3.50	3.44	3.37	
	0.8	0	3.72	3.66	3.61	3.48	3.35	
	3.9	3	4.03	3.89	3.74	3.53	3.32	
	7.0	6	4.40	4.12	3.83	3.56	3.29	
	10.1	9	4.38	4.10	3.82	3.54	3.27	
13.2	12	4.35	4.07	3.79	3.51	3.24		
16.9	15.5	4.31	4.04	3.76	3.48	3.20		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			2.69	1.95	3.21	2.22	3.48	2.29	3.70	2.33	4.14	2.51	4.30	2.43
	12			2.69	1.95	3.21	2.22	3.48	2.29	3.69	2.32	4.13	2.50	4.28	2.42
	14			2.69	1.95	3.21	2.22	3.48	2.29	3.69	2.32	4.11	2.49	4.27	2.42
	16			2.69	1.95	3.21	2.22	3.48	2.29	3.68	2.32	4.10	2.49	4.25	2.41
	18			2.69	1.95	3.21	2.22	3.48	2.29	3.68	2.32	4.08	2.48	4.23	2.40
	20			2.69	1.95	3.21	2.22	3.48	2.29	3.67	2.31	4.07	2.47	4.21	2.40
	22			2.68	1.95	3.21	2.22	3.48	2.29	3.66	2.31	4.02	2.45	4.15	2.37
	24			2.68	1.95	3.21	2.22	3.48	2.29	3.64	2.29	3.97	2.43	4.09	2.35
	26			2.68	1.95	3.20	2.21	3.44	2.27	3.60	2.28	3.90	2.40	4.03	2.32
	28	2.43	1.92	2.68	1.95	3.18	2.20	3.41	2.26	3.55	2.26	3.84	2.37	3.97	2.29
	30	2.43	1.92	2.67	1.94	3.16	2.19	3.38	2.24	3.51	2.24	3.78	2.35	3.91	2.27
	32	2.43	1.92	2.66	1.94	3.13	2.18	3.35	2.23	3.47	2.22	3.72	2.32	3.85	2.25
	34	2.43	1.92	2.65	1.93	3.12	2.17	3.30	2.20	3.42	2.20	3.64	2.29	3.77	2.22
	35	2.43	1.92	2.65	1.93	3.12	2.17	3.28	2.20	3.39	2.19	3.61	2.28	3.73	2.21
36	2.43	1.92	2.65	1.93	3.09	2.16	3.26	2.18	3.36	2.17	3.54	2.25	3.66	2.18	
38	2.43	1.92	2.64	1.93	3.05	2.14	3.23	2.17	3.29	2.14	3.41	2.20	3.51	2.13	
39	2.43	1.92	2.64	1.93	3.02	2.13	3.21	2.16	3.26	2.13	3.35	2.17	3.44	2.10	
41	2.43	1.92	2.63	1.92	2.93	2.09	3.08	2.10	3.12	2.07	3.20	2.11	3.28	2.04	
43	2.43	1.92	2.62	1.92	2.84	2.05	2.95	2.04	2.98	2.01	3.05	2.05	3.12	1.98	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	2.11	2.11	2.11	2.11	2.11	
	-17.8	-18	2.24	2.24	2.24	2.24	2.24	
	-15.7	-16	2.38	2.38	2.38	2.38	2.38	
	-13.7	-14	2.51	2.51	2.51	2.51	2.51	
	-11.7	-12	2.65	2.65	2.65	2.65	2.65	
	-9.6	-10	2.78	2.78	2.78	2.78	2.78	
	-7.5	-8	2.95	2.95	2.95	2.95	2.95	
	-5.5	-6	3.12	3.12	3.12	3.12	3.12	
	-3.4	-4	3.23	3.23	3.22	3.19	3.16	
	-1.3	-2	3.34	3.33	3.32	3.26	3.19	
	0.8	0	3.52	3.47	3.42	3.30	3.18	
	3.9	3	3.82	3.68	3.55	3.35	3.15	
	7.0	6	4.17	3.90	3.63	3.38	3.12	
	10.1	9	4.15	3.88	3.62	3.36	3.09	
13.2	12							

(10) Wall mounted type (FDK)

Model **FDK22KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi	10			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.38	2.78	2.67	2.89	2.70
	12			1.80	1.73	2.16	2.07	2.33	2.24	2.48	2.38	2.77	2.66	2.87	2.69
	14			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.76	2.65	2.86	2.69
	16			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.75	2.64	2.85	2.68
	18			1.80	1.73	2.16	2.07	2.33	2.24	2.47	2.37	2.74	2.63	2.84	2.68
	20			1.80	1.73	2.16	2.07	2.33	2.24	2.46	2.36	2.73	2.62	2.82	2.68
	22			1.80	1.73	2.15	2.06	2.33	2.24	2.45	2.35	2.69	2.58	2.78	2.66
	24			1.80	1.73	2.15	2.06	2.33	2.24	2.44	2.34	2.66	2.55	2.75	2.64
	26			1.80	1.73	2.14	2.05	2.31	2.22	2.41	2.31	2.62	2.52	2.70	2.59
	28	1.63	1.56	1.80	1.73	2.13	2.04	2.29	2.20	2.38	2.28	2.58	2.48	2.66	2.55
30	1.63	1.56	1.79	1.72	2.12	2.04	2.27	2.18	2.36	2.27	2.54	2.44	2.62	2.52	
32	1.63	1.56	1.79	1.72	2.10	2.02	2.24	2.15	2.33	2.24	2.50	2.40	2.58	2.48	
34	1.63	1.56	1.78	1.71	2.09	2.01	2.21	2.12	2.29	2.20	2.44	2.34	2.53	2.43	
35	1.63	1.56	1.78	1.71	2.09	2.01	2.20	2.11	2.27	2.18	2.42	2.32	2.50	2.40	
36	1.63	1.56	1.78	1.71	2.07	1.99	2.19	2.10	2.25	2.16	2.37	2.28	2.45	2.35	
38	1.63	1.56	1.77	1.70	2.04	1.96	2.17	2.08	2.21	2.12	2.29	2.20	2.36	2.27	
39	1.63	1.56	1.77	1.70	2.03	1.95	2.16	2.07	2.19	2.10	2.24	2.15	2.31	2.22	
41	1.63	1.56	1.76	1.69	1.97	1.89	2.07	1.99	2.09	2.01	2.14	2.05	2.20	2.11	
43	1.63	1.56	1.76	1.69	1.91	1.83	1.98	1.90	2.00	1.92	2.05	1.97	2.09	2.01	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi	-19.8	-20	1.45	1.45	1.45	1.45	1.45	
	-17.8	-18	1.54	1.54	1.54	1.54	1.54	
	-15.7	-16	1.64	1.64	1.64	1.64	1.64	
	-13.7	-14	1.73	1.73	1.73	1.73	1.73	
	-11.7	-12	1.82	1.82	1.82	1.82	1.82	
	-9.6	-10	1.92	1.92	1.92	1.92	1.92	
	-7.5	-8	2.03	2.03	2.03	2.03	2.03	
	-5.5	-6	2.15	2.15	2.15	2.15	2.15	
	-3.4	-4	2.23	2.22	2.22	2.20	2.18	
	-1.3	-2	2.30	2.29	2.29	2.24	2.20	
0.8	0	2.43	2.39	2.36	2.27	2.19		
3.9	3	2.63	2.54	2.44	2.31	2.17		
7.0	6	2.88	2.69	2.50	2.33	2.15		
10.1	9	2.86	2.67	2.49	2.31	2.13		
13.2	12	2.84	2.66	2.48	2.29	2.11		
16.9	15.5	2.82	2.63	2.45	2.27	2.09		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			1.76	1.69	2.11	2.02	2.28	2.05	2.42	2.06	2.72	2.24	2.82	2.19
	12			1.76	1.69	2.11	2.02	2.28	2.05	2.42	2.06	2.71	2.24	2.81	2.19
	14			1.76	1.69	2.11	2.02	2.28	2.05	2.42	2.06	2.70	2.23	2.80	2.19
	16			1.76	1.69	2.11	2.02	2.28	2.05	2.41	2.06	2.69	2.23	2.78	2.18
	18			1.76	1.69	2.11	2.02	2.28	2.05	2.41	2.06	2.68	2.23	2.77	2.18
	20			1.76	1.69	2.11	2.02	2.28	2.05	2.41	2.06	2.67	2.22	2.76	2.17
	22			1.76	1.69	2.11	2.02	2.28	2.05	2.40	2.05	2.63	2.21	2.72	2.16
	24			1.76	1.69	2.11	2.02	2.28	2.05	2.39	2.05	2.60	2.20	2.68	2.15
	26			1.76	1.69	2.10	2.01	2.26	2.04	2.36	2.04	2.56	2.19	2.64	2.14
	28	1.59	1.53	1.75	1.68	2.09	2.01	2.24	2.03	2.33	2.03	2.52	2.17	2.60	2.13
30	1.59	1.53	1.75	1.68	2.07	1.99	2.21	2.02	2.30	2.02	2.48	2.16	2.56	2.11	
32	1.59	1.53	1.75	1.68	2.05	1.97	2.19	2.01	2.28	2.01	2.44	2.15	2.52	2.10	
34	1.59	1.53	1.74	1.67	2.05	1.97	2.16	2.00	2.24	2.00	2.39	2.13	2.47	2.09	
35	1.59	1.53	1.74	1.67	2.04	1.96	2.15	2.00	2.22	1.99	2.36	2.12	2.45	2.08	
36	1.59	1.53	1.74	1.67	2.03	1.95	2.14	1.99	2.20	1.98	2.32	2.11	2.40	2.06	
38	1.59	1.53	1.73	1.66	2.00	1.92	2.12	1.99	2.16	1.97	2.24	2.08	2.30	2.03	
39	1.59	1.53	1.73	1.66	1.98	1.90	2.11	1.98	2.14	1.96	2.19	2.06	2.26	2.02	
41	1.59	1.53	1.72	1.65	1.92	1.84	2.02	1.94	2.05	1.93	2.10	2.02	2.15	1.99	
43	1.59	1.53	1.72	1.65	1.86	1.79	1.94	1.86	1.96	1.88	2.00	1.92	2.04	1.96	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi	-19.8	-20	1.38	1.38	1.38	1.38	1.38	
	-17.8	-18	1.47	1.47	1.47	1.47	1.47	
	-15.7	-16	1.56	1.56	1.56	1.56	1.56	
	-13.7	-14	1.65	1.65	1.65	1.65	1.65	
	-11.7	-12	1.74	1.74	1.74	1.74	1.74	
	-9.6	-10	1.82	1.82	1.82	1.82	1.82	
	-7.5	-8	1.94	1.94	1.94	1.94	1.94	
	-5.5	-6	2.05	2.05	2.05	2.05	2.05	
	-3.4	-4	2.12	2.12	2.11	2.09	2.07	
	-1.3	-2	2.19	2.18	2.18	2.14	2.09	
0.8	0	2.31	2.28	2.24	2.16	2.08		
3.9	3	2.50	2.42	2.33	2.20	2.06		
7.0	6	2.74	2.56	2.38	2.21	2.05		
10.1	9	2.72	2.55	2.37	2.20	2.03		
13.2	12	2.70	2.53	2.36	2.18	2.01		
16.9	15.5	2.68	2.51	2.34	2.16	1.99		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			1.66	1.59	1.99	1.81	2.15	1.84	2.29	1.86	2.56	2.01	2.66	1.97
	12			1.66	1.59	1.99	1.81	2.15	1.84	2.29	1.86	2.56	2.01	2.65	1.96
	14			1.66	1.59	1.99	1.81	2.15	1.84	2.28	1.85	2.55	2.01	2.64	1.96
	16			1.66	1.59	1.99	1.81	2.15	1.84	2.28	1.85	2.54	2.00	2.63	1.96
	18			1.66	1.59	1.99	1.81	2.15	1.84	2.28	1.85	2.53	2.00	2.62	1.96
	20			1.66	1.59	1.99	1.81	2.15	1.84	2.27	1.85	2.52	2.00	2.61	1.95
	22			1.66	1.59	1.99	1.81	2.15	1.84	2.26	1.85	2.49	1.99	2.57	1.94
	24			1.66	1.59	1.99	1.81	2.15	1.84	2.25	1.84	2.45	1.97	2.53	1.93
	26			1.66	1.59	1.98	1.81	2.13	1.83	2.23	1.84	2.42	1.96	2.50	1.92
	28	1.50	1.44	1.66	1.59	1.97	1.80	2.11	1.82	2.20	1.82	2.38	1.95	2.46	1.91
30	1.50	1.44	1.65	1.58	1.95	1.79	2.09	1.82	2.17	1.81	2.34	1.94	2.42	1.89	
32	1.50	1.44	1.65	1.58	1.94	1.79	2.07	1.81	2.15	1.81	2.30	1.92	2.38	1.88	
34	1.50	1.44	1.64	1.57	1.93	1.78	2.04	1.80	2.11	1.79	2.26	1.91	2.33	1.87	
35	1.50	1.44	1.64	1.57	1.93	1.78	2.03	1.79	2.10	1.79	2.23	1.90	2.31	1.86	
36	1.50	1.44	1.64	1.57	1.91	1.78	2.02	1.79	2.08	1.78	2.19	1.89	2.26	1.84	
38	1.50	1.44	1.63	1.56	1.88	1.77	2.00	1.78	2.04	1.77	2.11	1.86	2.17	1.82	
39	1.50	1.44	1.63	1.56	1.87	1.76	1.99	1.78	2.02	1.76	2.07	1.85	2.13	1.80	
41	1.50	1.44	1.63	1.56	1.81	1.74	1.91	1.75	1.93	1.72	1.98	1.81	2.03	1.77	
43	1.50	1.44	1.62	1.56	1.76	1.69	1.83	1.72	1.85	1.70	1.89	1.78	1.93	1.74	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me	-19.8	-20	1.29	1.29	1.29	1.29	1.29	
	-17.8	-18	1.38	1.38	1.38	1.38	1.38	
	-15.7	-16	1.46	1.46	1.46	1.46	1.46	
	-13.7	-14	1.54	1.54	1.54	1.54	1.54	
	-11.7	-12	1.63	1.63	1.63	1.63	1.63	
	-9.6	-10	1.71	1.71	1.71	1.71	1.71	
	-7.5	-8	1.81	1.81	1.81	1.81	1.81	
	-5.5	-6	1.92	1.92	1.92	1.92	1.92	
	-3.4	-4	1.98	1.98	1.98	1.96	1.94	
	-1.3	-2	2.05	2.05	2.04	2.00	1.96	
0.8	0	2.16	2.13	2.10	2.03	1.95		
3.9	3	2.35	2.26	2.18	2.06	1.93		
7.0	6	2.56	2.40	2.23	2.07	1.92		
10.1	9	2.55	2.38</					

Model **FDK28KXE6F**

Cooling mode

(kW)

Heating mode

(kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 11 (m ³ /min)	10			2.30	2.21	2.74	2.63	2.97	2.73	3.16	2.75	3.54	3.00	3.67	2.94
	12			2.30	2.21	2.74	2.63	2.97	2.73	3.15	2.75	3.52	2.99	3.66	2.93
	14			2.30	2.21	2.74	2.63	2.97	2.73	3.15	2.75	3.51	2.99	3.64	2.93
	16			2.30	2.21	2.74	2.63	2.97	2.73	3.14	2.75	3.50	2.98	3.63	2.92
	18			2.30	2.21	2.74	2.63	2.97	2.73	3.14	2.75	3.49	2.98	3.61	2.92
	20			2.30	2.21	2.74	2.63	2.97	2.73	3.14	2.75	3.47	2.97	3.59	2.91
	22			2.29	2.20	2.74	2.63	2.97	2.73	3.12	2.74	3.43	2.96	3.54	2.90
	24			2.29	2.20	2.74	2.63	2.97	2.73	3.11	2.74	3.39	2.95	3.50	2.88
	26			2.29	2.20	2.73	2.62	2.94	2.72	3.07	2.72	3.33	2.93	3.44	2.87
	28	2.07	1.99	2.28	2.19	2.72	2.61	2.91	2.71	3.03	2.71	3.28	2.91	3.39	2.85
	30	2.07	1.99	2.28	2.19	2.70	2.59	2.88	2.70	3.00	2.70	3.23	2.89	3.34	2.83
	32	2.07	1.99	2.27	2.18	2.67	2.56	2.86	2.69	2.96	2.68	3.18	2.87	3.29	2.81
	34	2.07	1.99	2.27	2.18	2.66	2.55	2.82	2.68	2.92	2.67	3.11	2.85	3.22	2.79
	35	2.07	1.99	2.26	2.17	2.66	2.55	2.80	2.67	2.89	2.66	3.08	2.84	3.18	2.78
	36	2.07	1.99	2.26	2.17	2.64	2.53	2.79	2.67	2.86	2.65	3.02	2.82	3.12	2.76
	38	2.07	1.99	2.25	2.16	2.60	2.50	2.76	2.65	2.81	2.63	2.91	2.79	3.00	2.73
39	2.07	1.99	2.25	2.16	2.58	2.48	2.74	2.63	2.78	2.62	2.86	2.75	2.94	2.71	
41	2.07	1.99	2.24	2.15	2.50	2.40	2.63	2.52	2.66	2.55	2.73	2.62	2.80	2.67	
43	2.07	1.99	2.24	2.15	2.43	2.33	2.52	2.42	2.55	2.45	2.60	2.50	2.66	2.55	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi 11 (m ³ /min)	-19.8	-20	1.86	1.86	1.86	1.86
-17.8	-18		1.98	1.98	1.98	1.98	1.98	
-15.7	-16		2.09	2.09	2.09	2.09	2.09	
-13.7	-14		2.21	2.21	2.21	2.21	2.21	
-11.7	-12		2.33	2.33	2.33	2.33	2.33	
-9.6	-10		2.45	2.45	2.45	2.45	2.45	
-7.5	-8		2.60	2.60	2.60	2.60	2.60	
-5.5	-6		2.75	2.75	2.75	2.75	2.75	
-3.4	-4		2.85	2.84	2.84	2.81	2.78	
-1.3	-2		2.94	2.94	2.93	2.87	2.82	
0.8	0		3.10	3.06	3.02	2.91	2.80	
3.9	3		3.37	3.25	3.13	2.95	2.78	
7.0	6		3.68	3.44	3.20	2.98	2.75	
10.1	9		3.66	3.42	3.19	2.96	2.73	
13.2	12		3.63	3.40	3.17	2.94	2.70	
16.9	15.5		3.60	3.37	3.14	2.91	2.68	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 8 (m ³ /min)	10			2.21	1.97	2.64	2.23	2.85	2.27	3.03	2.29	3.40	2.48	3.53	2.42
	12			2.21	1.97	2.64	2.23	2.85	2.27	3.03	2.29	3.39	2.48	3.51	2.42
	14			2.21	1.97	2.64	2.23	2.85	2.27	3.03	2.29	3.37	2.47	3.50	2.41
	16			2.21	1.97	2.64	2.23	2.85	2.27	3.02	2.29	3.36	2.47	3.48	2.41
	18			2.21	1.97	2.64	2.23	2.85	2.27	3.02	2.29	3.35	2.46	3.47	2.40
	20			2.21	1.97	2.64	2.23	2.85	2.27	3.01	2.28	3.34	2.46	3.45	2.40
	22			2.20	1.97	2.63	2.22	2.85	2.27	3.00	2.28	3.29	2.44	3.41	2.38
	24			2.20	1.97	2.63	2.22	2.85	2.27	2.99	2.28	3.25	2.43	3.36	2.37
	26			2.20	1.97	2.62	2.22	2.82	2.26	2.95	2.26	3.20	2.41	3.31	2.35
	28	1.99	1.91	2.20	1.97	2.61	2.21	2.80	2.25	2.91	2.25	3.15	2.39	3.25	2.33
	30	1.99	1.91	2.19	1.96	2.59	2.21	2.77	2.23	2.88	2.23	3.10	2.37	3.21	2.32
	32	1.99	1.91	2.18	1.96	2.57	2.20	2.74	2.22	2.85	2.22	3.05	2.36	3.16	2.30
	34	1.99	1.91	2.18	1.96	2.56	2.19	2.71	2.21	2.80	2.20	2.99	2.34	3.09	2.28
	35	1.99	1.91	2.17	1.96	2.56	2.19	2.69	2.20	2.78	2.19	2.96	2.33	3.06	2.27
	36	1.99	1.91	2.17	1.96	2.54	2.19	2.68	2.20	2.75	2.18	2.90	2.31	3.00	2.25
	38	1.99	1.91	2.17	1.96	2.50	2.17	2.65	2.19	2.70	2.16	2.80	2.27	2.98	2.21
39	1.99	1.91	2.16	1.95	2.48	2.16	2.64	2.18	2.67	2.15	2.74	2.25	2.92	2.19	
41	1.99	1.91	2.16	1.95	2.40	2.13	2.53	2.14	2.56	2.11	2.62	2.21	2.89	2.15	
43	1.99	1.91	2.15	1.95	2.33	2.10	2.42	2.10	2.45	2.07	2.50	2.17	2.86	2.11	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 8 (m ³ /min)	-19.8	-20	1.76	1.76	1.76	1.76
-17.8	-18		1.87	1.87	1.87	1.87	1.87	
-15.7	-16		1.98	1.98	1.98	1.98	1.98	
-13.7	-14		2.10	2.10	2.10	2.10	2.10	
-11.7	-12		2.21	2.21	2.21	2.21	2.21	
-9.6	-10		2.32	2.32	2.32	2.32	2.32	
-7.5	-8		2.46	2.46	2.46	2.46	2.46	
-5.5	-6		2.61	2.61	2.61	2.61	2.61	
-3.4	-4		2.70	2.69	2.69	2.66	2.64	
-1.3	-2		2.79	2.78	2.77	2.72	2.67	
0.8	0		2.94	2.90	2.86	2.75	2.65	
3.9	3		3.19	3.08	2.96	2.80	2.63	
7.0	6		3.48	3.26	3.03	2.82	2.61	
10.1	9		3.46	3.24	3.02	2.80	2.58	
13.2	12		3.44	3.22	3.00	2.78	2.56	
16.9	15.5		3.41	3.19	2.97	2.75	2.53	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 7 (m ³ /min)	10			2.12	1.81	2.54	2.05	2.75	2.10	2.92	2.12	3.27	2.29	3.40	2.24
	12			2.12	1.81	2.54	2.05	2.75	2.10	2.92	2.12	3.26	2.29	3.38	2.23
	14			2.12	1.81	2.54	2.05	2.75	2.10	2.91	2.11	3.25	2.28	3.37	2.22
	16			2.12	1.81	2.54	2.05	2.75	2.10	2.91	2.11	3.24	2.28	3.35	2.22
	18			2.12	1.81	2.54	2.05	2.75	2.10	2.91	2.11	3.22	2.27	3.34	2.21
	20			2.12	1.81	2.54	2.05	2.75	2.10	2.90	2.11	3.21	2.27	3.32	2.21
	22			2.12	1.81	2.54	2.05	2.75	2.10	2.89	2.11	3.17	2.25	3.28	2.19
	24			2.12	1.81	2.54	2.05	2.75	2.10	2.87	2.10	3.13	2.24	3.23	2.18
	26			2.12	1.81	2.52	2.05	2.72	2.08	2.84	2.09	3.08	2.22	3.18	2.16
	28	1.92	1.79	2.11	1.81	2.51	2.04	2.69	2.07	2.81	2.08	3.03	2.20	3.13	2.14
	30	1.92	1.79	2.11	1.81	2.49	2.03	2.67	2.06	2.77	2.06	2.99	2.19	3.09	2.13
	32	1.92	1.79	2.10	1.81	2.47	2.03	2.64	2.05	2.74	2.05	2.94	2.17	3.04	2.11
	34	1.92	1.79	2.10	1.81	2.46	2.02	2.61	2.04	2.70	2.03	2.88	2.15	2.98	2.10
	35	1.92	1.79	2.09	1.80	2.46	2.02	2.59	2.03	2.68	2.03	2.85	2.14	2.95	2.09
	36	1.92	1.79	2.09	1.80	2.44	2.01	2.58	2.03	2.65	2.01	2.80	2.12	2.89	2.07
	38	1.92	1.79	2.08	1.80	2.40	2.00	2.55	2.02	2.60	1.99	2.69	2.08	2.77	2.03
39	1.92	1.79	2.08	1.80	2.39	1.99	2.54	2.01	2.57	1.98	2.64	2.06	2.72	2.01	
41	1.92	1.79	2.08	1.80	2.31	1.96	2.43	1.97	2.46	1.94	2.53	2.02	2.59	1.97	
43	1.92	1.79	2.07	1.79	2.24	1.93	2.33	1.93	2.36	1.90	2.41	1.98	2.46	1.92	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 7 (m ³ /min)	-19.8	-20	1.66	1.66	1.66	1.66
-17.8	-18		1.77	1.77	1.77	1.77	1.77	
-15.7	-16		1.87	1.87	1.87	1.87	1.87	
-13.7	-14		1.98	1.98	1.98	1.98	1.98	
-11.7	-12		2.09	2.09	2.09	2.09	2.09	
-9.6	-10		2.19	2.19	2.19	2.19	2.19	
-7.5	-8		2.33	2.33	2.33	2.33	2.33	
-5.5	-6		2.46	2.46	2.46	2.46	2.46	
-3.4	-4		2.55	2.54	2.54	2.51	2.49	
-1.3	-2		2.63	2.62	2.62	2.57	2.52	
0.8	0		2.77	2.73	2.70	2.60	2.50	
3.9								

Model **FDK36KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 15 (m³/min)	10			2.95	2.83	3.53	3.39	3.82	3.62	4.06	3.64	4.55	3.97	4.72	3.89
	12			2.95	2.83	3.53	3.39	3.82	3.62	4.05	3.64	4.53	3.96	4.70	3.88
	14			2.95	2.83	3.53	3.39	3.82	3.62	4.05	3.64	4.51	3.95	4.68	3.87
	16			2.95	2.83	3.53	3.39	3.82	3.62	4.04	3.63	4.50	3.95	4.66	3.87
	18			2.95	2.83	3.53	3.39	3.82	3.62	4.04	3.63	4.48	3.94	4.64	3.86
	20			2.95	2.83	3.53	3.39	3.82	3.62	4.03	3.63	4.47	3.94	4.62	3.86
	22			2.95	2.83	3.53	3.39	3.82	3.62	4.01	3.62	4.41	3.92	4.56	3.84
	24			2.94	2.82	3.52	3.38	3.82	3.62	3.99	3.62	4.35	3.90	4.49	3.82
	26			2.94	2.82	3.51	3.37	3.78	3.60	3.95	3.60	4.28	3.88	4.43	3.80
	28	2.66	2.55	2.94	2.82	3.49	3.35	3.74	3.59	3.90	3.58	4.22	3.86	4.36	3.78
	30	2.66	2.55	2.93	2.81	3.47	3.33	3.71	3.56	3.86	3.57	4.15	3.84	4.29	3.76
	32	2.66	2.55	2.92	2.80	3.44	3.30	3.67	3.52	3.81	3.55	4.09	3.82	4.23	3.74
	34	2.66	2.55	2.91	2.79	3.43	3.29	3.62	3.48	3.75	3.53	4.00	3.79	4.14	3.71
	35	2.66	2.55	2.91	2.79	3.42	3.28	3.60	3.46	3.72	3.52	3.96	3.78	4.09	3.70
	36	2.66	2.55	2.91	2.79	3.39	3.25	3.58	3.44	3.68	3.51	3.89	3.73	4.02	3.68
38	2.66	2.55	2.90	2.78	3.34	3.21	3.55	3.41	3.61	3.47	3.74	3.59	3.86	3.62	
39	2.66	2.55	2.89	2.77	3.32	3.19	3.53	3.39	3.58	3.44	3.67	3.52	3.78	3.60	
41	2.66	2.55	2.88	2.76	3.22	3.09	3.38	3.24	3.43	3.29	3.51	3.37	3.60	3.46	
43	2.66	2.55	2.87	2.76	3.12	3.00	3.24	3.11	3.26	3.15	3.35	3.22	3.42	3.28	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
P-Hi 15 (m³/min)	-19.8	-20	2.32	2.32	2.32	2.32	2.32	2.32
	-17.8	-18	2.47	2.47	2.47	2.47	2.47	
	-15.7	-16	2.62	2.62	2.62	2.62	2.62	
	-13.7	-14	2.77	2.77	2.77	2.77	2.77	
	-11.7	-12	2.92	2.92	2.92	2.92	2.92	
	-9.6	-10	3.07	3.07	3.07	3.07	3.07	
	-7.5	-8	3.25	3.25	3.25	3.25	3.25	
	-5.5	-6	3.44	3.44	3.44	3.44	3.44	
	-3.4	-4	3.56	3.56	3.55	3.52	3.48	
	-1.3	-2	3.68	3.67	3.66	3.59	3.52	
	0.8	0	3.88	3.83	3.77	3.64	3.50	
	3.9	3	4.21	4.06	3.91	3.69	3.47	
	7.0	6	4.60	4.30	4.00	3.72	3.44	
	10.1	9	4.57	4.28	3.99	3.70	3.41	
	13.2	12	4.54	4.25	3.96	3.67	3.38	
16.9	15.5	4.51	4.22	3.93	3.64	3.35		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 10 (m³/min)	10			2.85	2.48	3.41	2.80	3.69	2.86	3.92	2.89	4.40	3.13	4.56	3.05
	12			2.85	2.48	3.41	2.80	3.69	2.86	3.92	2.89	4.38	3.12	4.54	3.04
	14			2.85	2.48	3.41	2.80	3.69	2.86	3.91	2.88	4.36	3.11	4.53	3.04
	16			2.85	2.48	3.41	2.80	3.69	2.86	3.91	2.88	4.35	3.11	4.51	3.03
	18			2.85	2.48	3.41	2.80	3.69	2.86	3.90	2.88	4.33	3.10	4.49	3.02
	20			2.85	2.48	3.41	2.80	3.69	2.86	3.90	2.88	4.32	3.10	4.47	3.02
	22			2.85	2.48	3.41	2.80	3.69	2.86	3.88	2.87	4.26	3.07	4.41	3.00
	24			2.84	2.47	3.41	2.80	3.69	2.86	3.86	2.86	4.21	3.05	4.34	2.97
	26			2.84	2.47	3.39	2.78	3.65	2.84	3.82	2.85	4.14	3.03	4.28	2.95
	28	2.58	2.45	2.84	2.47	3.38	2.78	3.62	2.83	3.77	2.83	4.07	3.00	4.21	2.93
	30	2.58	2.45	2.83	2.47	3.35	2.76	3.58	2.81	3.73	2.81	4.01	2.98	4.15	2.91
	32	2.58	2.45	2.83	2.47	3.32	2.75	3.55	2.80	3.68	2.79	3.95	2.96	4.08	2.89
	34	2.58	2.45	2.82	2.46	3.31	2.75	3.50	2.77	3.62	2.76	3.87	2.94	4.00	2.86
	35	2.58	2.45	2.81	2.46	3.31	2.75	3.48	2.76	3.60	2.75	3.83	2.92	3.96	2.85
	36	2.58	2.45	2.81	2.46	3.28	2.74	3.46	2.75	3.56	2.74	3.76	2.89	3.88	2.82
38	2.58	2.45	2.80	2.46	3.23	2.72	3.43	2.74	3.49	2.71	3.62	2.84	3.73	2.77	
39	2.58	2.45	2.80	2.46	3.21	2.71	3.41	2.73	3.46	2.70	3.55	2.82	3.65	2.75	
41	2.58	2.45	2.79	2.45	3.11	2.67	3.27	2.68	3.31	2.64	3.39	2.77	3.48	2.70	
43	2.58	2.45	2.78	2.45	3.01	2.63	3.13	2.63	3.17	2.59	3.24	2.71	3.31	2.64	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 10 (m³/min)	-19.8	-20	2.20	2.20	2.20	2.20	2.20	2.20
	-17.8	-18	2.35	2.35	2.35	2.35	2.35	
	-15.7	-16	2.49	2.49	2.49	2.49	2.49	
	-13.7	-14	2.63	2.63	2.63	2.63	2.63	
	-11.7	-12	2.77	2.77	2.77	2.77	2.77	
	-9.6	-10	2.91	2.91	2.91	2.91	2.91	
	-7.5	-8	3.09	3.09	3.09	3.09	3.09	
	-5.5	-6	3.27	3.27	3.27	3.27	3.27	
	-3.4	-4	3.38	3.38	3.37	3.34	3.31	
	-1.3	-2	3.50	3.49	3.48	3.41	3.34	
	0.8	0	3.69	3.63	3.58	3.45	3.33	
	3.9	3	4.00	3.86	3.71	3.51	3.30	
	7.0	6	4.37	4.09	3.80	3.53	3.27	
	10.1	9	4.34	4.06	3.79	3.51	3.24	
	13.2	12	4.31	4.04	3.76	3.49	3.21	
16.9	15.5	4.28	4.00	3.73	3.45	3.18		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m³/min)	10			2.79	2.33	3.33	2.64	3.60	2.70	3.83	2.73	4.30	2.95	4.46	2.88
	12			2.79	2.33	3.33	2.64	3.60	2.70	3.83	2.73	4.28	2.94	4.44	2.87
	14			2.79	2.33	3.33	2.64	3.60	2.70	3.82	2.72	4.26	2.94	4.42	2.86
	16			2.79	2.33	3.33	2.64	3.60	2.70	3.82	2.72	4.25	2.93	4.40	2.86
	18			2.79	2.33	3.33	2.64	3.60	2.70	3.81	2.72	4.23	2.93	4.38	2.85
	20			2.79	2.33	3.33	2.64	3.60	2.70	3.81	2.72	4.22	2.92	4.36	2.84
	22			2.78	2.33	3.33	2.64	3.60	2.70	3.79	2.71	4.16	2.90	4.30	2.82
	24			2.78	2.33	3.33	2.64	3.60	2.70	3.77	2.70	4.11	2.88	4.24	2.80
	26			2.78	2.33	3.31	2.63	3.57	2.68	3.73	2.69	4.05	2.86	4.18	2.78
	28	2.52	2.30	2.77	2.32	3.30	2.63	3.54	2.67	3.68	2.67	3.98	2.84	4.11	2.76
	30	2.52	2.30	2.77	2.32	3.27	2.62	3.50	2.66	3.64	2.65	3.92	2.81	4.05	2.74
	32	2.52	2.30	2.76	2.32	3.25	2.61	3.47	2.64	3.60	2.64	3.86	2.79	3.99	2.72
	34	2.52	2.30	2.75	2.31	3.24	2.61	3.42	2.62	3.54	2.62	3.78	2.76	3.91	2.69
	35	2.52	2.30	2.75	2.31	3.23	2.60	3.40	2.62	3.51	2.60	3.74	2.75	3.87	2.68
	36	2.52	2.30	2.74	2.31	3.21	2.59	3.38	2.61	3.48	2.59	3.67	2.72	3.79	2.65
38	2.52	2.30	2.74	2.31	3.16	2.57	3.35	2.60	3.41	2.57	3.54	2.68	3.64	2.60	
39	2.52	2.30	2.73	2.31	3.13	2.56	3.33	2.59	3.38	2.55	3.47	2.65	3.57	2.58	
41	2.52	2.30	2.72	2.30	3.04	2.52	3.20	2.53	3.24	2.50	3.31	2.59	3.40	2.52	
43	2.52	2.30	2.71	2.30	2.94	2.48	3.06	2.48	3.09	2.44	3.16	2.54	3.23	2.47	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 9 (m³/min)	-19.8	-20	2.13	2.13	2.13	2.13	2.13	2.13
	-17.8	-18	2.27	2.27	2.27	2.27	2.27	
	-15.7	-16	2.41	2.41	2.41	2.41	2.41	
	-13.7	-14	2.55	2.55	2.55	2.55	2.55	
	-11.7	-12	2.68	2.68	2.68	2.68	2.68	
	-9.6	-10	2.82	2.82	2.82	2.82	2.82	
	-7.5	-8	2.99	2.99	2.99	2.99	2.99	
	-5.5	-6	3.16	3.16	3.16	3.16	3.16	
	-3.4	-4	3.28	3.27	3.27	3.23	3.20	
	-1.3	-2	3.39	3.38	3.37	3.30	3.24	
	0.8	0	3.57	3.52	3.47	3.34	3.22	
	3.9	3	3.87	3.74	3.60	3.39	3.19	
	7.0	6	4.23	3.96	3.68	3.42	3.16</	

Model **FDK45KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi	10			3.69	3.53	4.41	3.98	4.77	4.05	5.07	4.09	5.68	4.43	5.90	4.33
	12			3.69	3.53	4.41	3.98	4.77	4.05	5.07	4.09	5.66	4.42	5.88	4.33
	14			3.69	3.53	4.41	3.98	4.77	4.05	5.06	4.08	5.64	4.41	5.85	4.32
	16			3.69	3.53	4.41	3.98	4.77	4.05	5.05	4.08	5.62	4.41	5.83	4.31
	18			3.69	3.53	4.41	3.98	4.77	4.05	5.05	4.08	5.60	4.40	5.80	4.30
	20			3.69	3.53	4.41	3.98	4.77	4.05	5.04	4.07	5.58	4.39	5.78	4.30
	22			3.68	3.52	4.41	3.98	4.77	4.05	5.02	4.07	5.51	4.37	5.70	4.27
	24			3.68	3.52	4.41	3.98	4.77	4.05	4.99	4.06	5.44	4.35	5.62	4.25
	26			3.68	3.52	4.39	3.97	4.73	4.04	4.93	4.03	5.35	4.32	5.53	4.22
	28	3.33	3.20	3.67	3.52	4.37	3.96	4.68	4.02	4.88	4.02	5.27	4.29	5.44	4.19
	30	3.33	3.20	3.66	3.51	4.33	3.95	4.64	4.00	4.82	3.99	5.19	4.26	5.36	4.16
	32	3.33	3.20	3.65	3.50	4.30	3.93	4.59	3.98	4.76	3.97	5.11	4.23	5.28	4.11
	34	3.33	3.20	3.64	3.49	4.28	3.93	4.53	3.96	4.69	3.95	5.00	4.20	5.17	4.08
	35	3.33	3.20	3.64	3.49	4.28	3.93	4.50	3.95	4.65	3.93	4.95	4.18	5.12	4.06
36	3.33	3.20	3.63	3.48	4.24	3.91	4.48	3.94	4.60	3.91	4.86	4.15	5.02	4.03	
38	3.33	3.20	3.62	3.48	4.18	3.89	4.43	3.91	4.52	3.88	4.68	4.06	4.82	3.97	
39	3.33	3.20	3.62	3.48	4.15	3.88	4.41	3.91	4.47	3.87	4.59	4.03	4.72	3.94	
41	3.33	3.20	3.61	3.47	4.02	3.82	4.23	3.84	4.28	3.79	4.39	3.97	4.50	3.87	
43	3.33	3.20	3.59	3.45	3.90	3.74	4.05	3.77	4.09	3.72	4.18	3.90	4.28	3.81	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		P-Hi	-19.8	-20	2.90	2.90	2.90	2.90
-17.8	-18		3.09	3.09	3.09	3.09	3.09	
-15.7	-16		3.27	3.27	3.27	3.27	3.27	
-13.7	-14		3.46	3.46	3.46	3.46	3.46	
-11.7	-12		3.65	3.65	3.65	3.65	3.65	
-9.6	-10		3.83	3.83	3.83	3.83	3.83	
-7.5	-8		4.07	4.07	4.07	4.07	4.07	
-5.5	-6		4.30	4.30	4.30	4.30	4.30	
-3.4	-4		4.45	4.44	4.44	4.39	4.35	
-1.3	-2		4.60	4.59	4.58	4.49	4.40	
0.8	0		4.85	4.78	4.71	4.54	4.38	
3.9	3		5.26	5.08	4.89	4.61	4.34	
7.0	6		5.75	5.38	5.00	4.65	4.30	
10.1	9		5.71	5.35	4.98	4.62	4.26	
13.2	12	5.68	5.31	4.95	4.59	4.23		
16.9	15.5	5.63	5.27	4.91	4.54	4.18		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi	10			3.54	2.95	4.23	3.33	4.58	3.40	4.87	3.44	5.46	3.72	5.67	3.62
	12			3.54	2.95	4.23	3.33	4.58	3.40	4.87	3.44	5.44	3.71	5.64	3.61
	14			3.54	2.95	4.23	3.33	4.58	3.40	4.86	3.44	5.42	3.70	5.62	3.61
	16			3.54	2.95	4.23	3.33	4.58	3.40	4.85	3.43	5.40	3.69	5.59	3.60
	18			3.54	2.95	4.23	3.33	4.58	3.40	4.85	3.43	5.38	3.69	5.57	3.59
	20			3.54	2.95	4.23	3.33	4.58	3.40	4.84	3.43	5.36	3.68	5.54	3.58
	22			3.54	2.95	4.23	3.33	4.58	3.40	4.82	3.42	5.29	3.65	5.47	3.56
	24			3.53	2.94	4.23	3.33	4.58	3.40	4.79	3.41	5.22	3.63	5.39	3.53
	26			3.53	2.94	4.21	3.32	4.54	3.38	4.74	3.39	5.14	3.60	5.31	3.50
	28	3.20	2.90	3.53	2.94	4.19	3.31	4.49	3.36	4.68	3.37	5.06	3.57	5.23	3.47
	30	3.20	2.90	3.52	2.94	4.16	3.30	4.45	3.35	4.63	3.35	4.98	3.54	5.15	3.45
	32	3.20	2.90	3.51	2.93	4.13	3.29	4.41	3.33	4.57	3.32	4.90	3.51	5.07	3.42
	34	3.20	2.90	3.50	2.92	4.11	3.28	4.35	3.31	4.50	3.29	4.80	3.47	4.97	3.39
	35	3.20	2.90	3.49	2.92	4.10	3.27	4.32	3.29	4.46	3.28	4.75	3.46	4.91	3.37
36	3.20	2.90	3.49	2.92	4.07	3.26	4.30	3.29	4.42	3.26	4.66	3.42	4.82	3.34	
38	3.20	2.90	3.48	2.92	4.01	3.24	4.26	3.27	4.33	3.23	4.49	3.36	4.63	3.28	
39	3.20	2.90	3.47	2.91	3.98	3.22	4.23	3.26	4.29	3.21	4.41	3.33	4.53	3.24	
41	3.20	2.90	3.46	2.91	3.86	3.17	4.06	3.19	4.11	3.14	4.21	3.26	4.32	3.18	
43	3.20	2.90	3.45	2.90	3.74	3.12	3.89	3.12	3.93	3.08	4.02	3.20	4.11	3.11	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi	-19.8	-20	2.66	2.66	2.66	2.66
-17.8	-18		2.83	2.83	2.83	2.83	2.83	
-15.7	-16		3.00	3.00	3.00	3.00	3.00	
-13.7	-14		3.18	3.18	3.18	3.18	3.18	
-11.7	-12		3.35	3.35	3.35	3.35	3.35	
-9.6	-10		3.52	3.52	3.52	3.52	3.52	
-7.5	-8		3.73	3.73	3.73	3.73	3.73	
-5.5	-6		3.95	3.95	3.95	3.95	3.95	
-3.4	-4		4.09	4.08	4.07	4.03	3.99	
-1.3	-2		4.22	4.21	4.20	4.12	4.04	
0.8	0		4.45	4.39	4.33	4.17	4.02	
3.9	3		4.83	4.66	4.49	4.23	3.98	
7.0	6		5.28	4.93	4.59	4.27	3.95	
10.1	9		5.24	4.91	4.57	4.24	3.91	
13.2	12	5.21	4.88	4.54	4.21	3.88		
16.9	15.5	5.17	4.84	4.50	4.17	3.84		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me	10			3.25	2.57	3.88	2.90	4.20	2.97	4.47	3.02	5.00	3.25	5.19	3.16
	12			3.25	2.57	3.88	2.90	4.20	2.97	4.46	3.01	4.98	3.24	5.17	3.16
	14			3.25	2.57	3.88	2.90	4.20	2.97	4.45	3.01	4.97	3.24	5.15	3.15
	16			3.25	2.57	3.88	2.90	4.20	2.97	4.45	3.01	4.95	3.23	5.13	3.14
	18			3.25	2.57	3.88	2.90	4.20	2.97	4.44	3.01	4.93	3.22	5.10	3.13
	20			3.25	2.57	3.88	2.90	4.20	2.97	4.44	3.01	4.91	3.22	5.08	3.12
	22			3.24	2.56	3.88	2.90	4.20	2.97	4.42	2.99	4.85	3.19	5.01	3.10
	24			3.24	2.56	3.88	2.90	4.20	2.97	4.39	2.98	4.79	3.17	4.94	3.08
	26			3.23	2.56	3.86	2.89	4.16	2.95	4.34	2.96	4.71	3.14	4.87	3.05
	28	2.93	2.52	3.23	2.56	3.84	2.88	4.12	2.94	4.29	2.94	4.64	3.11	4.79	3.02
	30	2.93	2.52	3.22	2.55	3.81	2.87	4.08	2.92	4.24	2.92	4.57	3.08	4.72	3.00
	32	2.93	2.52	3.22	2.55	3.78	2.86	4.04	2.90	4.19	2.90	4.50	3.05	4.65	2.97
	34	2.93	2.52	3.20	2.55	3.77	2.85	3.99	2.88	4.12	2.87	4.40	3.02	4.55	2.93
	35	2.93	2.52	3.20	2.55	3.76	2.85	3.96	2.87	4.09	2.86	4.35	3.00	4.50	2.92
36	2.93	2.52	3.20	2.55	3.73	2.84	3.94	2.86	4.05	2.84	4.27	2.97	4.42	2.89	
38	2.93	2.52	3.19	2.54	3.68	2.82	3.90	2.85	3.97	2.81	4.12	2.91	4.24	2.83	
39	2.93	2.52	3.18	2.54	3.65	2.80	3.88	2.84	3.93	2.79	4.04	2.88	4.15	2.80	
41	2.93	2.52	3.17	2.53	3.54	2.76	3.72	2.77	3.77	2.73	3.86	2.82	3.96	2.74	
43	2.93	2.52	3.16	2.53	3.43	2.71	3.56	2.71	3.60	2.66	3.68	2.75	3.76	2.67	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me	-19.8	-20	2.44	2.44	2.44	2.44
-17.8	-18		2.59	2.59	2.59	2.59	2.59	
-15.7	-16		2.75	2.75	2.75	2.75	2.75	
-13.7	-14		2.91	2.91	2.91	2.91	2.91	
-11.7	-12		3.06	3.06	3.06	3.06	3.06	
-9.6	-10		3.22	3.22	3.22	3.22	3.22	
-7.5	-8		3.42	3.42	3.42	3.42	3.42	
-5.5	-6		3.61	3.61	3.61	3.61	3.61	
-3.4	-4		3.74	3.73	3.73	3.69	3.65	
-1.3	-2		3.86	3.85	3.84	3.77	3.70	
0.8	0		4.07	4.02	3.96	3.82	3.68	
3.9	3		4.42	4.26	4.11	3.87	3.64	
7.0	6		4.83	4.52	4.20	3.91	3.61	
10.1	9		4.80	4.49	4.18	3.88	3.58	
13.2	12							

Model **FDK56KXE6F**

Cooling mode

(kW)

Heating mode

(kW)

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature													
			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
P-Hi 16 (m³/min)	10		4.59	4.02	5.49	4.54	5.94	4.63	6.32	4.68	7.07	5.06	7.35	4.94		
	12		4.59	4.02	5.49	4.54	5.94	4.63	6.31	4.68	7.05	5.05	7.31	4.93		
	14		4.59	4.02	5.49	4.54	5.94	4.63	6.30	4.67	7.02	5.04	7.28	4.92		
	16		4.59	4.02	5.49	4.54	5.94	4.63	6.29	4.67	7.00	5.03	7.25	4.91		
	18		4.59	4.02	5.49	4.54	5.94	4.63	6.28	4.67	6.97	5.02	7.22	4.90		
	20		4.59	4.02	5.49	4.54	5.94	4.63	6.27	4.66	6.95	5.01	7.19	4.89		
	22		4.58	4.01	5.49	4.54	5.94	4.63	6.24	4.65	6.86	4.98	7.09	4.86		
	24		4.58	4.01	5.48	4.53	5.94	4.63	6.21	4.64	6.77	4.95	6.99	4.82		
	26		4.57	4.01	5.46	4.52	5.88	4.61	6.14	4.61	6.66	4.91	6.88	4.79		
	28	4.14	3.97	4.57	4.01	5.43	4.51	5.82	4.58	6.07	4.59	6.56	4.88	6.78	4.75	
	30	4.14	3.97	4.56	4.01	5.39	4.50	5.77	4.56	6.00	4.56	6.46	4.84	6.67	4.72	
	32	4.14	3.97	4.55	4.00	5.35	4.48	5.71	4.54	5.93	4.53	6.36	4.81	6.57	4.69	
	34	4.14	3.97	4.53	3.99	5.33	4.47	5.64	4.51	5.83	4.50	6.22	4.76	6.44	4.64	
	35	4.14	3.97	4.52	3.99	5.32	4.47	5.60	4.50	5.79	4.48	6.16	4.73	6.37	4.62	
36	4.14	3.97	4.52	3.99	5.28	4.45	5.57	4.49	5.73	4.46	6.05	4.70	6.25	4.59		
38	4.14	3.97	4.51	3.98	5.20	4.42	5.52	4.46	5.62	4.41	5.82	4.62	6.00	4.51		
39	4.14	3.97	4.50	3.98	5.16	4.40	5.49	4.45	5.56	4.39	5.71	4.57	5.87	4.46		
41	4.14	3.97	4.49	3.98	5.00	4.34	5.26	4.36	5.33	4.30	5.46	4.49	5.60	4.37		
43	4.14	3.97	4.47	3.97	4.85	4.28	5.04	4.27	5.10	4.22	5.21	4.40	5.32	4.29		

Air flow	Outdoor air temperature		Indoor air temperature							
			°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
P-Hi 16 (m³/min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42
	-3.4	-4	5.61	5.60	5.59	5.54	5.54	5.48	5.48	5.48
	-1.3	-2	5.80	5.78	5.76	5.65	5.65	5.54	5.54	5.54
	0.8	0	6.11	6.02	5.94	5.73	5.73	5.51	5.51	5.51
	3.9	3	6.63	6.39	6.16	5.81	5.81	5.47	5.47	5.47
	7.0	6	7.25	6.77	6.30	5.86	5.86	5.42	5.42	5.42
	10.1	9	7.20	6.74	6.28	5.82	5.82	5.37	5.37	5.37
13.2	12	7.15	6.69	6.24	5.78	5.78	5.32	5.32	5.32	
16.9	15.5	7.10	6.64	6.18	5.73	5.73	5.27	5.27	5.27	

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature													
			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
Hi 14 (m³/min)	10		4.49	3.72	5.37	4.21	5.81	4.30	6.18	4.35	6.92	4.70	7.19	4.59		
	12		4.49	3.72	5.37	4.21	5.81	4.30	6.17	4.35	6.90	4.69	7.16	4.58		
	14		4.49	3.72	5.37	4.21	5.81	4.30	6.16	4.34	6.87	4.68	7.13	4.57		
	16		4.49	3.72	5.37	4.21	5.81	4.30	6.16	4.34	6.85	4.68	7.09	4.55		
	18		4.49	3.72	5.37	4.21	5.81	4.30	6.15	4.34	6.82	4.67	7.06	4.54		
	20		4.49	3.72	5.37	4.21	5.81	4.30	6.14	4.34	6.80	4.66	7.03	4.53		
	22		4.49	3.72	5.37	4.21	5.81	4.30	6.11	4.32	6.71	4.62	6.94	4.50		
	24		4.48	3.72	5.37	4.21	5.81	4.30	6.08	4.31	6.63	4.59	6.84	4.47		
	26		4.48	3.72	5.34	4.20	5.75	4.27	6.01	4.28	6.52	4.55	6.74	4.43		
	28	4.06	3.67	4.47	3.71	5.32	4.19	5.70	4.25	5.94	4.26	6.42	4.52	6.63	4.39	
	30	4.06	3.67	4.46	3.71	5.27	4.17	5.64	4.23	5.87	4.23	6.32	4.47	6.53	4.36	
	32	4.06	3.67	4.45	3.70	5.23	4.15	5.59	4.21	5.80	4.20	6.22	4.44	6.43	4.32	
	34	4.06	3.67	4.44	3.70	5.22	4.15	5.52	4.18	5.71	4.17	6.09	4.39	6.30	4.28	
	35	4.06	3.67	4.43	3.69	5.21	4.14	5.48	4.17	5.66	4.15	6.02	4.37	6.23	4.26	
36	4.06	3.67	4.42	3.69	5.17	4.13	5.45	4.15	5.61	4.13	5.92	4.33	6.11	4.22		
38	4.06	3.67	4.41	3.69	5.09	4.09	5.40	4.13	5.50	4.09	5.70	4.25	5.87	4.14		
39	4.06	3.67	4.41	3.69	5.05	4.08	5.37	4.12	5.44	4.06	5.59	4.21	5.75	4.10		
41	4.06	3.67	4.39	3.68	4.90	4.01	5.15	4.03	5.22	3.98	5.34	4.13	5.48	4.02		
43	4.06	3.67	4.37	3.67	4.75	3.95	4.93	3.95	4.99	3.89	5.09	4.04	5.21	3.92		

Air flow	Outdoor air temperature		Indoor air temperature							
			°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB
Hi 14 (m³/min)	-19.8	-20	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
	-17.8	-18	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
	-15.7	-16	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95
	-13.7	-14	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
	-11.7	-12	4.41	4.41	4.41	4.41	4.41	4.41	4.41	4.41
	-9.6	-10	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63
	-7.5	-8	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
	-5.5	-6	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19
	-3.4	-4	5.38	5.37	5.36	5.31	5.31	5.25	5.25	5.25
	-1.3	-2	5.56	5.54	5.53	5.42	5.42	5.32	5.32	5.32
	0.8	0	5.86	5.78	5.69	5.49	5.49	5.29	5.29	5.29
	3.9	3	6.36	6.13	5.90	5.57	5.57	5.24	5.24	5.24
	7.0	6	6.95	6.49	6.04	5.62	5.62	5.19	5.19	5.19
	10.1	9	6.90	6.46	6.02	5.58	5.58	5.15	5.15	5.15
13.2	12	6.86	6.42	5.98	5.54	5.54	5.10	5.10	5.10	
16.9	15.5	6.80	6.36	5.93	5.49	5.49	5.05	5.05	5.05	

Air flow	Outdoor air temperature (°CDB)		Indoor air temperature													
			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
Me 12 (m³/min)	10		4.21	3.35	5.03	3.79	5.44	3.88	5.79	3.93	6.48	4.25	6.73	4.14		
	12		4.21	3.35	5.03	3.79	5.44	3.88	5.78	3.93	6.46	4.24	6.70	4.12		
	14		4.21	3.35	5.03	3.79	5.44	3.88	5.77	3.93	6.43	4.23	6.67	4.11		
	16		4.21	3.35	5.03	3.79	5.44	3.88	5.76	3.92	6.41	4.22	6.64	4.10		
	18		4.21	3.35	5.03	3.79	5.44	3.88	5.75	3.92	6.39	4.21	6.61	4.09		
	20		4.21	3.35	5.03	3.79	5.44	3.88	5.75	3.92	6.36	4.20	6.58	4.08		
	22		4.20	3.35	5.02	3.79	5.44	3.88	5.72	3.91	6.28	4.16	6.49	4.04		
	24		4.19	3.35	5.02	3.79	5.44	3.88	5.69	3.89	6.20	4.13	6.40	4.01		
	26		4.19	3.35	5.00	3.78	5.39	3.86	5.63	3.87	6.10	4.09	6.31	3.98		
	28	3.80	3.30	4.19	3.35	4.98	3.77	5.34	3.84	5.56	3.84	6.01	4.06	6.21	3.95	
	30	3.80	3.30	4.18	3.34	4.94	3.75	5.28	3.81	5.49	3.81	5.92	4.03	6.11	3.91	
	32	3.80	3.30	4.17	3.34	4.90	3.73	5.23	3.79	5.43	3.79	5.82	3.99	6.02	3.88	
	34	3.80	3.30	4.15	3.33	4.88	3.73	5.16	3.76	5.34	3.75	5.70	3.94	5.90	3.84	
	35	3.80	3.30	4.15	3.33	4.87	3.72	5.13	3.75	5.30	3.73	5.64	3.92	5.83	3.82	
36	3.80	3.30	4.14	3.32	4.84	3.71	5.10	3.73	5.25	3.71	5.54	3.89	5.72	3.78		
38	3.80	3.30	4.13	3.32	4.76	3.67	5.05	3.71	5.15	3.67	5.34	3.81	5.50	3.70		
39	3.80	3.30	4.12	3.31	4.73	3.66	5.03	3.71	5.10	3.65	5.23	3.77	5.38	3.66		
41	3.80	3.30	4.11	3.31	4.58	3.60	4.82	3.62	4.88	3.57	5.00	3.69	5.13	3.58		
43	3.80	3.30	4.10	3.31	4.44	3.54	4.62	3.54	4.67	3.48	4.77	3.60	4.88	3.50		

Air flow	Outdoor air temperature		Indoor air temperature							
			°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB		

Model		FDK71KXE6F														Cooling mode														(kW)														Heating mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																												Air flow	Outdoor air temperature	Indoor air temperature																																							
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB		33 °CDB		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB																																										
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																	TC	SHC																																						
P-Hi	24 (m³/min)	10			5.82	5.53	6.96	6.26	7.53	6.37	8.01	6.42	8.97	6.96	9.31	6.80	P-Hi	24 (m³/min)	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	-19.8	-20	4.64	4.64	4.64	4.64	4.64	-19.8	-20	4.64	4.64	4.64	4.64	4.64																																
		12			5.82	5.53	6.96	6.26	7.53	6.37	8.00	6.42	8.94	6.95	9.27	6.79			°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	-17.8	-18	4.94	4.94	4.94	4.94	4.94	-17.8	-18	4.94	4.94	4.94	4.94	4.94																																
		Lo	15 (m³/min)	10			4.88	4.04	5.83	4.56	6.31	4.66	6.71	4.72	7.52	5.10			7.80	4.97	Lo	15 (m³/min)	°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	-19.8	-20	3.69	3.69	3.69	3.69	3.69	-19.8	-20	3.69	3.69	3.69	3.69	3.69																												

Notes(1) This data shows average statuses out of those possible to occur in the system control.
 (Depending on controls, there may be ranges where the operation is not conducted continuously.)
 (2) Symbols are as follows
 TC :Total cooling capacity(kW)
 SHC :Sensible heat capacity(kW)

PHA001Z063

(11) Ceiling suspended type (FDE)

Model		Cooling mode												(kW)			
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
P-Hi 13 (m ³ /min)	10			2.95	2.46	3.53	2.77	3.82	2.84	4.06	2.88	4.55	3.10	4.72	3.04		
	12			2.95	2.46	3.53	2.77	3.82	2.84	4.05	2.87	4.53	3.10	4.70	3.03		
	14			2.95	2.46	3.53	2.77	3.82	2.84	4.05	2.87	4.51	3.09	4.68	3.02		
	16			2.95	2.46	3.53	2.77	3.82	2.84	4.04	2.87	4.50	3.09	4.66	3.01		
	18			2.95	2.46	3.53	2.77	3.82	2.84	4.04	2.87	4.48	3.08	4.64	3.01		
	20			2.95	2.46	3.53	2.77	3.82	2.84	4.03	2.87	4.47	3.08	4.62	3.00		
	22			2.95	2.46	3.53	2.77	3.82	2.84	4.01	2.86	4.41	3.06	4.56	2.98		
	24			2.94	2.45	3.52	2.76	3.82	2.84	3.99	2.85	4.35	3.03	4.49	2.96		
	26			2.94	2.45	3.51	2.76	3.78	2.82	3.95	2.83	4.28	3.01	4.43	2.93		
	28	2.66	2.42	2.94	2.45	3.49	2.75	3.74	2.81	3.90	2.82	4.22	2.98	4.36	2.91		
	30	2.66	2.42	2.93	2.45	3.47	2.75	3.71	2.80	3.86	2.80	4.15	2.96	4.29	2.88		
	32	2.66	2.42	2.92	2.45	3.44	2.74	3.67	2.78	3.81	2.78	4.09	2.94	4.23	2.86		
	34	2.66	2.42	2.91	2.44	3.43	2.73	3.62	2.75	3.75	2.76	4.00	2.90	4.14	2.82		
	35	2.66	2.42	2.91	2.44	3.42	2.73	3.60	2.74	3.72	2.73	3.96	2.89	4.09	2.80		
	36	2.66	2.42	2.91	2.44	3.39	2.72	3.58	2.73	3.68	2.71	3.89	2.85	4.02	2.79		
	38	2.66	2.42	2.90	2.44	3.34	2.70	3.55	2.72	3.61	2.69	3.74	2.81	3.86	2.74		
39	2.66	2.42	2.89	2.43	3.32	2.69	3.53	2.72	3.58	2.68	3.67	2.78	3.78	2.71			
41	2.66	2.42	2.88	2.43	3.22	2.65	3.38	2.66	3.43	2.63	3.51	2.73	3.60	2.65			
43	2.66	2.42	2.87	2.43	3.12	2.61	3.24	2.61	3.28	2.57	3.35	2.67	3.42	2.60			

Model		Heating mode												(kW)			
Air flow	Outdoor air temperature	Indoor air temperature															
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB			
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC		
P-Hi 13 (m ³ /min)	-19.8	-20	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32		
	-17.8	-18	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47		
	-15.7	-16	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62		
	-13.7	-14	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77		
	-11.7	-12	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92		
	-9.6	-10	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07		
	-7.5	-8	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25		
	-5.5	-6	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44		
	-3.4	-4	3.56	3.56	3.55	3.52	3.48	3.45	3.42	3.39	3.36	3.33	3.30	3.27	3.24		
	-1.3	-2	3.68	3.67	3.66	3.59	3.52	3.45	3.38	3.31	3.24	3.17	3.10	3.03	2.96		
	0.8	0	3.88	3.83	3.77	3.64	3.50	3.37	3.23	3.09	2.95	2.81	2.67	2.53	2.39		
	3.9	3	4.21	4.06	3.91	3.69	3.47	3.25	3.03	2.81	2.59	2.37	2.15	1.93	1.71		
	7.0	6	4.60	4.30	4.00	3.72	3.44	3.16	2.88	2.60	2.32	2.04	1.76	1.48	1.20		
	10.1	9	4.57	4.28	3.99	3.70	3.41	3.12	2.83	2.54	2.25	1.96	1.67	1.38	1.09		
	13.2	12	4.54	4.25	3.96	3.67	3.38	3.09	2.80	2.51	2.22	1.93	1.64	1.35	1.06		
	16.9	15.5	4.51	4.22	3.93	3.64	3.35	3.06	2.77	2.48	2.19	1.90	1.61	1.32	1.03		

Model		Cooling mode												(kW)			
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
Hi 10 (m ³ /min)	10			2.42	1.98	2.90	2.25	3.13	2.28	3.33	2.32	3.73	2.51	3.88	2.45		
	12			2.42	1.98	2.90	2.25	3.13	2.28	3.33	2.32	3.72	2.51	3.86	2.44		
	14			2.42	1.98	2.90	2.25	3.13	2.28	3.32	2.32	3.71	2.50	3.84	2.44		
	16			2.42	1.98	2.90	2.25	3.13	2.28	3.32	2.32	3.69	2.50	3.83	2.44		
	18			2.42	1.98	2.90	2.25	3.13	2.28	3.32	2.32	3.68	2.49	3.81	2.43		
	20			2.42	1.98	2.90	2.25	3.13	2.28	3.31	2.32	3.67	2.49	3.79	2.42		
	22			2.42	1.98	2.90	2.25	3.13	2.28	3.30	2.31	3.62	2.47	3.74	2.40		
	24			2.42	1.98	2.89	2.24	3.13	2.28	3.28	2.30	3.57	2.45	3.69	2.38		
	26			2.41	1.97	2.88	2.24	3.10	2.27	3.24	2.29	3.52	2.43	3.63	2.36		
	28	2.19	1.96	2.41	1.97	2.87	2.24	3.07	2.26	3.20	2.26	3.46	2.41	3.58	2.34		
	30	2.19	1.96	2.41	1.97	2.84	2.22	3.04	2.25	3.17	2.25	3.41	2.39	3.52	2.32		
	32	2.19	1.96	2.40	1.97	2.82	2.21	3.01	2.24	3.13	2.24	3.36	2.37	3.47	2.29		
	34	2.19	1.96	2.39	1.97	2.81	2.21	2.98	2.23	3.08	2.22	3.28	2.33	3.40	2.28		
	35	2.19	1.96	2.39	1.97	2.81	2.21	2.96	2.22	3.05	2.21	3.25	2.32	3.36	2.27		
	36	2.19	1.96	2.39	1.97	2.79	2.20	2.94	2.22	3.02	2.20	3.19	2.30	3.30	2.25		
	38	2.19	1.96	2.38	1.96	2.74	2.18	2.91	2.20	2.97	2.18	3.07	2.26	3.17	2.21		
39	2.19	1.96	2.38	1.96	2.72	2.17	2.90	2.20	2.94	2.17	3.02	2.24	3.10	2.18			
41	2.19	1.96	2.37	1.96	2.64	2.14	2.78	2.15	2.81	2.12	2.88	2.19	2.96	2.14			
43	2.19	1.96	2.36	1.96	2.56	2.10	2.66	2.10	2.69	2.07	2.75	2.15	2.81	2.09			

Model		Heating mode												(kW)			
Air flow	Outdoor air temperature	Indoor air temperature															
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB			
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC		
Hi 10 (m ³ /min)	-19.8	-20	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88		
	-17.8	-18	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
	-15.7	-16	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12		
	-13.7	-14	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24		
	-11.7	-12	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36		
	-9.6	-10	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48		
	-7.5	-8	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64		
	-5.5	-6	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79		
	-3.4	-4	2.88	2.88	2.88	2.85	2.82	2.79	2.76	2.73	2.70	2.67	2.64	2.61	2.58		
	-1.3	-2	2.98	2.97	2.97	2.91	2.85	2.79	2.73	2.67	2.61	2.55	2.49	2.43	2.37		
	0.8	0	3.14	3.10	3.05	2.95	2.84	2.73	2.62	2.51	2.40	2.29	2.18	2.07	1.96		
	3.9	3	3.41	3.29	3.17	2.99	2.81	2.63	2.45	2.27	2.09	1.91	1.73	1.55	1.37		
	7.0	6	3.73	3.48	3.24	3.01	2.79	2.57	2.35	2.13	1.91	1.69	1.47	1.25	1.03		
	10.1	9	3.70	3.47	3.23	3.00	2.76	2.54	2.32	2.10	1.88	1.66	1.44	1.22	1.00		
	13.2	12	3.68	3.44	3.21	2.97	2.74	2.52	2.30	2.08	1.86	1.64	1.42	1.20	0.98		
	16.9	15.5	3.65	3.42	3.18	2.95	2.71	2.49	2.27	2.05	1.83	1.61	1.39	1.17	0.95		

Model		Cooling mode												(kW)			
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
Me 7 (m ³ /min)	10			1.81	1.46	2.17	1.65	2.35	1.69	2.50	1.71	2.80	1.85	2.90	1.80		
	12			1.81	1.46												

Model		FDE45KXZE1												Cooling mode		(kW)		
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC			
		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	
P-Hi	13 (m ³ /min)	10	3.69	2.92	4.41	3.31	4.77	3.39	5.07	3.44	5.68	3.71	5.90	3.61				
		12		3.69	2.92	4.41	3.31	4.77	3.39	5.07	3.44	5.66	3.70	5.88	3.60			
		14		3.69	2.92	4.41	3.31	4.77	3.39	5.06	3.43	5.64	3.69	5.85	3.59			
		16		3.69	2.92	4.41	3.31	4.77	3.39	5.05	3.43	5.62	3.68	5.83	3.59			
		18		3.69	2.92	4.41	3.31	4.77	3.39	5.05	3.43	5.60	3.68	5.80	3.57			
		20		3.69	2.92	4.41	3.31	4.77	3.39	5.04	3.43	5.58	3.67	5.78	3.57			
		22		3.68	2.92	4.41	3.31	4.77	3.39	5.02	3.41	5.51	3.64	5.70	3.54			
		24		3.68	2.92	4.41	3.31	4.77	3.39	4.99	3.40	5.44	3.62	5.62	3.51			
		26		3.68	2.92	4.39	3.30	4.73	3.36	4.93	3.38	5.35	3.57	5.53	3.46			
		28	3.33	2.88	3.67	2.92	4.37	3.29	4.68	3.34	4.88	3.36	5.27	3.53	5.44	3.44		
		30	3.33	2.88	3.66	2.91	4.33	3.28	4.64	3.33	4.82	3.32	5.19	3.50	5.36	3.42		
		32	3.33	2.88	3.65	2.91	4.30	3.26	4.59	3.31	4.76	3.30	5.11	3.48	5.28	3.39		
		34	3.33	2.88	3.64	2.90	4.28	3.25	4.53	3.29	4.69	3.28	5.00	3.44	5.17	3.35		
		35	3.33	2.88	3.64	2.90	4.28	3.25	4.50	3.27	4.65	3.26	4.95	3.43	5.12	3.34		
		36	3.33	2.88	3.63	2.90	4.24	3.24	4.48	3.26	4.60	3.24	4.86	3.39	5.02	3.30		
		38	3.33	2.88	3.62	2.90	4.18	3.21	4.43	3.25	4.52	3.21	4.68	3.32	4.82	3.23		
39	3.33	2.88	3.62	2.90	4.15	3.20	4.41	3.23	4.47	3.19	4.59	3.29	4.72	3.20				
41	3.33	2.88	3.61	2.89	4.02	3.14	4.23	3.16	4.28	3.11	4.39	3.22	4.50	3.11				
43	3.33	2.88	3.59	2.88	3.90	3.09	4.05	3.09	4.09	3.04	4.18	3.13	4.28	3.05				

Model		FDE45KXZE1												Heating mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC		
		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
P-Hi	13 (m ³ /min)	10	-19.8	-20	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	
		12	-17.8	-18	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	
		14	-15.7	-16	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	
		16	-13.7	-14	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	
		18	-11.7	-12	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	
		20	-9.6	-10	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	
		22	-7.5	-8	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	
		24	-5.5	-6	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	
		26	-3.4	-4	4.45	4.44	4.44	4.43	4.39	4.35	4.44	4.39	4.35	4.44	4.39	4.35	
		28	-1.3	-2	4.60	4.59	4.58	4.58	4.49	4.44	4.58	4.49	4.44	4.58	4.49	4.44	
		30	0.8	0	4.85	4.78	4.71	4.71	4.54	4.38	4.78	4.71	4.54	4.38	4.78	4.71	
		32	3.9	3	5.26	5.08	4.89	4.89	4.61	4.44	5.08	4.89	4.61	4.44	5.08	4.89	
		34	7.0	6	5.75	5.38	5.00	5.00	4.65	4.30	5.38	5.00	4.65	4.30	5.38	5.00	
		35	10.1	9	5.71	5.35	4.98	4.98	4.62	4.26	5.35	4.98	4.62	4.26	5.35	4.98	
		36	13.2	12	5.68	5.31	4.95	4.95	4.59	4.23	5.31	4.95	4.59	4.23	5.31	4.95	
		38	16.9	15.5	5.63	5.27	4.91	4.91	4.54	4.18	5.27	4.91	4.54	4.18	5.27	4.91	

Model		FDE45KXZE1												Cooling mode		(kW)		
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC			
		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	
Hi	10 (m ³ /min)	10	2.97	2.32	3.55	2.63	3.84	2.70	4.08	2.73	4.57	2.95	4.75	2.87				
		12	2.97	2.32	3.55	2.63	3.84	2.70	4.08	2.73	4.56	2.94	4.73	2.87				
		14	2.97	2.32	3.55	2.63	3.84	2.70	4.07	2.73	4.54	2.94	4.71	2.86				
		16	2.97	2.32	3.55	2.63	3.84	2.70	4.07	2.73	4.52	2.93	4.69	2.85				
		18	2.97	2.32	3.55	2.63	3.84	2.70	4.06	2.73	4.51	2.92	4.67	2.84				
		20	2.97	2.32	3.55	2.63	3.84	2.70	4.05	2.72	4.49	2.92	4.65	2.83				
		22	2.96	2.32	3.55	2.63	3.84	2.70	4.04	2.71	4.43	2.89	4.58	2.81				
		24	2.96	2.32	3.54	2.62	3.84	2.70	4.02	2.71	4.38	2.87	4.52	2.79				
		26	2.96	2.32	3.53	2.62	3.80	2.67	3.97	2.69	4.31	2.85	4.45	2.76				
		28	2.68	2.28	2.95	2.32	3.51	2.61	3.76	2.65	3.92	2.66	4.24	2.82	3.38	2.72		
		30	2.68	2.28	2.95	2.32	3.48	2.60	3.73	2.64	3.88	2.64	4.17	2.79	4.31	2.70		
		32	2.68	2.28	2.94	2.31	3.46	2.59	3.69	2.63	3.83	2.62	4.11	2.76	4.25	2.69		
		34	2.68	2.28	2.93	2.30	3.44	2.58	3.64	2.61	3.77	2.60	4.02	2.73	4.16	2.66		
		35	2.68	2.28	2.92	2.30	3.44	2.58	3.62	2.60	3.74	2.59	3.98	2.72	4.12	2.65		
		36	2.68	2.28	2.92	2.30	3.41	2.57	3.60	2.59	3.70	2.57	3.91	2.69	4.04	2.62		
		38	2.68	2.28	2.91	2.30	3.36	2.55	3.57	2.58	3.63	2.54	3.76	2.63	3.88	2.56		
39	2.68	2.28	2.91	2.30	3.33	2.53	3.55	2.57	3.60	2.53	3.69	2.61	3.80	2.54				
41	2.68	2.28	2.90	2.29	3.23	2.49	3.40	2.51	3.44	2.47	3.53	2.55	3.62	2.46				
43	2.68	2.28	2.89	2.29	3.13	2.45	3.26	2.45	3.29	2.41	3.36	2.47	3.44	2.41				

Model		FDE45KXZE1												Heating mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC		
		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
Hi	10 (m ³ /min)	10	-19.8	-20	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	
		12	-17.8	-18	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	
		14	-15.7	-16	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	
		16	-13.7	-14	2.74	2.74	2.74	2.74	2.74	2.74	2.74	2.74	2.74	2.74	2.74	2.74	
		18	-11.7	-12	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	
		20	-9.6	-10	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	
		22	-7.5	-8	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	
		24	-5.5	-6	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	
		26	-3.4	-4	3.52	3.51	3.51	3.47	3.44	3.44	3.52	3.51	3.47	3.44	3.44	3.44	
		28	-1.3	-2	3.64	3.63	3.62	3.55	3.48	3.48	3.64	3.63	3.62	3.55	3.48	3.48	
		30	0.8	0	3.84	3.78	3.73	3.59	3.46	3.46	3.84	3.78	3.73	3.59	3.46	3.46	
		32	3.9	3	4.16	4.01	3.87	3.65	3.43	3.43	4.16	4.01	3.87	3.65	3.43	3.43	
		34	7.0	6	4.55	4.25	3.95	3.68	3.40	3.40	4.55	4.25	3.95	3.68	3.40	3.40	
		35	10.1	9	4.52	4.23	3.94	3.66	3.37	3.37	4.52	4.23	3.94	3.66	3.37	3.37	
		36	13.2	12	4.49	4.20	3.91	3.63	3.34	3.34	4.49	4.20	3.91	3.63	3.34	3.34	
		38	16.9	15.5	4.45	4.17	3.88	3.59	3.31	3.31	4.45	4.17	3.88	3.59	3.31	3.31	

Model		FDE45KXZE1												Cooling mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												TC	SHC		
		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
Me	9 (m ³ /min)	10	2.71	2.11	3.24	2.39	3.50	2.45	3.73	2.49	4.18	2.69	4.34	2.61			
		12	2.71	2.11	3.24	2.39	3.50	2.45	3.72	2.48	4.16	2.67	4.32	2.60			
		14	2.71	2.11	3.24	2.39	3.50	2.45	3.72	2.48	4.15	2.66	4.30	2.59			

Model		Cooling mode (kW)																											
FDE56KXZE1		Indoor air temperature																											
Air flow	Outdoor air temperature (°CDB)	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	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
P-Hi 13 (m ³ /min)	10			4.59	3.48	5.49	3.94	5.94	4.05	6.32	4.11	7.07	4.43	7.35	4.31														
	12			4.59	3.48	5.49	3.94	5.94	4.05	6.31	4.11	7.05	4.42	7.31	4.28														
	14			4.59	3.48	5.49	3.94	5.94	4.05	6.30	4.10	7.02	4.41	7.28	4.27														
	16			4.59	3.48	5.49	3.94	5.94	4.05	6.29	4.09	7.00	4.40	7.25	4.26														
	18			4.59	3.48	5.49	3.94	5.94	4.05	6.28	4.08	6.97	4.39	7.22	4.25														
	20			4.59	3.48	5.49	3.94	5.94	4.05	6.27	4.08	6.95	4.38	7.19	4.24														
	22			4.58	3.47	5.49	3.94	5.94	4.05	6.24	4.07	6.86	4.33	7.09	4.21														
	24			4.58	3.47	5.48	3.94	5.94	4.05	6.21	4.06	6.77	4.30	6.99	4.17														
	26			4.57	3.47	5.46	3.93	5.88	4.02	6.14	4.03	6.66	4.26	6.88	4.13														
	28	4.14	3.41	4.57	3.47	5.43	3.91	5.82	3.99	6.07	4.00	6.56	4.22	6.78	4.10														
	30	4.14	3.41	4.56	3.46	5.39	3.90	5.77	3.97	6.00	3.98	6.46	4.18	6.67	4.06														
	32	4.14	3.41	4.55	3.46	5.35	3.88	5.71	3.94	5.93	3.94	6.36	4.14	6.57	4.02														
	34	4.14	3.41	4.53	3.45	5.33	3.87	5.64	3.92	5.83	3.90	6.22	4.08	6.44	3.97														
35	4.14	3.41	4.52	3.44	5.32	3.86	5.60	3.89	5.79	3.88	6.16	4.06	6.37	3.94															
36	4.14	3.41	4.52	3.44	5.28	3.85	5.57	3.88	5.73	3.86	6.05	4.02	6.25	3.90															
38	4.14	3.41	4.51	3.44	5.20	3.81	5.52	3.86	5.62	3.81	5.82	3.93	6.00	3.80															
39	4.14	3.41	4.50	3.43	5.16	3.79	5.49	3.85	5.56	3.79	5.71	3.87	5.87	3.76															
41	4.14	3.41	4.49	3.43	5.00	3.72	5.26	3.75	5.33	3.69	5.46	3.79	5.60	3.67															
43	4.14	3.41	4.47	3.42	4.85	3.66	5.04	3.65	5.10	3.60	5.21	3.70	5.32	3.58															

Model		Heating mode (kW)																													
FDE56KXZE1		Indoor air temperature																													
Air flow	Outdoor air temperature (°CDB)	16 °CDB				18 °CDB				20 °CDB				22 °CDB				24 °CDB													
		°CDB		°CWB		°CDB		°CWB		°CDB		°CWB		°CDB		°CWB		°CDB		°CWB											
		°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB	°CDB	°CWB										
P-Hi 13 (m ³ /min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65			
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89		
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12		
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42
	-3.4	-4	5.61	5.60	5.59	5.54	5.48	5.42	5.36	5.30	5.24	5.18	5.12	5.06	5.00	4.94	4.88	4.82	4.76	4.70	4.64	4.58	4.52	4.46	4.40	4.34	4.28	4.22	4.16	4.10	
	-1.3	-2	5.80	5.78	5.76	5.65	5.54	5.43	5.32	5.21	5.10	5.00	4.89	4.78	4.67	4.56	4.45	4.34	4.23	4.12	4.01	3.90	3.79	3.68	3.57	3.46	3.35	3.24	3.13	3.02	
	0.8	0	6.11	6.02	5.94	5.73	5.51	5.29	5.07	4.85	4.63	4.41	4.19	3.97	3.75	3.53	3.31	3.09	2.87	2.65	2.43	2.21	1.99	1.77	1.55	1.33	1.11	0.89	0.67	0.45	
	3.9	3	6.63	6.39	6.16	5.81	5.47	5.13	4.79	4.45	4.11	3.77	3.43	3.09	2.75	2.41	2.07	1.73	1.39	1.05	0.71	0.37	0.03	-0.31	-0.65	-0.99	-1.33	-1.67	-2.01	-2.35	
	7.0	6	7.25	6.77	6.30	5.86	5.42	4.98	4.54	4.10	3.66	3.22	2.78	2.34	1.90	1.46	1.02	0.58	0.14	-0.30	-0.86	-1.42	-1.98	-2.54	-3.10	-3.66	-4.22	-4.78	-5.34	-5.90	
10.1	9	7.20	6.74	6.28	5.82	5.37	4.91	4.45	3.99	3.53	3.07	2.61	2.15	1.69	1.23	0.77	0.31	-0.15	-0.71	-1.27	-1.83	-2.39	-2.95	-3.51	-4.07	-4.63	-5.19	-5.75			
13.2	12	7.15	6.69	6.24	5.78	5.33	4.87	4.41	3.95	3.49	3.03	2.57	2.11	1.65	1.19	0.73	0.27	-0.19	-0.75	-1.31	-1.87	-2.43	-2.99	-3.55	-4.11	-4.67	-5.23	-5.79			
16.9	15.5	7.10	6.64	6.18	5.73	5.28	4.83	4.37	3.91	3.45	2.99	2.53	2.07	1.61	1.15	0.69	0.23	-0.23	-0.79	-1.35	-1.91	-2.47	-3.03	-3.59	-4.15	-4.71	-5.27	-5.83			

Model		Cooling mode (kW)																											
FDE56KXZE1		Indoor air temperature																											
Air flow	Outdoor air temperature (°CDB)	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	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
Hi 10 (m ³ /min)	10			3.69	2.75	4.41	3.13	4.77	3.22	5.08	3.27	5.69	3.52	5.91	3.42														
	12			3.69	2.75	4.41	3.13	4.77	3.22	5.07	3.27	5.67	3.51	5.88	3.41														
	14			3.69	2.75	4.41	3.13	4.77	3.22	5.07	3.27	5.65	3.50	5.86	3.40														
	16			3.69	2.75	4.41	3.13	4.77	3.22	5.06	3.26	5.63	3.49	5.83	3.39														
	18			3.69	2.75	4.41	3.13	4.77	3.22	5.05	3.26	5.61	3.48	5.81	3.39														
	20			3.69	2.75	4.41	3.13	4.77	3.22	5.05	3.26	5.59	3.48	5.78	3.38														
	22			3.69	2.75	4.41	3.13	4.77	3.22	5.02	3.24	5.52	3.45	5.70	3.34														
	24			3.68	2.75	4.41	3.13	4.77	3.22	5.00	3.23	5.45	3.43	5.62	3.31														
	26			3.68	2.75	4.39	3.12	4.73	3.20	4.94	3.21	5.36	3.38	5.54	3.28														
	28	3.33	2.71	3.68	2.75	4.37	3.11	4.68	3.17	4.88	3.18	5.27	3.35	5.45	3.25														

Model		Cooling mode												(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																							
		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										
P-Hi	20 (m³/min)	10	5.82	4.62	6.96	5.23	7.53	5.36	8.01	5.42	8.97	5.86	9.31	5.71											
		12	5.82	4.62	6.96	5.23	7.53	5.36	8.00	5.42	8.94	5.85	9.27	5.69											
		14	5.82	4.62	6.96	5.23	7.53	5.36	7.99	5.41	8.90	5.83	9.23	5.68											
		16	5.82	4.62	6.96	5.23	7.53	5.36	7.97	5.41	8.87	5.82	9.19	5.67											
		18	5.82	4.62	6.96	5.23	7.53	5.36	7.96	5.40	8.84	5.81	9.15	5.64											
		20	5.82	4.62	6.96	5.23	7.53	5.36	7.95	5.40	8.81	5.80	9.11	5.63											
		22	5.81	4.62	6.95	5.22	7.53	5.36	7.92	5.39	8.70	5.76	8.99	5.56											
		24	5.80	4.61	6.95	5.22	7.53	5.36	7.88	5.38	8.58	5.71	8.86	5.53											
		26	5.80	4.61	6.92	5.21	7.46	5.32	7.79	5.34	8.45	5.64	8.73	5.49											
		28	5.25	4.55	5.79	4.61	6.89	5.20	7.38	5.29	7.69	5.30	8.31	5.59	8.59	5.45									
		30	5.25	4.55	5.78	4.60	6.83	5.17	7.31	5.26	7.60	5.26	8.19	5.55	8.46	5.40									
		32	5.25	4.55	5.77	4.60	6.78	5.15	7.24	5.23	7.51	5.23	8.06	5.50	8.33	5.36									
		34	5.25	4.55	5.75	4.59	6.76	5.15	7.15	5.19	7.39	5.18	7.89	5.44	8.16	5.30									
		35	5.25	4.55	5.74	4.59	6.75	5.14	7.10	5.17	7.33	5.15	7.80	5.40	8.08	5.26									
36	5.25	4.55	5.73	4.58	6.69	5.11	7.06	5.16	7.26	5.12	7.66	5.36	7.92	5.22											
38	5.25	4.55	5.72	4.57	6.59	5.07	6.99	5.12	7.12	5.07	7.38	5.25	7.61	5.11											
39	5.25	4.55	5.71	4.57	6.54	5.04	6.96	5.11	7.05	5.04	7.24	5.20	7.45	5.05											
41	5.25	4.55	5.69	4.56	6.35	4.96	6.67	4.99	6.76	4.92	6.92	5.05	7.10	4.92											
43	5.25	4.55	5.67	4.55	6.15	4.87	6.39	4.86	6.46	4.79	6.60	4.96	6.75	4.83											

Model		Heating mode												(kW)											
Air flow	Outdoor air temperature	Indoor air temperature																							
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB											
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB																	
P-Hi	20 (m³/min)	-19.8	-20	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64											
		-17.8	-18	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94											
		-15.7	-16	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24											
		-13.7	-14	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54											
		-11.7	-12	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83											
		-9.6	-10	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13											
		-7.5	-8	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51											
		-5.5	-6	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88											
		-3.4	-4	7.12	7.11	7.10	7.03	6.96																	
		-1.3	-2	7.36	7.34	7.32	7.18	7.04																	
		0.8	0	7.76	7.65	7.54	7.27	7.00																	
		3.9	3	8.42	8.12	7.82	7.38	6.94																	
		7.0	6	9.20	8.60	8.00	7.44	6.88																	
		10.1	9	9.14	8.56	7.97	7.40	6.82																	
13.2	12	9.08	8.50	7.92	7.34	6.76																			
16.9	15.5	9.01	8.43	7.85	7.27	6.69																			

Model		Cooling mode												(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																							
		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										
Hi	15 (m³/min)	10	4.68	3.63	5.60	4.12	6.06	4.23	6.44	4.29	7.22	4.61	7.49	4.50											
		12	4.68	3.63	5.60	4.12	6.06	4.23	6.43	4.28	7.19	4.60	7.46	4.49											
		14	4.68	3.63	5.60	4.12	6.06	4.23	6.43	4.28	7.16	4.59	7.43	4.48											
		16	4.68	3.63	5.60	4.12	6.06	4.23	6.42	4.28	7.14	4.59	7.40	4.47											
		18	4.68	3.63	5.60	4.12	6.06	4.23	6.41	4.27	7.11	4.58	7.36	4.45											
		20	4.68	3.63	5.60	4.12	6.06	4.23	6.40	4.27	7.09	4.57	7.33	4.44											
		22	4.68	3.63	5.60	4.12	6.06	4.23	6.37	4.25	7.00	4.53	7.23	4.40											
		24	4.67	3.62	5.59	4.12	6.06	4.23	6.34	4.24	6.91	4.50	7.13	4.37											
		26	4.67	3.62	5.57	4.10	6.00	4.20	6.26	4.21	6.80	4.46	7.02	4.33											
		28	4.23	3.58	4.66	3.62	5.54	4.09	5.94	4.16	6.19	4.18	6.69	4.41	6.91	4.29									
		30	4.23	3.58	4.65	3.61	5.50	4.08	5.88	4.14	6.12	4.14	6.59	4.38	6.81	4.25									
		32	4.23	3.58	4.64	3.61	5.46	4.06	5.83	4.12	6.05	4.11	6.49	4.34	6.71	4.21									
		34	4.23	3.58	4.62	3.60	5.44	4.05	5.75	4.09	5.95	4.08	6.35	4.28	6.57	4.15									
		35	4.23	3.58	4.62	3.60	5.43	4.04	5.71	4.08	5.90	4.06	6.28	4.26	6.50	4.13									
36	4.23	3.58	4.61	3.60	5.39	4.03	5.68	4.06	5.84	4.03	6.17	4.20	6.37	4.09											
38	4.23	3.58	4.60	3.59	5.30	3.99	5.63	4.04	5.73	3.99	5.94	4.12	6.12	4.01											
39	4.23	3.58	4.59	3.59	5.26	3.97	5.60	4.03	5.68	3.97	5.83	4.08	5.99	3.96											
41	4.23	3.58	4.58	3.59	5.11	3.91	5.37	3.93	5.44	3.87	5.57	3.98	5.71	3.87											
43	4.23	3.58	4.56	3.58	4.95	3.83	5.14	3.84	5.20	3.77	5.31	3.89	5.43	3.77											

Model		Heating mode												(kW)											
Air flow	Outdoor air temperature	Indoor air temperature																							
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB											
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB																	
Hi	15 (m³/min)	-19.8	-20	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60											
		-17.8	-18	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83											
		-15.7	-16	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06											
		-13.7	-14	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29											
		-11.7	-12	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52											
		-9.6	-10	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75											
		-7.5	-8	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04											
		-5.5	-6	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33											
		-3.4	-4	5.52	5.51	5.50	5.45	5.39																	
		-1.3	-2	5.70	5.69	5.67	5.57	5.46																	
		0.8	0	6.01	5.93	5.84	5.64	5.43																	
		3.9	3	6.53	6.29	6.06	5.72	5.38																	
		7.0	6	7.13	6.67	6.20	5.77	5.33																	
		10.1	9	7.08	6.63	6.18	5.73	5.29																	
13.2	12	7.04	6.59	6.14	5.69	5.24																			
16.9	15.5	6.98	6.53	6.08	5.64	5.19																			

Model		Cooling mode												(kW)											
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																							
		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										
Me	13 (m³/min)	10	4.17	3.21	4.99	3.64	5.40	3.74	5.74	3.79	6.43	4.09	6.68	3.98											
		12	4.17	3.21	4.99	3.64	5.40	3.74	5.73	3.79	6.41	4.08	6.65	3.97											
		14	4.17	3.21	4.99	3.64	5.40	3.74	5.72	3.78	6.38	4.07	6.62	3.96											
		16	4.17	3.21	4.99	3.64	5.40	3.74	5.72	3.78	6.36	4.06	6.59	3.95											
		18	4.17	3.21	4.99	3.64	5.40	3.74	5.71	3.78	6.34	4.05	6.56	3.94											
		20	4.17	3.21	4.99	3.64	5.40	3.74	5.70	3.77	6.31	4.04	6.53	3.92											
		22	4.17	3.21	4.99	3.64	5.40	3.74	5.67	3.76	6.23	4.01	6.44	3.89											
		24	4.16	3.21	4.98	3.64	5.40	3.74	5.65	3.76	6.15	3.98	6.35	3.86											
		26	4.16	3.21	4.96	3.63	5.34	3.71	5.58	3.72	6.06	3.94	6.26	3.81											
		28	3.77	3.16	4.15	3.20	4.94	3.62	5.29	3.69	5.52	3.70	5.96	3.90	6.16	3.78									
		30	3.77	3.16	4.14	3.20	4.90	3.60	5.24	3.67	5.45	3.67	5.87	3.85	6.07	3.75									
		32	3.77	3.16	4.13	3.20	4.86	3.59	5.19	3.65	5.39	3.64	5.78	3.82	5.97	3.72									
		34	3.77	3.16	4.12	3.19	4.84	3.58	5.12	3.61	5.30	3.61	5.66	3.79	5.85	3.67									
		35	3.77	3.16	4.11	3.19	4.84	3.58	5.09	3.60	5.26	3.59	5.59	3.76	5.79	3.66									
36	3.77	3.16	4.11	3.19	4.80	3.56	5.06	3.59	5.21	3.57	5.49	3.72	5.68	3.62											
38	3.77	3.16	4.10	3.18	4.73	3.53	5.01	3.57	5.11	3.53	5.29	3.64	5.45	3.54											
39	3.77	3.16	4.09																						

Model		FDE112KXZE1												Cooling mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												°CDB	°CWB		
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB				33 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC			SHC	TC
P-Hi	10			9.18	7.09	10.97	8.02	11.87	8.23	12.63	8.37	14.15	9.02	14.69	8.78		
	12			9.18	7.09	10.97	8.02	11.87	8.23	12.61	8.36	14.10	9.00	14.63	8.75		
	14			9.18	7.09	10.97	8.02	11.87	8.23	12.60	8.34	14.05	8.97	14.56	8.72		
	16			9.18	7.09	10.97	8.02	11.87	8.23	12.58	8.33	14.00	8.96	14.50	8.71		
	18			9.18	7.09	10.97	8.02	11.87	8.23	12.56	8.33	13.94	8.94	14.44	8.64		
	20			9.18	7.09	10.97	8.02	11.87	8.23	12.55	8.32	13.89	8.92	14.37	8.62		
	22			9.17	7.08	10.97	8.02	11.87	8.23	12.49	8.30	13.72	8.85	14.18	8.56		
	24			9.15	7.07	10.97	8.02	11.87	8.23	12.43	8.28	13.54	8.74	13.98	8.50		
	26			9.15	7.07	10.92	8.00	11.76	8.19	12.28	8.21	13.33	8.67	13.77	8.44		
	28	8.29	6.97	9.14	7.07	10.86	7.98	11.65	8.15	12.14	8.15	13.11	8.60	13.55	8.36		
	30	8.29	6.97	9.12	7.06	10.78	7.94	11.54	8.06	12.00	8.09	12.91	8.52	13.35	8.28		
	32	8.29	6.97	9.09	7.05	10.70	7.91	11.42	8.02	11.85	8.00	12.71	8.44	13.15	8.20		
	34	8.29	6.97	9.06	7.04	10.66	7.89	11.27	7.96	11.66	7.93	12.45	8.34	12.87	8.11		
	35	8.29	6.97	9.05	7.03	10.64	7.88	11.20	7.93	11.57	7.90	12.31	8.29	12.74	8.07		
36	8.29	6.97	9.04	7.03	10.56	7.85	11.14	7.91	11.46	7.86	12.09	8.20	12.49	7.98			
38	8.29	6.97	9.02	7.02	10.40	7.77	11.03	7.87	11.24	7.78	11.65	8.03	12.00	7.80			
39	8.29	6.97	9.00	7.01	10.32	7.74	10.98	7.85	11.13	7.73	11.43	7.94	11.75	7.68			
41	8.29	6.97	8.97	7.00	10.01	7.61	10.53	7.66	10.66	7.54	10.92	7.73	11.20	7.52			
43	8.29	6.97	8.94	6.99	9.70	7.47	10.08	7.46	10.19	7.35	10.41	7.57	10.65	7.34			

Model		FDE112KXZE1												Heating mode		(kW)		
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												°CDB	°CWB			
		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB								
		16 °CWB	18 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC	SHC						
P-Hi	-19.8	-20	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25				
	-17.8	-18	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72				
	-15.7	-16	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18	8.18				
	-13.7	-14	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65				
	-11.7	-12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	9.12	9.12				
	-9.6	-10	9.58	9.58	9.58	9.58	9.58	9.58	9.58	9.58	9.58	9.58	9.58	9.58				
	-7.5	-8	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17				
	-5.5	-6	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75				
	-3.4	-4	11.13	11.13	11.13	11.13	11.13	11.13	11.13	11.13	11.13	11.13	11.13	11.13				
	-1.3	-2	11.50	11.47	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.00			
	0.8	0	12.13	11.95	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.36	10.94		
	3.9	3	13.16	12.69	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	11.53	10.84		
	7.0	6	14.38	13.44	12.50	11.63	10.75											
	10.1	9	14.28	13.37	12.45	11.55	10.66											
13.2	12	14.19	13.28	12.38	11.47	10.56												
16.9	15.5	14.08	13.17	12.27	11.36	10.45												

Model		FDE112KXZE1												Cooling mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												°CDB	°CWB		
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB				33 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC			SHC	TC
Hi	10			8.43	6.45	10.07	7.31	10.90	7.50	11.59	7.61	12.99	8.21	13.48	7.99		
	12			8.43	6.45	10.07	7.31	10.90	7.50	11.58	7.61	12.94	8.20	13.43	7.97		
	14			8.43	6.45	10.07	7.31	10.90	7.50	11.56	7.60	12.89	8.18	13.37	7.94		
	16			8.43	6.45	10.07	7.31	10.90	7.50	11.55	7.60	12.85	8.15	13.31	7.92		
	18			8.43	6.45	10.07	7.31	10.90	7.50	11.53	7.59	12.80	8.14	13.25	7.90		
	20			8.43	6.45	10.07	7.31	10.90	7.50	11.52	7.59	12.75	8.12	13.19	7.87		
	22			8.41	6.44	10.07	7.31	10.90	7.50	11.46	7.56	12.59	8.05	13.01	7.82		
	24			8.40	6.44	10.07	7.31	10.90	7.50	11.41	7.53	12.43	7.98	12.83	7.75		
	26			8.40	6.44	10.02	7.29	10.79	7.46	11.27	7.48	12.23	7.90	12.64	7.68		
	28	7.61	6.34	8.39	6.43	9.97	7.27	10.69	7.41	11.14	7.42	12.04	7.83	12.44	7.60		
	30	7.61	6.34	8.37	6.43	9.89	7.22	10.59	7.37	11.01	7.36	11.85	7.75	12.25	7.53		
	32	7.61	6.34	8.35	6.42	9.82	7.20	10.49	7.32	10.88	7.31	11.67	7.68	12.07	7.43		
	34	7.61	6.34	8.32	6.40	9.78	7.18	10.35	7.27	10.71	7.24	11.42	7.55	11.82	7.36		
	35	7.61	6.34	8.31	6.40	9.77	7.18	10.28	7.23	10.62	7.21	11.30	7.51	11.69	7.32		
36	7.61	6.34	8.30	6.40	9.69	7.14	10.23	7.21	10.52	7.16	11.10	7.45	11.47	7.25			
38	7.61	6.34	8.28	6.39	9.55	7.08	10.13	7.17	10.31	7.07	10.69	7.30	11.01	7.09			
39	7.61	6.34	8.27	6.38	9.47	7.05	10.07	7.14	10.21	7.03	10.49	7.22	10.78	7.01			
41	7.61	6.34	8.24	6.37	9.19	6.90	9.66	6.96	9.78	6.83	10.02	7.05	10.28	6.84			
43	7.61	6.34	8.21	6.35	8.90	6.79	9.25	6.78	9.35	6.68	9.56	6.88	9.77	6.66			

Model		FDE112KXZE1												Heating mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												°CDB	°CWB		
		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB							
		16 °CWB	18 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC	SHC					
Hi	-19.8	-20	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55			
	-17.8	-18	6.97	6.97	6.97	6.97	6.97	6.97	6.97	6.97	6.97	6.97	6.97	6.97			
	-15.7	-16	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39			
	-13.7	-14	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81			
	-11.7	-12	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23			
	-9.6	-10	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65			
	-7.5	-8	9.18	9.18	9.18	9.18	9.18	9.18	9.18	9.18	9.18	9.18	9.18	9.18			
	-5.5	-6	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71			
	-3.4	-4	10.05	10.03	10.02	9.92	9.82										
	-1.3	-2	10.38	10.36	10.33	10.13	9.93										
	0.8	0	10.95	10.79	10.64	10.26	9.88										
	3.9	3	11.88	11.46	11.03	10.41	9.79										
	7.0	6	12.98	12.13	11.29	10.50	9.71										
	10.1	9	12.89	12.07	11.24	10.43	9.62										
13.2	12	12.81	11.99	11.17	10.36	9.54											
16.9	15.5	12.71	11.89	11.07	10.26	9.44											

Model		FDE112KXZE1												Cooling mode		(kW)	
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature												°CDB	°CWB		
		21 °CDB		23 °CDB		26 °CDB		27 °CDB		28 °CDB		31 °CDB				33 °CDB	
		14 °CWB	16 °CWB	18 °CWB	19 °CWB	20 °CWB	22 °CWB	24 °CWB	TC	SHC	TC	SHC	TC			SHC	TC
Me	10			7.34	5.56	8.77	6.29	9.49	6.47	10.09	6.57	11.31	7.08	11.74	6.89		
	12			7.34	5.56	8.77	6.29	9.49	6.47	10.08	6.56	11.27	7.07	11.69	6.87		
	14			7.34	5.56	8.77	6.29	9.49	6.47	10.07	6.56	11.23	7.05	11.64	6.84		
	16			7.34	5.56	8.77	6.29	9.49	6.47	10.05	6.55	11.18	7.03	11.59	6.83		

Model		FDE140KXZE1 Cooling mode (kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
P-Hi 32 (m ³ /min)	10	11.48	8.74	13.72	9.90	14.84	10.16	15.79	10.32	17.69	11.11	18.36	10.82		
	12	11.48	8.74	13.72	9.90	14.84	10.16	15.77	10.31	17.62	11.09	18.28	10.79		
	14	11.48	8.74	13.72	9.90	14.84	10.16	15.75	10.31	17.56	11.07	18.20	10.75		
	16	11.48	8.74	13.72	9.90	14.84	10.16	15.72	10.28	17.49	11.04	18.13	10.72		
	18	11.48	8.74	13.72	9.90	14.84	10.16	15.70	10.27	17.43	11.02	18.05	10.70		
	20	11.48	8.74	13.72	9.90	14.84	10.16	15.68	10.26	17.37	11.00	17.97	10.67		
	22	11.46	8.73	13.71	9.90	14.84	10.16	15.61	10.24	17.15	10.90	17.72	10.57		
	24	11.44	8.72	13.71	9.90	14.84	10.16	15.54	10.21	16.93	10.81	17.48	10.48		
	26	11.43	8.72	13.64	9.85	14.70	10.10	15.35	10.12	16.66	10.71	17.21	10.39		
	28	10.36	8.58	11.42	8.72	13.58	9.83	14.56	10.03	15.17	10.05	16.39	10.60	16.94	10.29
	30	10.36	8.58	11.40	8.71	13.48	9.79	14.42	9.97	14.99	9.97	16.14	10.49	16.69	10.19
	32	10.36	8.58	11.37	8.68	13.37	9.74	14.28	9.90	14.82	9.90	15.89	10.39	16.43	10.10
	34	10.36	8.58	11.33	8.66	13.32	9.72	14.09	9.83	14.58	9.79	15.56	10.27	16.09	9.98
	35	10.36	8.58	11.31	8.65	13.30	9.71	14.00	9.79	14.46	9.75	15.39	10.19	15.92	9.90
36	10.36	8.58	11.30	8.65	13.20	9.66	13.93	9.75	14.32	9.69	15.11	10.08	15.61	9.81	
38	10.36	8.58	11.27	8.64	13.00	9.55	13.79	9.69	14.05	9.58	14.56	9.84	15.00	9.56	
39	10.36	8.58	11.26	8.63	12.90	9.51	13.72	9.67	13.91	9.52	14.28	9.74	14.69	9.47	
41	10.36	8.58	11.22	8.61	12.51	9.35	13.16	9.40	13.32	9.25	13.65	9.53	14.00	9.24	
43	10.36	8.58	11.18	8.60	12.13	9.19	12.60	9.18	12.74	9.04	13.02	9.30	13.31	9.00	

Model		FDE140KXZE1 Heating mode (kW)													
Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB							
P-Hi 32 (m ³ /min)	-19.8	-20	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	
	-17.8	-18	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88		
	-15.7	-16	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47		
	-13.7	-14	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07		
	-11.7	-12	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67		
	-9.6	-10	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27		
	-7.5	-8	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01	13.01		
	-5.5	-6	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76	13.76		
	-3.4	-4	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24	14.24		
	-1.3	-2	14.72	14.68	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64	14.64		
	0.8	0	15.52	15.30	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08		
	3.9	3	16.84	16.24	15.64	14.76	13.88								
	7.0	6	18.40	17.20	16.00	14.88	13.76								
	10.1	9	18.28	17.11	15.94	14.79	13.64								
13.2	12	18.16	17.00	15.84	14.68	13.52									
16.9	15.5	18.02	16.86	15.70	14.54	13.38									

Model		FDE140KXZE1 Cooling mode (kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 26 (m ³ /min)	10	9.86	7.37	11.78	8.35	12.75	8.59	13.56	8.73	15.19	9.41	15.77	9.14		
	12	9.86	7.37	11.78	8.35	12.75	8.59	13.54	8.72	15.14	9.39	15.70	9.11		
	14	9.86	7.37	11.78	8.35	12.75	8.59	13.52	8.71	15.08	9.37	15.64	9.09		
	16	9.86	7.37	11.78	8.35	12.75	8.59	13.51	8.71	15.03	9.35	15.57	9.07		
	18	9.86	7.37	11.78	8.35	12.75	8.59	13.49	8.70	14.97	9.31	15.50	9.03		
	20	9.86	7.37	11.78	8.35	12.75	8.59	13.47	8.69	14.92	9.29	15.43	9.01		
	22	9.84	7.37	11.78	8.35	12.75	8.59	13.41	8.67	14.73	9.21	15.22	8.93		
	24	9.83	7.36	11.77	8.34	12.75	8.59	13.34	8.63	14.54	9.14	15.01	8.85		
	26	9.82	7.36	11.72	8.32	12.63	8.54	13.19	8.57	14.31	9.04	14.78	8.76		
	28	8.90	7.24	9.81	7.35	11.66	8.30	12.51	8.48	13.03	8.49	14.08	8.94	14.55	8.67
	30	8.90	7.24	9.79	7.34	11.57	8.26	12.39	8.43	12.88	8.43	13.87	8.85	14.33	8.59
	32	8.90	7.24	9.76	7.33	11.48	8.22	12.27	8.35	12.73	8.36	13.65	8.78	14.11	8.52
	34	8.90	7.24	9.73	7.32	11.44	8.21	12.11	8.29	12.52	8.26	13.36	8.66	13.82	8.38
	35	8.90	7.24	9.72	7.31	11.42	8.20	12.03	8.25	12.42	8.22	13.22	8.57	13.68	8.33
36	8.90	7.24	9.70	7.29	11.34	8.15	11.96	8.23	12.30	8.17	12.98	8.48	13.41	8.25	
38	8.90	7.24	9.68	7.28	11.17	8.08	11.84	8.18	12.07	8.08	12.51	8.32	12.88	8.06	
39	8.90	7.24	9.67	7.28	11.08	8.04	11.78	8.16	11.95	8.03	12.27	8.22	12.62	7.98	
41	8.90	7.24	9.63	7.26	10.75	7.89	11.30	7.95	11.44	7.81	11.72	8.01	12.02	7.76	
43	8.90	7.24	9.60	7.25	10.42	7.75	10.82	7.74	10.94	7.61	11.18	7.81	11.43	7.56	

Model		FDE140KXZE1 Heating mode (kW)													
Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB							
Hi 26 (m ³ /min)	-19.8	-20	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71		
	-17.8	-18	8.21	8.21	8.21	8.21	8.21	8.21	8.21	8.21	8.21	8.21	8.21		
	-15.7	-16	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71		
	-13.7	-14	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20		
	-11.7	-12	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70		
	-9.6	-10	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20	10.20		
	-7.5	-8	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82		
	-5.5	-6	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44	11.44		
	-3.4	-4	11.84	11.82	11.80	11.69	11.57								
	-1.3	-2	12.24	12.20	12.17	11.94	11.70								
	0.8	0	12.90	12.72	12.54	12.09	11.64								
	3.9	3	14.00	13.50	13.00	12.27	11.54								
	7.0	6	15.30	14.30	13.30	12.37	11.44								
	10.1	9	15.20	14.22	13.25	12.29	11.34								
13.2	12	15.10	14.13	13.17	12.20	11.24									
16.9	15.5	14.98	14.02	13.05	12.09	11.12									

Model		FDE140KXZE1 Cooling mode (kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 23 (m ³ /min)	10	8.96	6.65	10.71	7.54	11.59	7.75	12.33	7.89	13.81	8.49	14.34	8.22		
	12	8.96	6.65	10.71	7.54	11.59	7.75	12.31	7.87	13.76	8.				

Model **FDW45KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 9 (m³/min)	10			3.69	2.70	4.41	3.06	4.77	3.15	5.07	3.21	5.68	3.46	5.90	3.35
	12			3.69	2.70	4.41	3.06	4.77	3.15	5.07	3.21	5.66	3.45	5.88	3.34
	14			3.69	2.70	4.41	3.06	4.77	3.15	5.06	3.20	5.64	3.44	5.85	3.33
	16			3.69	2.70	4.41	3.06	4.77	3.15	5.05	3.20	5.62	3.43	5.83	3.32
	18			3.69	2.70	4.41	3.06	4.77	3.15	5.05	3.20	5.60	3.42	5.80	3.31
	20			3.69	2.70	4.41	3.06	4.77	3.15	5.04	3.19	5.58	3.40	5.78	3.30
	22			3.68	2.69	4.41	3.06	4.77	3.15	5.02	3.19	5.51	3.38	5.70	3.28
	24			3.68	2.69	4.41	3.06	4.77	3.15	4.99	3.17	5.44	3.35	5.62	3.24
	26			3.68	2.69	4.39	3.06	4.73	3.14	4.93	3.14	5.35	3.31	5.53	3.21
	28	3.33	2.65	3.67	2.69	4.37	3.05	4.68	3.11	4.88	3.12	5.27	3.28	5.44	3.18
	30	3.33	2.65	3.66	2.68	4.33	3.03	4.64	3.09	4.82	3.09	5.19	3.24	5.36	3.14
	32	3.33	2.65	3.65	2.68	4.30	3.01	4.59	3.07	4.76	3.07	5.11	3.21	5.28	3.12
	34	3.33	2.65	3.64	2.68	4.28	3.00	4.53	3.04	4.69	3.04	5.00	3.16	5.17	3.07
	35	3.33	2.65	3.64	2.68	4.28	3.00	4.50	3.03	4.65	3.02	4.95	3.15	5.12	3.05
	36	3.33	2.65	3.63	2.67	4.24	2.98	4.48	3.02	4.60	3.00	4.86	3.11	5.02	3.01
38	3.33	2.65	3.62	2.67	4.18	2.95	4.43	3.00	4.52	2.96	4.68	3.04	4.82	2.94	
39	3.33	2.65	3.62	2.67	4.15	2.94	4.41	2.99	4.47	2.93	4.59	3.00	4.72	2.89	
41	3.33	2.65	3.61	2.66	4.02	2.88	4.23	2.90	4.26	2.86	4.39	2.91	4.50	2.82	
43	3.33	2.65	3.59	2.65	3.90	2.83	4.05	2.83	4.09	2.78	4.18	2.84	4.28	2.75	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Hi 9 (m³/min)	-19.8	-20	2.90	2.90	2.90	2.90	2.90	
	-17.8	-18	3.09	3.09	3.09	3.09	3.09	
	-15.7	-16	3.27	3.27	3.27	3.27	3.27	
	-13.7	-14	3.46	3.46	3.46	3.46	3.46	
	-11.7	-12	3.65	3.65	3.65	3.65	3.65	
	-9.6	-10	3.83	3.83	3.83	3.83	3.83	
	-7.5	-8	4.07	4.07	4.07	4.07	4.07	
	-5.5	-6	4.30	4.30	4.30	4.30	4.30	
	-3.4	-4	4.45	4.44	4.44	4.39	4.35	
	-1.3	-2	4.60	4.59	4.58	4.49	4.40	
	0.8	0	4.85	4.78	4.71	4.54	4.38	
	3.9	3	5.26	5.08	4.89	4.61	4.34	
	7.0	6	5.75	5.38	5.00	4.65	4.30	
	10.1	9	5.71	5.35	4.98	4.62	4.26	
	13.2	12	5.68	5.31	4.95	4.59	4.23	
16.9	15.5	5.63	5.27	4.91	4.54	4.18		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 8 (m³/min)	10			3.35	2.43	4.01	2.77	4.34	2.85	4.61	2.90	5.17	3.12	5.36	3.03
	12			3.35	2.43	4.01	2.77	4.34	2.85	4.61	2.90	5.15	3.12	5.34	3.02
	14			3.35	2.43	4.01	2.77	4.34	2.85	4.60	2.89	5.13	3.11	5.32	3.01
	16			3.35	2.43	4.01	2.77	4.34	2.85	4.59	2.89	5.11	3.10	5.30	3.01
	18			3.35	2.43	4.01	2.77	4.34	2.85	4.59	2.89	5.09	3.09	5.27	2.99
	20			3.35	2.43	4.01	2.77	4.34	2.85	4.58	2.88	5.07	3.08	5.25	2.98
	22			3.35	2.43	4.01	2.77	4.34	2.85	4.56	2.88	5.01	3.06	5.18	2.95
	24			3.34	2.43	4.00	2.76	4.34	2.85	4.54	2.87	4.95	3.02	5.11	2.93
	26			3.34	2.43	3.99	2.76	4.29	2.83	4.49	2.84	4.87	2.99	5.03	2.90
	28	3.03	2.39	3.34	2.43	3.97	2.75	4.25	2.81	4.43	2.81	4.79	2.96	4.95	2.87
	30	3.03	2.39	3.33	2.42	3.94	2.73	4.21	2.79	4.38	2.79	4.72	2.93	4.87	2.83
	32	3.03	2.39	3.32	2.42	3.91	2.72	4.17	2.77	4.33	2.77	4.64	2.89	4.80	2.81
	34	3.03	2.39	3.31	2.42	3.89	2.71	4.12	2.75	4.26	2.74	4.54	2.85	4.70	2.77
	35	3.03	2.39	3.30	2.41	3.89	2.71	4.09	2.73	4.23	2.72	4.50	2.84	4.65	2.75
	36	3.03	2.39	3.30	2.41	3.86	2.69	4.07	2.73	4.18	2.70	4.42	2.80	4.56	2.72
38	3.03	2.39	3.29	2.41	3.80	2.67	4.03	2.71	4.10	2.67	4.25	2.74	4.38	2.65	
39	3.03	2.39	3.29	2.41	3.77	2.65	4.01	2.70	4.06	2.65	4.17	2.70	4.29	2.62	
41	3.03	2.39	3.28	2.40	3.66	2.60	3.84	2.61	3.89	2.57	3.99	2.63	4.09	2.54	
43	3.03	2.39	3.27	2.39	3.54	2.55	3.68	2.55	3.72	2.51	3.80	2.55	3.89	2.47	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Me 8 (m³/min)	-19.8	-20	2.64	2.64	2.64	2.64	2.64	
	-17.8	-18	2.81	2.81	2.81	2.81	2.81	
	-15.7	-16	2.98	2.98	2.98	2.98	2.98	
	-13.7	-14	3.15	3.15	3.15	3.15	3.15	
	-11.7	-12	3.32	3.32	3.32	3.32	3.32	
	-9.6	-10	3.49	3.49	3.49	3.49	3.49	
	-7.5	-8	3.70	3.70	3.70	3.70	3.70	
	-5.5	-6	3.91	3.91	3.91	3.91	3.91	
	-3.4	-4	4.05	4.04	4.04	4.00	3.96	
	-1.3	-2	4.19	4.17	4.16	4.08	4.00	
	0.8	0	4.41	4.35	4.29	4.13	3.98	
	3.9	3	4.79	4.62	4.45	4.20	3.95	
	7.0	6	5.23	4.89	4.55	4.23	3.91	
	10.1	9	5.20	4.87	4.53	4.21	3.88	
	13.2	12	5.16	4.83	4.50	4.17	3.84	
16.9	15.5	5.12	4.79	4.46	4.13	3.80		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 7 (m³/min)	10			2.90	2.12	3.47	2.41	3.75	2.48	3.99	2.52	4.47	2.72	4.64	2.64
	12			2.90	2.12	3.47	2.41	3.75	2.48	3.99	2.52	4.46	2.71	4.62	2.63
	14			2.90	2.12	3.47	2.41	3.75	2.48	3.98	2.52	4.44	2.71	4.60	2.62
	16			2.90	2.12	3.47	2.41	3.75	2.48	3.98	2.52	4.42	2.70	4.58	2.61
	18			2.90	2.12	3.47	2.41	3.75	2.48	3.97	2.51	4.41	2.69	4.56	2.61
	20			2.90	2.12	3.47	2.41	3.75	2.48	3.97	2.51	4.39	2.68	4.54	2.60
	22			2.90	2.12	3.47	2.41	3.75	2.48	3.95	2.51	4.34	2.66	4.48	2.58
	24			2.89	2.12	3.47	2.41	3.75	2.48	3.93	2.49	4.28	2.64	4.42	2.55
	26			2.89	2.12	3.45	2.40	3.72	2.46	3.88	2.47	4.21	2.60	4.35	2.52
	28	2.62	2.08	2.89	2.12	3.43	2.39	3.68	2.44	3.84	2.45	4.14	2.58	4.28	2.50
	30	2.62	2.08	2.88	2.11	3.41	2.38	3.65	2.43	3.79	2.43	4.08	2.55	4.22	2.47
	32	2.62	2.08	2.87	2.11	3.38	2.37	3.61	2.41	3.75	2.41	4.02	2.52	4.16	2.45
	34	2.62	2.08	2.87	2.11	3.37	2.36	3.56	2.39	3.69	2.39	3.93	2.49	4.07	2.42
	35	2.62	2.08	2.86	2.10	3.36	2.36	3.54	2.38	3.66	2.38	3.89	2.47	4.03	2.39
	36	2.62	2.08	2.86	2.10	3.34	2.35	3.52	2.37	3.62	2.36	3.82	2.44	3.95	2.37
38	2.62	2.08	2.85	2.09	3.29	2.33	3.49	2.36	3.55	2.32	3.68	2.38	3.79	2.31	
39	2.62	2.08	2.85	2.09	3.26	2.31	3.47	2.35	3.52	2.31	3.61	2.36	3.71	2.28	
41	2.62	2.08	2.84	2.09	3.16	2.27	3.33	2.29	3.37	2.25	3.45	2.30	3.54	2.22	
43	2.62	2.08	2.83	2.08	3.07	2.23	3.19	2.23	3.22	2.19	3.29	2.23	3.37	2.16	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB °CWB		16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
Lo 7 (m³/min)	-19.8	-20	2.36	2.36	2.36	2.36	2.36	
	-17.8	-18	2.51	2.51	2.51	2.51	2.51	
	-15.7	-16	2.66	2.66	2.66	2.66	2.66	
	-13.7	-14	2.82	2.82	2.82	2.82	2.82	
	-11.7	-12	2.97	2.97	2.97	2.97	2.97	
	-9.6	-10	3.12	3.12	3.12	3.12	3.12	
	-7.5	-8	3.31	3.31	3.31	3.31	3.31	
	-5.5	-6	3.50	3.50	3.50	3.50	3.50	
	-3.4	-4	3.62	3.62	3.61	3.58	3.54	
	-1.3	-2	3.74	3.73	3.72	3.65	3	

Model **FDW56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 11 (m ³ /min)	10			4.59	3.34	5.49	3.80	5.94	3.91	6.32	3.98	7.07	4.28	7.35	4.16
	12			4.59	3.34	5.49	3.80	5.94	3.91	6.31	3.97	7.05	4.27	7.31	4.14
	14			4.59	3.34	5.49	3.80	5.94	3.91	6.30	3.97	7.02	4.26	7.28	4.13
	16			4.59	3.34	5.49	3.80	5.94	3.91	6.29	3.96	7.00	4.25	7.25	4.11
	18			4.59	3.34	5.49	3.80	5.94	3.91	6.28	3.96	6.97	4.23	7.22	4.09
	20			4.59	3.34	5.49	3.80	5.94	3.91	6.27	3.95	6.95	4.23	7.19	4.08
	22			4.58	3.33	5.49	3.80	5.94	3.91	6.24	3.94	6.86	4.19	7.09	4.05
	24			4.58	3.33	5.48	3.79	5.94	3.91	6.21	3.92	6.77	4.14	6.99	4.01
	26			4.57	3.33	5.46	3.78	5.88	3.88	6.14	3.89	6.66	4.10	6.88	3.97
	28	4.14	3.27	4.57	3.33	5.43	3.76	5.82	3.85	6.07	3.86	6.56	4.06	6.78	3.93
	30	4.14	3.27	4.56	3.33	5.39	3.75	5.77	3.83	6.00	3.83	6.46	4.02	6.67	3.89
	32	4.14	3.27	4.55	3.32	5.35	3.73	5.71	3.80	5.93	3.80	6.36	3.97	6.57	3.85
	34	4.14	3.27	4.53	3.31	5.33	3.72	5.64	3.77	5.83	3.75	6.22	3.91	6.44	3.80
	35	4.14	3.27	4.52	3.31	5.32	3.72	5.60	3.75	5.79	3.74	6.16	3.89	6.37	3.77
	36	4.14	3.27	4.52	3.31	5.28	3.69	5.57	3.73	5.73	3.71	6.05	3.84	6.25	3.73
	38	4.14	3.27	4.51	3.30	5.20	3.65	5.52	3.71	5.62	3.66	5.82	3.75	6.00	3.64
	39	4.14	3.27	4.50	3.29	5.16	3.63	5.49	3.70	5.56	3.64	5.71	3.71	5.87	3.59
41	4.14	3.27	4.49	3.29	5.00	3.56	5.26	3.59	5.33	3.53	5.46	3.60	5.60	3.48	
43	4.14	3.27	4.47	3.28	4.85	3.49	5.04	3.50	5.10	3.44	5.21	3.51	5.32	3.39	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16	18	20	22	24	24
Hi 11 (m ³ /min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65
	-17.8	-18	3.89	3.89	3.89	3.89	3.89
	-15.7	-16	4.12	4.12	4.12	4.12	4.12
	-13.7	-14	4.36	4.36	4.36	4.36	4.36
	-11.7	-12	4.59	4.59	4.59	4.59	4.59
	-9.6	-10	4.83	4.83	4.83	4.83	4.83
	-7.5	-8	5.12	5.12	5.12	5.12	5.12
	-5.5	-6	5.42	5.42	5.42	5.42	5.42
	-3.4	-4	5.61	5.60	5.59	5.54	5.48
	-1.3	-2	5.80	5.78	5.76	5.65	5.54
	0.8	0	6.11	6.02	5.94	5.73	5.51
	3.9	3	6.63	6.39	6.16	5.81	5.47
	7.0	6	7.25	6.77	6.30	5.86	5.42
	10.1	9	7.20	6.74	6.28	5.82	5.37
	13.2	12	7.15	6.69	6.24	5.78	5.32
	16.9	15.5	7.10	6.64	6.18	5.73	5.27

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 9 (m ³ /min)	10			4.08	2.89	4.88	3.29	5.28	3.40	5.62	3.46	6.29	3.73	6.53	3.62
	12			4.08	2.89	4.88	3.29	5.28	3.40	5.61	3.46	6.27	3.72	6.50	3.61
	14			4.08	2.89	4.88	3.29	5.28	3.40	5.60	3.46	6.25	3.71	6.48	3.59
	16			4.08	2.89	4.88	3.29	5.28	3.40	5.59	3.45	6.22	3.70	6.45	3.58
	18			4.08	2.89	4.88	3.29	5.28	3.40	5.59	3.45	6.20	3.69	6.42	3.57
	20			4.08	2.89	4.88	3.29	5.28	3.40	5.58	3.45	6.18	3.68	6.39	3.56
	22			4.08	2.89	4.88	3.29	5.28	3.40	5.55	3.43	6.10	3.64	6.30	3.52
	24			4.07	2.89	4.88	3.29	5.28	3.40	5.53	3.42	6.02	3.61	6.22	3.48
	26			4.07	2.89	4.85	3.28	5.23	3.37	5.46	3.38	5.93	3.57	6.12	3.44
	28	3.69	2.83	4.06	2.88	4.83	3.27	5.18	3.35	5.40	3.36	5.83	3.52	6.03	3.41
	30	3.69	2.83	4.05	2.88	4.79	3.25	5.13	3.32	5.33	3.33	5.74	3.48	5.94	3.37
	32	3.69	2.83	4.04	2.87	4.76	3.23	5.08	3.30	5.27	3.30	5.65	3.44	5.85	3.33
	34	3.69	2.83	4.03	2.87	4.74	3.22	5.01	3.27	5.19	3.26	5.53	3.38	5.72	3.28
	35	3.69	2.83	4.02	2.86	4.73	3.22	4.98	3.25	5.14	3.24	5.47	3.36	5.66	3.26
	36	3.69	2.83	4.02	2.86	4.70	3.21	4.96	3.24	5.10	3.22	5.38	3.33	5.55	3.22
	38	3.69	2.83	4.01	2.86	4.62	3.17	4.91	3.22	5.00	3.18	5.18	3.24	5.33	3.13
	39	3.69	2.83	4.00	2.85	4.59	3.15	4.88	3.20	4.95	3.15	5.08	3.20	5.22	3.09
41	3.69	2.83	3.99	2.85	4.45	3.08	4.68	3.11	4.74	3.06	4.86	3.11	4.98	3.00	
43	3.69	2.83	3.98	2.84	4.31	3.02	4.48	3.02	4.53	2.96	4.63	3.01	4.73	2.90	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16	18	20	22	24	24
Me 9 (m ³ /min)	-19.8	-20	3.32	3.32	3.32	3.32	3.32
	-17.8	-18	3.54	3.54	3.54	3.54	3.54
	-15.7	-16	3.75	3.75	3.75	3.75	3.75
	-13.7	-14	3.97	3.97	3.97	3.97	3.97
	-11.7	-12	4.18	4.18	4.18	4.18	4.18
	-9.6	-10	4.39	4.39	4.39	4.39	4.39
	-7.5	-8	4.66	4.66	4.66	4.66	4.66
	-5.5	-6	4.93	4.93	4.93	4.93	4.93
	-3.4	-4	5.10	5.09	5.09	5.04	4.99
	-1.3	-2	5.27	5.26	5.24	5.14	5.04
	0.8	0	5.56	5.48	5.40	5.21	5.01
	3.9	3	6.03	5.82	5.60	5.29	4.97
	7.0	6	6.59	6.16	5.73	5.33	4.93
	10.1	9	6.55	6.13	5.71	5.30	4.88
	13.2	12	6.50	6.09	5.67	5.26	4.84
	16.9	15.5	6.45	6.04	5.62	5.21	4.79

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 8 (m ³ /min)	10			3.53	2.53	4.22	2.87	4.57	2.97	4.86	3.02	5.44	3.25	5.65	3.15
	12			3.53	2.53	4.22	2.87	4.57	2.97	4.85	3.02	5.42	3.25	5.63	3.14
	14			3.53	2.53	4.22	2.87	4.57	2.97	4.85	3.02	5.41	3.24	5.60	3.13
	16			3.53	2.53	4.22	2.87	4.57	2.97	4.84	3.01	5.39	3.23	5.58	3.12
	18			3.53	2.53	4.22	2.87	4.57	2.97	4.83	3.01	5.37	3.22	5.56	3.12
	20			3.53	2.53	4.22	2.87	4.57	2.97	4.83	3.01	5.35	3.21	5.53	3.10
	22			3.53	2.53	4.22	2.87	4.57	2.97	4.81	3.00	5.28	3.18	5.46	3.08
	24			3.52	2.53	4.22	2.87	4.57	2.97	4.78	2.98	5.21	3.15	5.38	3.05
	26			3.52	2.53	4.20	2.86	4.53	2.95	4.73	2.96	5.13	3.12	5.30	3.01
	28	3.19	2.48	3.52	2.53	4.18	2.85	4.48	2.92	4.67	2.93	5.05	3.08	5.22	2.98
	30	3.19	2.48	3.51	2.52	4.15	2.84	4.44	2.91	4.62	2.91	4.97	3.05	5.14	2.95
	32	3.19	2.48	3.50	2.52	4.12	2.83	4.40	2.89	4.56	2.88	4.89	3.01	5.06	2.92
	34	3.19	2.48	3.49	2.51	4.10	2.82	4.34	2.85	4.49	2.85	4.79	2.97	4.95	2.88
	35	3.19	2.48	3.48	2.51	4.09	2.81	4.31	2.84	4.45	2.83	4.74	2.95	4.90	2.86
	36	3.19	2.48	3.48	2.51	4.06	2.80	4.29	2.83	4.41	2.81	4.65	2.91	4.81	2.82
	38	3.19	2.48	3.47	2.50	4.00	2.77	4.25	2.81	4.32	2.77	4.48	2.84	4.62	2.75
	39	3.19	2.48	3.47	2.50	3.97	2.76	4.22	2.80	4.28	2.76	4.40	2.81	4.52	2.71
41	3.19	2.48	3.45	2.49	3.85	2.70	4.05	2.72	4.10	2.68	4.20	2.72	4.31	2.63	
43	3.19	2.48	3.44	2.49	3.73	2.64	3.88	2.65	3.92	2.60	4.01	2.65	4.10	2.56	

Air flow	Outdoor air temperature	Indoor air temperature					
		°CDB		°CWB		°CDB	
		16	18	20	22	24	24
Lo 8 (m ³ /min)	-19.8	-20	2.98	2.98	2.98	2.98	2.98
	-17.8	-18	3.17	3.17	3.17	3.17	3.17
	-15.7	-16	3.36	3.36	3.36	3.36	3.36
	-13.7	-14	3.55	3.55	3.55	3.55	3.55
	-11.7	-12	3.74	3.74	3.74	3.74	3.74
	-9.6	-10	3.93	3.93	3.93	3.93	3.93
	-7.5	-8	4.17	4.17	4.17	4.17	4.17
	-5.5	-6	4.41	4.41	4.41	4.41	4.41
	-3.4	-4	4.57	4.56	4.55	4.51	4.46
	-1.3	-2	4.72	4.71	4.69	4.60	4.51
	0.8	0	4.98	4.91	4.84	4.66	4.49
	3.9	3	5.40	5.21	5.01	4.73	4.45
	7						

(13) Floor standing (with casing) type (FDL)

Model **FDL71KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 18 (m ³ /min)	10			5.82	4.76	6.96	5.38	7.53	5.51	8.01	5.57	8.97	6.01	9.31	5.86
	12			5.82	4.76	6.96	5.38	7.53	5.51	8.00	5.57	8.94	6.00	9.27	5.84
	14			5.82	4.76	6.96	5.38	7.53	5.51	7.99	5.57	8.90	5.98	9.23	5.83
	16			5.82	4.76	6.96	5.38	7.53	5.51	7.97	5.56	8.87	5.97	9.19	5.81
	18			5.82	4.76	6.96	5.38	7.53	5.51	7.96	5.55	8.84	5.96	9.15	5.80
	20			5.82	4.76	6.96	5.38	7.53	5.51	7.95	5.55	8.81	5.95	9.11	5.79
	22			5.81	4.76	6.95	5.38	7.53	5.51	7.92	5.54	8.70	5.91	8.99	5.75
	24			5.80	4.75	6.95	5.38	7.53	5.51	7.88	5.52	8.58	5.87	8.86	5.70
	26			5.80	4.75	6.92	5.37	7.46	5.48	7.79	5.49	8.45	5.82	8.73	5.66
	28	5.25	4.69	5.79	4.75	6.89	5.35	7.38	5.45	7.69	5.45	8.31	5.77	8.59	5.62
	30	5.25	4.69	5.78	4.75	6.83	5.33	7.31	5.42	7.60	5.41	8.19	5.72	8.46	5.57
	32	5.25	4.69	5.77	4.74	6.78	5.31	7.24	5.38	7.51	5.38	8.06	5.68	8.33	5.53
	34	5.25	4.69	5.75	4.73	6.76	5.30	7.15	5.34	7.39	5.32	7.89	5.62	8.16	5.47
	35	5.25	4.69	5.74	4.73	6.75	5.30	7.10	5.33	7.33	5.30	7.80	5.59	8.08	5.44
	36	5.25	4.69	5.73	4.72	6.69	5.27	7.06	5.31	7.26	5.27	7.66	5.52	7.92	5.39
	38	5.25	4.69	5.72	4.72	6.59	5.23	6.99	5.28	7.12	5.22	7.38	5.43	7.61	5.29
39	5.25	4.69	5.71	4.71	6.54	5.21	6.96	5.27	7.05	5.19	7.24	5.38	7.45	5.24	
41	5.25	4.69	5.69	4.71	6.35	5.12	6.67	5.15	6.76	5.08	6.92	5.26	7.10	5.11	
43	5.25	4.69	5.67	4.70	6.15	5.04	6.39	5.04	6.46	4.94	6.60	5.15	6.75	5.01	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 18 (m ³ /min)	-19.8	-20	4.64	4.64	4.64	4.64
-17.8	-18		4.94	4.94	4.94	4.94	4.94	
-15.7	-16		5.24	5.24	5.24	5.24	5.24	
-13.7	-14		5.54	5.54	5.54	5.54	5.54	
-11.7	-12		5.83	5.83	5.83	5.83	5.83	
-9.6	-10		6.13	6.13	6.13	6.13	6.13	
-7.5	-8		6.51	6.51	6.51	6.51	6.51	
-5.5	-6		6.88	6.88	6.88	6.88	6.88	
-3.4	-4		7.12	7.11	7.10	7.03	6.96	
-1.3	-2		7.36	7.34	7.32	7.18	7.04	
0.8	0		7.76	7.65	7.54	7.27	7.00	
3.9	3		8.42	8.12	7.82	7.38	6.94	
7.0	6		9.20	8.60	8.00	7.44	6.88	
10.1	9		9.14	8.56	7.97	7.40	6.82	
13.2	12		9.08	8.50	7.92	7.34	6.76	
16.9	15.5		9.01	8.43	7.85	7.27	6.69	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 15 (m ³ /min)	10			5.11	4.14	6.10	4.68	6.60	4.78	7.03	4.85	7.87	5.24	8.17	5.10
	12			5.11	4.14	6.10	4.68	6.60	4.78	7.02	4.85	7.84	5.23	8.14	5.09
	14			5.11	4.14	6.10	4.68	6.60	4.78	7.01	4.84	7.81	5.22	8.10	5.08
	16			5.11	4.14	6.10	4.68	6.60	4.78	7.00	4.84	7.78	5.20	8.07	5.07
	18			5.11	4.14	6.10	4.68	6.60	4.78	6.99	4.83	7.76	5.20	8.03	5.05
	20			5.11	4.14	6.10	4.68	6.60	4.78	6.98	4.83	7.73	5.18	8.00	5.04
	22			5.10	4.14	6.10	4.68	6.60	4.78	6.95	4.82	7.63	5.15	7.89	5.01
	24			5.09	4.13	6.10	4.68	6.60	4.78	6.91	4.80	7.53	5.10	7.78	4.97
	26			5.09	4.13	6.07	4.67	6.54	4.76	6.83	4.77	7.41	5.06	7.66	4.92
	28	4.61	4.08	5.08	4.13	6.04	4.65	6.48	4.73	6.75	4.74	7.29	5.01	7.54	4.88
	30	4.61	4.08	5.07	4.13	6.00	4.64	6.42	4.71	6.67	4.70	7.18	4.97	7.43	4.84
	32	4.61	4.08	5.06	4.12	5.95	4.61	6.35	4.68	6.59	4.67	7.07	4.93	7.31	4.80
	34	4.61	4.08	5.04	4.11	5.93	4.61	6.27	4.65	6.49	4.63	6.92	4.87	7.16	4.75
	35	4.61	4.08	5.03	4.11	5.92	4.60	6.23	4.63	6.44	4.61	6.85	4.85	7.09	4.72
	36	4.61	4.08	5.03	4.11	5.87	4.58	6.20	4.62	6.37	4.58	6.73	4.80	6.95	4.68
	38	4.61	4.08	5.02	4.10	5.78	4.54	6.14	4.59	6.25	4.54	6.48	4.71	6.67	4.58
39	4.61	4.08	5.01	4.10	5.74	4.53	6.11	4.58	6.19	4.51	6.36	4.67	6.54	4.54	
41	4.61	4.08	4.99	4.09	5.57	4.45	5.86	4.48	5.93	4.41	6.07	4.57	6.23	4.44	
43	4.61	4.08	4.97	4.06	5.40	4.38	5.61	4.38	5.67	4.31	5.79	4.47	5.92	4.34	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 15 (m ³ /min)	-19.8	-20	4.21	4.21	4.21	4.21
-17.8	-18		4.48	4.48	4.48	4.48	4.48	
-15.7	-16		4.75	4.75	4.75	4.75	4.75	
-13.7	-14		5.02	5.02	5.02	5.02	5.02	
-11.7	-12		5.29	5.29	5.29	5.29	5.29	
-9.6	-10		5.56	5.56	5.56	5.56	5.56	
-7.5	-8		5.90	5.90	5.90	5.90	5.90	
-5.5	-6		6.24	6.24	6.24	6.24	6.24	
-3.4	-4		6.45	6.44	6.43	6.37	6.31	
-1.3	-2		6.67	6.65	6.63	6.51	6.38	
0.8	0		7.03	6.93	6.83	6.59	6.34	
3.9	3		7.63	7.36	7.09	6.69	6.29	
7.0	6		8.34	7.79	7.25	6.74	6.24	
10.1	9		8.28	7.75	7.22	6.70	6.18	
13.2	12		8.23	7.70	7.18	6.65	6.13	
16.9	15.5		8.17	7.64	7.11	6.59	6.06	

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 12 (m ³ /min)	10			4.29	3.41	5.12	3.85	5.54	3.94	5.90	3.99	6.61	4.31	6.86	4.20
	12			4.29	3.41	5.12	3.85	5.54	3.94	5.89	3.99	6.58	4.30	6.83	4.19
	14			4.29	3.41	5.12	3.85	5.54	3.94	5.88	3.99	6.56	4.29	6.80	4.18
	16			4.29	3.41	5.12	3.85	5.54	3.94	5.87	3.98	6.54	4.29	6.77	4.17
	18			4.29	3.41	5.12	3.85	5.54	3.94	5.87	3.98	6.51	4.27	6.74	4.15
	20			4.29	3.41	5.12	3.85	5.54	3.94	5.86	3.98	6.49	4.27	6.71	4.14
	22			4.28	3.40	5.12	3.85	5.54	3.94	5.83	3.96	6.41	4.23	6.62	4.11
	24			4.27	3.40	5.12	3.85	5.54	3.94	5.80	3.95	6.32	4.20	6.53	4.08
	26			4.27	3.40	5.10	3.84	5.49	3.92	5.74	3.93	6.22	4.16	6.43	4.05
	28	3.87	3.35	4.27	3.40	5.07	3.82	5.44	3.89	5.67	3.90	6.12	4.12	6.33	4.01
	30	3.87	3.35	4.26	3.39	5.03	3.81	5.39	3.87	5.60	3.87	6.03	4.08	6.23	3.98
	32	3.87	3.35	4.25	3.39	4.99	3.79	5.33	3.85	5.54	3.85	5.94	4.05	6.14	3.94
	34	3.87	3.35	4.23	3.38	4.98	3.79	5.26	3.82	5.45	3.81	5.81	4.00	6.01	3.89
	35	3.87	3.35	4.23	3.38	4.97	3.78	5.23	3.81	5.40	3.79	5.75	3.98	5.95	3.87
	36	3.87	3.35	4.22	3.37	4.93	3.76	5.20	3.79	5.35	3.77	5.65	3.94	5.83	3.83
	38	3.87	3.35	4.21	3.37	4.86	3.73	5.15	3.77	5.25	3.73	5.44	3.86	5.60	3.75
39	3.87	3.35	4.20	3.36	4.82	3.72	5.13	3.76	5.20	3.71	5.34	3.83	5.49	3.72	
41	3.87	3.35	4.19	3.36	4.67	3.65	4.92	3.68	4.98	3.62	5.10	3.74	5.23	3.63	
43	3.87	3.35	4.18	3.36	4.53	3.59	4.71	3.59	4.76	3.54	4.86	3.65	4.97	3.55	

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Lo 12 (m ³ /min)	-19.8	-20	3.53	3.53	3.53	3.53
-17.8	-18		3.76	3.76	3.76	3.76	3.76	
-15.7	-16		3.99	3.99	3.99	3.99	3.99	
-13.7	-14		4.21	4.21	4.21	4.21	4.21	
-11.7	-12		4.44	4.44	4.44	4.44	4.44	
-9.6	-10		4.67	4.67	4.67	4.67	4.67	
-7.5	-8		4.95	4.95	4.95	4.95	4.95	
-5.5	-6		5.24	5.24	5.24	5.24	5.24	
-3.4	-4		5.42	5.41	5.40	5.35	5.30	
-1.3	-2		5.60	5.59	5.57	5.47	5.36	
0.8	0		5.91	5.82	5.74	5.53	5.33	
3.9	3		6.41	6.18	5.95	5.62	5.28	

(14) Floor standing (without casing) type (FDPU)

Model		FDPU28KXE6F														Cooling mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																																									
		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																												
Hi	10			2.30	2.21	2.74	2.63	2.97	2.75	3.16	2.77	3.54	3.02	3.67	2.96																												
	12			2.30	2.21	2.74	2.63	2.97	2.75	3.15	2.77	3.52	3.01	3.66	2.95																												
	14			2.30	2.21	2.74	2.63	2.97	2.75	3.15	2.77	3.51	3.01	3.64	2.95																												
	16			2.30	2.21	2.74	2.63	2.97	2.75	3.14	2.77	3.50	3.00	3.63	2.95																												
	18			2.30	2.21	2.74	2.63	2.97	2.75	3.14	2.77	3.49	3.00	3.61	2.94																												
	20			2.30	2.21	2.74	2.63	2.97	2.75	3.14	2.77	3.47	2.99	3.59	2.93																												
	22			2.29	2.20	2.74	2.63	2.97	2.75	3.12	2.76	3.43	2.98	3.54	2.92																												
	24			2.29	2.20	2.74	2.63	2.97	2.75	3.11	2.76	3.39	2.97	3.50	2.91																												
	26			2.29	2.20	2.73	2.62	2.94	2.74	3.07	2.74	3.33	2.95	3.44	2.88																												
	28	2.07	1.99	2.28	2.19	2.72	2.61	2.91	2.73	3.03	2.73	3.28	2.93	3.39	2.87																												
	30	2.07	1.99	2.28	2.19	2.70	2.59	2.88	2.72	3.00	2.72	3.23	2.91	3.34	2.85																												
	32	2.07	1.99	2.27	2.18	2.67	2.56	2.86	2.72	2.96	2.71	3.18	2.90	3.29	2.84																												
	34	2.07	1.99	2.27	2.18	2.66	2.55	2.82	2.70	2.92	2.69	3.11	2.88	3.22	2.82																												
	35	2.07	1.99	2.26	2.17	2.66	2.55	2.80	2.69	2.89	2.68	3.08	2.87	3.18	2.81																												
36	2.07	1.99	2.26	2.17	2.64	2.53	2.79	2.68	2.86	2.67	3.02	2.85	3.12	2.79																													
38	2.07	1.99	2.25	2.16	2.60	2.50	2.76	2.65	2.81	2.65	2.91	2.79	3.00	2.75																													
39	2.07	1.99	2.25	2.16	2.58	2.48	2.74	2.63	2.78	2.64	2.86	2.75	2.94	2.73																													
41	2.07	1.99	2.24	2.15	2.50	2.40	2.63	2.52	2.66	2.55	2.73	2.62	2.80	2.69																													
43	2.07	1.99	2.24	2.15	2.43	2.33	2.52	2.42	2.55	2.45	2.60	2.50	2.66	2.55																													

Model		FDPU28KXE6F														Heating mode														(kW)													
Air flow	Outdoor air temperature	Indoor air temperature																																									
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB																													
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																												
Hi	-19.8	-20	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86																													
	-17.8	-18	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98																													
	-15.7	-16	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09																													
	-13.7	-14	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21																													
	-11.7	-12	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33																													
	-9.6	-10	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45																													
	-7.5	-8	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60																													
	-5.5	-6	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75																													
	-3.4	-4	2.85	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84																													
	-1.3	-2	2.94	2.94	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93																													
	0.8	0	3.10	3.06	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02																													
	3.9	3	3.37	3.25	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13																													
	7.0	6	3.68	3.44	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20																													
	10.1	9	3.66	3.42	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19																													
13.2	12	3.63	3.40	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17																														
16.9	15.5	3.60	3.37	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14																														

Model		FDPU28KXE6F														Cooling mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																																									
		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																												
Me	10			2.17	2.08	2.60	2.50	2.81	2.56	2.99	2.58	3.35	2.81	3.48	2.74																												
	12			2.17	2.08	2.60	2.50	2.81	2.56	2.98	2.58	3.34	2.80	3.46	2.74																												
	14			2.17	2.08	2.60	2.50	2.81	2.56	2.98	2.58	3.32	2.79	3.45	2.74																												
	16			2.17	2.08	2.60	2.50	2.81	2.56	2.98	2.58	3.31	2.79	3.43	2.73																												
	18			2.17	2.08	2.60	2.50	2.81	2.56	2.97	2.57	3.30	2.78	3.42	2.73																												
	20			2.17	2.08	2.60	2.50	2.81	2.56	2.97	2.57	3.29	2.78	3.40	2.72																												
	22			2.17	2.08	2.60	2.50	2.81	2.56	2.95	2.57	3.25	2.77	3.35	2.71																												
	24			2.17	2.08	2.59	2.49	2.81	2.56	2.94	2.56	3.20	2.75	3.31	2.69																												
	26			2.16	2.07	2.58	2.48	2.78	2.55	2.91	2.55	3.15	2.74	3.26	2.68																												
	28	1.96	1.88	2.16	2.07	2.57	2.47	2.76	2.54	2.87	2.53	3.10	2.72	3.21	2.67																												
	30	1.96	1.88	2.16	2.07	2.55	2.45	2.73	2.53	2.84	2.52	3.06	2.71	3.16	2.65																												
	32	1.96	1.88	2.15	2.06	2.53	2.43	2.70	2.52	2.80	2.51	3.01	2.68	3.11	2.63																												
	34	1.96	1.88	2.14	2.05	2.52	2.42	2.67	2.51	2.76	2.50	2.94	2.66	3.05	2.61																												
	35	1.96	1.88	2.14	2.05	2.52	2.42	2.65	2.50	2.74	2.49	2.91	2.65	3.01	2.60																												
36	1.96	1.88	2.14	2.05	2.50	2.40	2.64	2.50	2.71	2.48	2.86	2.64	2.96	2.59																													
38	1.96	1.88	2.13	2.04	2.46	2.36	2.61	2.49	2.66	2.46	2.76	2.61	2.84	2.55																													
39	1.96	1.88	2.13	2.04	2.44	2.34	2.60	2.48	2.63	2.45	2.70	2.59	2.78	2.53																													
41	1.96	1.88	2.12	2.04	2.37	2.28	2.49	2.39	2.52	2.41	2.58	2.48	2.65	2.49																													
43	1.96	1.88	2.12	2.04	2.30	2.21	2.39	2.29	2.41	2.31	2.46	2.36	2.52	2.42																													

Model		FDPU28KXE6F														Heating mode														(kW)													
Air flow	Outdoor air temperature	Indoor air temperature																																									
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB																													
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC																												
Me	-19.8	-20	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76																													
	-17.8	-18	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88																													
	-15.7	-16	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99																													
	-13.7	-14	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10																													
	-11.7	-12	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22																													
	-9.6	-10	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33																													
	-7.5	-8	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47																													
	-5.5	-6	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61																													
	-3.4	-4	2.71	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70																													
	-1.3	-2	2.80	2.79	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78																													
	0.8	0	2.95	2.91	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87																													
	3.9	3	3.20	3.09	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97																													
	7.0	6	3.50	3.27	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04																													
	10.1	9	3.47	3.25	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03																													
13.2	12	3.45	3.23	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01																														
16.9	15.5	3.42	3.20	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98																														

Model		FDPU28KXE6F														Cooling mode														(kW)													
Air flow	Outdoor air temperature (°CDB)	Indoor air temperature																																									
		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																												
Lo	10			2.04	1.96	2.44	2.34	2.64	2.40	2.81	2.42	3.15	2.62	3.27	2.57																												
	12			2.04	1.96	2.44	2.34	2.64	2.40	2.80	2.42	3.13	2.62	3.25	2.56																												
	14			2.04	1.96	2.44	2.34	2.64	2.40	2.80	2.42	3.12	2.61	3.24	2.56																												
	16			2.04	1.96	2.44	2.34	2.64	2.40	2.80	2.42	3.11	2.61	3.22	2.55																												
	18			2.04	1.96	2.44	2.34	2.64	2.40	2.79	2.41	3.10	2.60	3.21	2.55																												
	20			2.04	1.96	2.44	2.34	2.64	2.40	2.79	2.41	3.09	2.60	3.20	2.55																												
	22			2.04	1.96	2.44	2.34	2.64	2.40	2.78	2.41	3.05	2.59	3.15	2.53																												
	24			2.04	1.96	2.44	2.34	2.64	2.40	2.76	2.40	3.01	2.58	3.11	2.52																												
	26			2.03	1.95	2.43	2.33	2.61	2.39	2.73	2.39	2.96	2.56	3																													

Model **FDFU45KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 14 (m ³ /min)	10			3.69	3.35	4.41	3.79	4.77	3.86	5.07	3.90	5.68	4.22	5.90	4.13
	12			3.69	3.35	4.41	3.79	4.77	3.86	5.07	3.90	5.66	4.22	5.88	4.12
	14			3.69	3.35	4.41	3.79	4.77	3.86	5.06	3.89	5.64	4.21	5.85	4.11
	16			3.69	3.35	4.41	3.79	4.77	3.86	5.05	3.89	5.62	4.20	5.83	4.11
	18			3.69	3.35	4.41	3.79	4.77	3.86	5.05	3.89	5.60	4.19	5.80	4.10
	20			3.69	3.35	4.41	3.79	4.77	3.86	5.04	3.88	5.58	4.19	5.78	4.09
	22			3.68	3.35	4.41	3.79	4.77	3.86	5.02	3.88	5.51	4.16	5.70	4.06
	24			3.68	3.35	4.41	3.79	4.77	3.86	4.99	3.87	5.44	4.14	5.62	4.04
	26			3.68	3.35	4.39	3.78	4.73	3.84	4.93	3.84	5.35	4.11	5.53	4.01
	28	3.33	3.20	3.67	3.34	4.37	3.78	4.68	3.82	4.88	3.82	5.27	4.07	5.44	3.97
	30	3.33	3.20	3.66	3.34	4.33	3.76	4.64	3.81	4.82	3.80	5.19	4.04	5.36	3.95
	32	3.33	3.20	3.65	3.33	4.30	3.75	4.59	3.79	4.76	3.78	5.11	4.02	5.28	3.92
	34	3.33	3.20	3.64	3.33	4.28	3.74	4.53	3.77	4.69	3.75	5.00	3.98	5.17	3.89
	35	3.33	3.20	3.64	3.33	4.28	3.74	4.50	3.76	4.65	3.74	4.95	3.96	5.12	3.87
	36	3.33	3.20	3.63	3.33	4.24	3.72	4.48	3.75	4.60	3.72	4.86	3.93	5.02	3.84
	38	3.33	3.20	3.62	3.32	4.18	3.70	4.43	3.73	4.52	3.69	4.68	3.87	4.82	3.78
	39	3.33	3.20	3.62	3.32	4.15	3.69	4.41	3.72	4.47	3.67	4.59	3.84	4.72	3.75
	41	3.33	3.20	3.61	3.32	4.02	3.64	4.23	3.65	4.28	3.60	4.39	3.78	4.50	3.68
43	3.33	3.20	3.59	3.31	3.90	3.58	4.05	3.59	4.09	3.54	4.18	3.71	4.28	3.61	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Hi 14 (m ³ /min)	-19.8	-20	2.90	2.90	2.90	2.90
-17.8	-18		3.09	3.09	3.09	3.09	3.09	
-15.7	-16		3.27	3.27	3.27	3.27	3.27	
-13.7	-14		3.46	3.46	3.46	3.46	3.46	
-11.7	-12		3.65	3.65	3.65	3.65	3.65	
-9.6	-10		3.83	3.83	3.83	3.83	3.83	
-7.5	-8		4.07	4.07	4.07	4.07	4.07	
-5.5	-6		4.30	4.30	4.30	4.30	4.30	
-3.4	-4		4.45	4.44	4.44	4.39	4.35	
-1.3	-2		4.60	4.59	4.58	4.49	4.40	
0.8	0		4.85	4.78	4.71	4.54	4.38	
3.9	3		5.26	5.08	4.89	4.61	4.34	
7.0	6		5.75	5.38	5.00	4.65	4.30	
10.1	9		5.71	5.35	4.98	4.62	4.26	
13.2	12		5.68	5.31	4.95	4.59	4.23	
16.9	15.5		5.63	5.27	4.91	4.54	4.18	

Indoor air temperature

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 12 (m ³ /min)	10			3.31	2.93	3.96	3.32	4.28	3.38	4.56	3.43	5.10	3.70	5.30	3.62
	12			3.31	2.93	3.96	3.32	4.28	3.38	4.55	3.42	5.09	3.70	5.28	3.61
	14			3.31	2.93	3.96	3.32	4.28	3.38	4.54	3.42	5.07	3.69	5.25	3.60
	16			3.31	2.93	3.96	3.32	4.28	3.38	4.54	3.42	5.05	3.68	5.23	3.59
	18			3.31	2.93	3.96	3.32	4.28	3.38	4.53	3.41	5.03	3.68	5.21	3.59
	20			3.31	2.93	3.96	3.32	4.28	3.38	4.53	3.41	5.01	3.67	5.18	3.58
	22			3.31	2.93	3.96	3.32	4.28	3.38	4.50	3.40	4.95	3.65	5.11	3.56
	24			3.30	2.93	3.96	3.32	4.28	3.38	4.48	3.40	4.88	3.62	5.04	3.53
	26			3.30	2.93	3.94	3.31	4.24	3.37	4.43	3.38	4.81	3.60	4.97	3.51
	28	2.99	2.87	3.30	2.93	3.92	3.31	4.20	3.35	4.38	3.36	4.73	3.57	4.89	3.48
	30	2.99	2.87	3.29	2.92	3.89	3.29	4.16	3.34	4.33	3.33	4.66	3.55	4.82	3.46
	32	2.99	2.87	3.28	2.92	3.86	3.28	4.12	3.32	4.28	3.31	4.59	3.52	4.74	3.44
	34	2.99	2.87	3.27	2.92	3.84	3.27	4.07	3.30	4.21	3.29	4.49	3.48	4.64	3.40
	35	2.99	2.87	3.26	2.91	3.84	3.27	4.04	3.29	4.17	3.27	4.44	3.46	4.60	3.39
	36	2.99	2.87	3.26	2.91	3.81	3.26	4.02	3.28	4.13	3.26	4.36	3.44	4.51	3.36
	38	2.99	2.87	3.25	2.91	3.75	3.24	3.98	3.27	4.05	3.23	4.20	3.38	4.33	3.30
	39	2.99	2.87	3.25	2.91	3.72	3.23	3.96	3.26	4.01	3.21	4.12	3.36	4.24	3.27
	41	2.99	2.87	3.24	2.90	3.61	3.18	3.80	3.20	3.84	3.15	3.94	3.30	4.04	3.21
43	2.99	2.87	3.23	2.90	3.50	3.14	3.64	3.14	3.68	3.09	3.76	3.24	3.84	3.15	

Indoor air temperature

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Me 12 (m ³ /min)	-19.8	-20	2.60	2.60	2.60	2.60
-17.8	-18		2.77	2.77	2.77	2.77	2.77	
-15.7	-16		2.93	2.93	2.93	2.93	2.93	
-13.7	-14		3.10	3.10	3.10	3.10	3.10	
-11.7	-12		3.27	3.27	3.27	3.27	3.27	
-9.6	-10		3.43	3.43	3.43	3.43	3.43	
-7.5	-8		3.64	3.64	3.64	3.64	3.64	
-5.5	-6		3.85	3.85	3.85	3.85	3.85	
-3.4	-4		3.99	3.98	3.98	3.94	3.90	
-1.3	-2		4.12	4.11	4.10	4.02	3.94	
0.8	0		4.35	4.28	4.22	4.07	3.92	
3.9	3		4.72	4.55	4.38	4.13	3.89	
7.0	6		5.15	4.82	4.48	4.17	3.85	
10.1	9		5.12	4.79	4.46	4.14	3.82	
13.2	12		5.08	4.76	4.44	4.11	3.79	
16.9	15.5		5.05	4.72	4.40	4.07	3.75	

Indoor air temperature

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 10 (m ³ /min)	10			2.89	2.53	3.46	2.87	3.74	2.92	3.98	2.95	4.46	3.19	4.63	3.12
	12			2.89	2.53	3.46	2.87	3.74	2.92	3.98	2.95	4.44	3.19	4.61	3.11
	14			2.89	2.53	3.46	2.87	3.74	2.92	3.97	2.95	4.43	3.18	4.59	3.10
	16			2.89	2.53	3.46	2.87	3.74	2.92	3.96	2.94	4.41	3.17	4.57	3.10
	18			2.89	2.53	3.46	2.87	3.74	2.92	3.96	2.94	4.39	3.17	4.55	3.09
	20			2.89	2.53	3.46	2.87	3.74	2.92	3.95	2.94	4.38	3.16	4.53	3.08
	22			2.89	2.53	3.46	2.87	3.74	2.92	3.94	2.94	4.32	3.14	4.47	3.06
	24			2.89	2.53	3.46	2.87	3.74	2.92	3.92	2.93	4.27	3.12	4.41	3.04
	26			2.88	2.53	3.44	2.86	3.71	2.91	3.87	2.91	4.20	3.10	4.34	3.02
	28	2.61	2.50	2.88	2.53	3.42	2.85	3.67	2.89	3.83	2.89	4.13	3.07	4.27	3.00
	30	2.61	2.50	2.87	2.52	3.40	2.84	3.64	2.88	3.78	2.87	4.07	3.05	4.21	2.98
	32	2.61	2.50	2.87	2.52	3.37	2.83	3.60	2.86	3.74	2.86	4.01	3.03	4.14	2.96
	34	2.61	2.50	2.86	2.52	3.36	2.82	3.55	2.84	3.68	2.84	3.92	3.00	4.06	2.93
	35	2.61	2.50	2.85	2.51	3.35	2.82	3.53	2.84	3.65	2.83	3.88	2.99	4.02	2.92
	36	2.61	2.50	2.85	2.51	3.33	2.81	3.51	2.83	3.61	2.81	3.81	2.96	3.94	2.89
	38	2.61	2.50	2.84	2.51	3.28	2.79	3.48	2.82	3.54	2.78	3.67	2.91	3.78	2.84
	39	2.61	2.50	2.84	2.51	3.25	2.78	3.46	2.81	3.51	2.77	3.60	2.89	3.70	2.82
	41	2.61	2.50	2.83	2.51	3.15	2.74	3.32	2.75	3.36	2.72	3.44	2.83	3.53	2.74
43	2.61	2.50	2.82	2.50	3.06	2.70	3.18	2.70	3.21	2.66	3.28	2.78	3.36	2.69	

Indoor air temperature

Air flow	Outdoor air temperature	Indoor air temperature						
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB
		Lo 10 (m ³ /min)	-19.8	-20	2.27	2.27	2.27	2.27
-17.8	-18		2.41	2.41	2.41	2.41	2.41	
-15.7	-16		2.56	2.56	2.56	2.56	2.56	
-13.7	-14		2.71	2.71	2.71	2.71	2.71	
-11.7	-12		2.85	2.85	2.85	2.85	2.85	
-9.6	-10		3.00	3.00	3.00	3.00	3.00	
-7.5	-8		3.18	3.18	3.18	3.18	3.18	
-5.5	-6		3.36	3.36	3.36	3.36	3.36	
-3.4	-4		3.48	3.48	3.47	3.44	3.40	
-1.3	-2		3.60	3.59	3.58	3.51	3.44	
0.8	0		3.79	3.74	3.69	3.55	3.42	
3.9	3		4.12	3.97	3.82	3.61	3.39	
7.0	6		4.50	4.20	3.91	3.64	3.36	
10.1</								

Model **FDFU56KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Hi 14 (m ³ /min)	10			4.59	3.77	5.49	4.26	5.94	4.35	6.32	4.41	7.07	4.76	7.35	4.64
	12			4.59	3.77	5.49	4.26	5.94	4.35	6.31	4.41	7.05	4.75	7.31	4.63
	14			4.59	3.77	5.49	4.26	5.94	4.35	6.30	4.41	7.02	4.74	7.28	4.62
	16			4.59	3.77	5.49	4.26	5.94	4.35	6.29	4.40	7.00	4.73	7.25	4.61
	18			4.59	3.77	5.49	4.26	5.94	4.35	6.28	4.40	6.97	4.72	7.22	4.60
	20			4.59	3.77	5.49	4.26	5.94	4.35	6.27	4.39	6.95	4.71	7.19	4.59
	22			4.58	3.76	5.49	4.26	5.94	4.35	6.24	4.38	6.86	4.68	7.09	4.55
	24			4.58	3.76	5.48	4.26	5.94	4.35	6.21	4.37	6.77	4.65	6.99	4.52
	26			4.57	3.76	5.46	4.25	5.88	4.33	6.14	4.34	6.66	4.61	6.88	4.48
	28	4.14	3.71	4.57	3.76	5.43	4.23	5.82	4.30	6.07	4.31	6.56	4.57	6.78	4.45
	30	4.14	3.71	4.56	3.75	5.39	4.22	5.77	4.28	6.00	4.28	6.46	4.53	6.67	4.41
	32	4.14	3.71	4.55	3.75	5.35	4.20	5.71	4.26	5.93	4.25	6.36	4.49	6.57	4.37
	34	4.14	3.71	4.53	3.74	5.33	4.19	5.64	4.23	5.83	4.21	6.22	4.44	6.44	4.33
	35	4.14	3.71	4.52	3.73	5.32	4.19	5.60	4.21	5.79	4.20	6.16	4.42	6.37	4.30
	36	4.14	3.71	4.52	3.73	5.28	4.17	5.57	4.20	5.73	4.17	6.05	4.38	6.25	4.26
	38	4.14	3.71	4.51	3.73	5.20	4.14	5.52	4.18	5.62	4.13	5.82	4.29	6.00	4.18
	39	4.14	3.71	4.50	3.72	5.16	4.12	5.49	4.17	5.56	4.11	5.71	4.26	5.87	4.14
	41	4.14	3.71	4.49	3.72	5.00	4.06	5.26	4.08	5.33	4.02	5.46	4.17	5.60	4.05
43	4.14	3.71	4.47	3.71	4.85	3.99	5.04	3.99	5.10	3.93	5.21	4.08	5.32	3.96	

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature											
		°CDB °CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
Hi 14 (m ³ /min)	-19.8	-20	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65
	-17.8	-18	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89
	-15.7	-16	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12
	-13.7	-14	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36	4.36
	-11.7	-12	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59
	-9.6	-10	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
	-7.5	-8	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
	-5.5	-6	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42
	-3.4	-4	5.61	5.60	5.59	5.54	5.48	5.48	5.48	5.48	5.48	5.48	5.48
	-1.3	-2	5.80	5.78	5.76	5.65	5.54	5.54	5.54	5.54	5.54	5.54	5.54
	0.8	0	6.11	6.02	5.94	5.73	5.51	5.51	5.51	5.51	5.51	5.51	5.51
	3.9	3	6.63	6.39	6.16	5.81	5.47	5.47	5.47	5.47	5.47	5.47	5.47
	7.0	6	7.25	6.77	6.30	5.86	5.42	5.42	5.42	5.42	5.42	5.42	5.42
	10.1	9	7.20	6.74	6.28	5.82	5.37	5.37	5.37	5.37	5.37	5.37	5.37
	13.2	12	7.15	6.69	6.24	5.78	5.32	5.32	5.32	5.32	5.32	5.32	5.32
	16.9	15.5	7.10	6.64	6.18	5.73	5.27	5.27	5.27	5.27	5.27	5.27	5.27

Indoor air temperature

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Me 12 (m ³ /min)	10			4.08	3.31	4.88	3.74	5.28	3.83	5.62	3.88	6.29	4.19	6.53	4.08
	12			4.08	3.31	4.88	3.74	5.28	3.83	5.61	3.87	6.27	4.18	6.50	4.07
	14			4.08	3.31	4.88	3.74	5.28	3.83	5.60	3.87	6.25	4.17	6.48	4.06
	16			4.08	3.31	4.88	3.74	5.28	3.83	5.59	3.87	6.22	4.16	6.45	4.05
	18			4.08	3.31	4.88	3.74	5.28	3.83	5.59	3.87	6.20	4.15	6.42	4.04
	20			4.08	3.31	4.88	3.74	5.28	3.83	5.58	3.86	6.18	4.15	6.39	4.03
	22			4.08	3.31	4.88	3.74	5.28	3.83	5.55	3.85	6.10	4.12	6.30	4.00
	24			4.07	3.31	4.88	3.74	5.28	3.83	5.53	3.84	6.02	4.08	6.22	3.97
	26			4.07	3.31	4.85	3.73	5.23	3.81	5.46	3.81	5.93	4.05	6.12	3.93
	28	3.69	3.26	4.06	3.30	4.83	3.72	5.18	3.79	5.40	3.79	5.83	4.01	6.03	3.90
	30	3.69	3.26	4.05	3.30	4.79	3.70	5.13	3.76	5.33	3.76	5.74	3.97	5.94	3.87
	32	3.69	3.26	4.04	3.29	4.76	3.69	5.08	3.74	5.27	3.74	5.65	3.94	5.85	3.84
	34	3.69	3.26	4.03	3.29	4.74	3.68	5.01	3.71	5.19	3.70	5.53	3.90	5.72	3.79
	35	3.69	3.26	4.02	3.28	4.73	3.68	4.98	3.70	5.14	3.69	5.47	3.87	5.66	3.77
	36	3.69	3.26	4.02	3.28	4.70	3.67	4.96	3.69	5.10	3.67	5.38	3.84	5.55	3.74
	38	3.69	3.26	4.01	3.28	4.62	3.63	4.91	3.67	5.00	3.63	5.18	3.77	5.33	3.67
	39	3.69	3.26	4.00	3.28	4.59	3.62	4.88	3.66	4.95	3.61	5.08	3.73	5.22	3.63
	41	3.69	3.26	3.99	3.27	4.45	3.56	4.68	3.58	4.74	3.59	4.86	3.65	4.98	3.55
43	3.69	3.26	3.98	3.27	4.31	3.50	4.48	3.50	4.53	3.45	4.63	3.57	4.73	3.47	

Indoor air temperature

Air flow	Outdoor air temperature	Indoor air temperature											
		°CDB °CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
Me 12 (m ³ /min)	-19.8	-20	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28	3.28
	-17.8	-18	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49
	-15.7	-16	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
	-13.7	-14	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
	-11.7	-12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12
	-9.6	-10	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33
	-7.5	-8	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
	-5.5	-6	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86
	-3.4	-4	5.03	5.02	5.01	4.96	4.92	4.92	4.92	4.92	4.92	4.92	4.92
	-1.3	-2	5.20	5.18	5.17	5.07	4.97	4.97	4.97	4.97	4.97	4.97	4.97
	0.8	0	5.48	5.40	5.33	5.13	4.94	4.94	4.94	4.94	4.94	4.94	4.94
	3.9	3	5.95	5.73	5.52	5.21	4.90	4.90	4.90	4.90	4.90	4.90	4.90
	7.0	6	6.50	6.07	5.65	5.25	4.86	4.86	4.86	4.86	4.86	4.86	4.86
	10.1	9	6.46	6.04	5.63	5.22	4.82	4.82	4.82	4.82	4.82	4.82	4.82
	13.2	12	6.41	6.00	5.59	5.18	4.77	4.77	4.77	4.77	4.77	4.77	4.77
	16.9	15.5	6.36	5.95	5.54	5.13	4.72	4.72	4.72	4.72	4.72	4.72	4.72

Indoor air temperature

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature													
		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
Lo 10 (m ³ /min)	10			3.53	2.82	4.22	3.18	4.57	3.26	4.86	3.30	5.44	3.57	5.65	3.47
	12			3.53	2.82	4.22	3.18	4.57	3.26	4.85	3.30	5.42	3.56	5.63	3.47
	14			3.53	2.82	4.22	3.18	4.57	3.26	4.85	3.30	5.41	3.56	5.60	3.46
	16			3.53	2.82	4.22	3.18	4.57	3.26	4.84	3.30	5.39	3.55	5.58	3.45
	18			3.53	2.82	4.22	3.18	4.57	3.26	4.83	3.29	5.37	3.54	5.56	3.44
	20			3.53	2.82	4.22	3.18	4.57	3.26	4.83	3.29	5.35	3.53	5.53	3.43
	22			3.53	2.82	4.22	3.18	4.57	3.26	4.81	3.28	5.28	3.51	5.46	3.41
	24			3.52	2.81	4.22	3.18	4.57	3.26	4.78	3.27	5.21	3.48	5.38	3.38
	26			3.52	2.81	4.20	3.18	4.53	3.24	4.73	3.25	5.13	3.45	5.30	3.35
	28	3.19	2.77	3.52	2.81	4.18	3.17	4.48	3.22	4.67	3.23	5.05	3.42	5.22	3.32
	30	3.19	2.77	3.51	2.81	4.15	3.15	4.44	3.21	4.62	3.21	4.97	3.38	5.14	3.29
	32	3.19	2.77	3.50	2.80	4.12	3.14	4.40	3.19	4.56	3.18	4.89	3.35	5.06	3.26
	34	3.19	2.77	3.49	2.80	4.10	3.13	4.34	3.16	4.49					

Model **FDU71KXE6F** Cooling mode (kW)

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
Hi 18 (m³/min)	10	5.82	4.76	6.96	5.38	7.53	5.51	8.01	5.57	8.97	6.01	9.31	5.86				
	12			5.82	4.76	6.96	5.38	7.53	5.51	8.00	5.57	8.94	6.00	9.27	5.84		
	14			5.82	4.76	6.96	5.38	7.53	5.51	7.99	5.57	8.90	5.98	9.23	5.83		
	16			5.82	4.76	6.96	5.38	7.53	5.51	7.97	5.56	8.87	5.97	9.19	5.81		
	18			5.82	4.76	6.96	5.38	7.53	5.51	7.96	5.55	8.84	5.96	9.15	5.80		
	20			5.82	4.76	6.96	5.38	7.53	5.51	7.95	5.55	8.81	5.95	9.11	5.79		
	22			5.81	4.76	6.95	5.38	7.53	5.51	7.92	5.54	8.70	5.91	8.99	5.75		
	24			5.80	4.75	6.95	5.38	7.53	5.51	7.88	5.52	8.58	5.87	8.86	5.70		
	26			5.80	4.75	6.92	5.37	7.46	5.48	7.79	5.49	8.45	5.82	8.73	5.66		
	28	5.25	4.69	5.79	4.75	6.89	5.35	7.38	5.45	7.69	5.45	8.31	5.77	8.59	5.62		
	30	5.25	4.69	5.78	4.75	6.83	5.33	7.31	5.42	7.60	5.41	8.19	5.72	8.46	5.57		
	32	5.25	4.69	5.77	4.74	6.78	5.31	7.24	5.38	7.51	5.38	8.06	5.68	8.33	5.53		
	34	5.25	4.69	5.75	4.73	6.76	5.30	7.15	5.34	7.39	5.32	7.89	5.62	8.16	5.47		
	35	5.25	4.69	5.74	4.73	6.75	5.30	7.10	5.33	7.33	5.30	7.80	5.59	8.08	5.44		
36	5.25	4.69	5.73	4.72	6.69	5.27	7.06	5.31	7.26	5.27	7.66	5.52	7.92	5.39			
38	5.25	4.69	5.72	4.72	6.59	5.23	6.99	5.28	7.12	5.22	7.38	5.43	7.61	5.29			
39	5.25	4.69	5.71	4.71	6.54	5.21	6.96	5.27	7.05	5.19	7.24	5.38	7.45	5.24			
41	5.25	4.69	5.69	4.71	6.35	5.12	6.67	5.15	6.76	5.08	6.92	5.26	7.10	5.11			
43	5.25	4.69	5.67	4.70	6.15	5.04	6.39	5.04	6.46	4.94	6.60	5.15	6.75	5.01			

Heating mode (kW)

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	
Hi 18 (m³/min)	-19.8	-20	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	
	-17.8	-18	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	
	-15.7	-16	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24	
	-13.7	-14	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	
	-11.7	-12	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	
	-9.6	-10	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	
	-7.5	-8	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	
	-5.5	-6	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	
	-3.4	-4	7.12	7.11	7.10	7.03	7.03	6.96	6.88	6.88	6.88	6.88	6.88	6.88	
	-1.3	-2	7.36	7.34	7.32	7.18	7.18	7.04	7.04	7.04	7.04	7.04	7.04	7.04	
	0.8	0	7.76	7.65	7.54	7.27	7.27	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
	3.9	3	8.42	8.12	7.82	7.38	7.38	6.94	6.94	6.94	6.94	6.94	6.94	6.94	
	7.0	6	9.20	8.60	8.00	7.44	7.44	6.88	6.88	6.88	6.88	6.88	6.88	6.88	
	10.1	9	9.14	8.56	7.97	7.40	7.40	6.82	6.82	6.82	6.82	6.82	6.82	6.82	
13.2	12	9.08	8.50	7.92	7.34	7.34	6.76	6.76	6.76	6.76	6.76	6.76	6.76		
16.9	15.5	9.01	8.43	7.85	7.27	7.27	6.69	6.69	6.69	6.69	6.69	6.69	6.69		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
Me 15 (m³/min)	10	5.11	4.14	6.10	4.68	6.60	4.78	7.03	4.85	7.87	5.24	8.17	5.10				
	12			5.11	4.14	6.10	4.68	6.60	4.78	7.02	4.85	7.84	5.23	8.14	5.09		
	14			5.11	4.14	6.10	4.68	6.60	4.78	7.01	4.84	7.81	5.22	8.10	5.08		
	16			5.11	4.14	6.10	4.68	6.60	4.78	7.00	4.84	7.78	5.20	8.07	5.07		
	18			5.11	4.14	6.10	4.68	6.60	4.78	6.99	4.83	7.76	5.20	8.03	5.05		
	20			5.11	4.14	6.10	4.68	6.60	4.78	6.98	4.83	7.73	5.18	8.00	5.04		
	22			5.10	4.14	6.10	4.68	6.60	4.78	6.95	4.82	7.63	5.15	7.89	5.01		
	24			5.09	4.13	6.10	4.68	6.60	4.78	6.91	4.80	7.53	5.10	7.78	4.97		
	26			5.09	4.13	6.07	4.67	6.54	4.76	6.83	4.77	7.41	5.06	7.66	4.92		
	28	4.61	4.08	5.08	4.13	6.04	4.65	6.48	4.73	6.75	4.74	7.29	5.01	7.54	4.88		
	30	4.61	4.08	5.07	4.13	6.00	4.64	6.42	4.71	6.67	4.70	7.18	4.97	7.43	4.84		
	32	4.61	4.08	5.06	4.12	5.95	4.61	6.35	4.68	6.59	4.67	7.07	4.93	7.31	4.80		
	34	4.61	4.08	5.04	4.11	5.93	4.61	6.27	4.65	6.49	4.63	6.92	4.87	7.16	4.75		
	35	4.61	4.08	5.03	4.11	5.92	4.60	6.23	4.63	6.44	4.61	6.85	4.85	7.09	4.72		
36	4.61	4.08	5.03	4.11	5.87	4.58	6.20	4.62	6.37	4.58	6.73	4.80	6.95	4.68			
38	4.61	4.08	5.02	4.10	5.78	4.54	6.14	4.59	6.25	4.54	6.48	4.71	6.67	4.58			
39	4.61	4.08	5.01	4.10	5.74	4.53	6.11	4.58	6.19	4.51	6.36	4.67	6.54	4.54			
41	4.61	4.08	4.99	4.09	5.57	4.45	5.86	4.48	5.93	4.41	6.07	4.57	6.23	4.44			
43	4.61	4.08	4.97	4.08	5.40	4.38	5.61	4.38	5.67	4.31	5.79	4.47	5.92	4.34			

Air flow	Outdoor air temperature	Indoor air temperature													
		°CDB		°CWB		16 °CDB		18 °CDB		20 °CDB		22 °CDB		24 °CDB	
		°CDB	°CWB	16 °CDB	18 °CDB	20 °CDB	22 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	24 °CDB	
Me 15 (m³/min)	-19.8	-20	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	
	-17.8	-18	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	
	-15.7	-16	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	
	-13.7	-14	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	
	-11.7	-12	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	
	-9.6	-10	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	
	-7.5	-8	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	
	-5.5	-6	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	
	-3.4	-4	6.22	6.21	6.20	6.14	6.14	6.08	6.08	6.08	6.08	6.08	6.08	6.08	
	-1.3	-2	6.43	6.41	6.40	6.27	6.27	6.15	6.15	6.15	6.15	6.15	6.15	6.15	
	0.8	0	6.78	6.68	6.59	6.35	6.35	6.12	6.12	6.12	6.12	6.12	6.12	6.12	
	3.9	3	7.36	7.09	6.83	6.45	6.45	6.06	6.06	6.06	6.06	6.06	6.06	6.06	
	7.0	6	8.04	7.51	6.99	6.50	6.50	6.01	6.01	6.01	6.01	6.01	6.01	6.01	
	10.1	9	7.99	7.47	6.96	6.46	6.46	5.96	5.96	5.96	5.96	5.96	5.96	5.96	
13.2	12	7.93	7.43	6.92	6.41	6.41	5.91	5.91	5.91	5.91	5.91	5.91	5.91		
16.9	15.5	7.87	7.37	6.86	6.35	6.35	5.85	5.85	5.85	5.85	5.85	5.85	5.85		

Air flow	Outdoor air temperature (°CDB)	Indoor air temperature															
		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		
Lo 12 (m³/min)	10	4.29	3.41	5.12	3.85	5.54	3.94	5.90	3.99	6.61	4.31	6.86	4.20				
	12			4.29	3.41	5.12	3.85	5.54	3.94	5.89	3.99	6.58	4.30	6.83	4.19		
	14			4.29	3.41	5.12	3.85	5.54	3.94	5.88	3.99	6.56	4.29	6.80	4.18		
	16			4.29	3.41	5.12	3.85	5.54	3.94	5.87	3.98	6.54	4.29	6.77	4.17		
	18			4.29	3.41	5.12	3.85	5.54	3.94	5.87	3.98	6.51	4.27	6.74	4.15		
	20			4.29	3.41	5.12	3.85	5.54	3.94	5.86	3.98	6.49	4.27	6.71	4.14		
	22			4.28	3.40	5.12	3.85	5.54	3.94	5.83	3.96	6.41	4.23	6.62	4.11		
	24			4.27	3.40	5.12	3.85	5.54	3.94	5.80	3.95	6.32	4.20	6.53	4.08		
	26			4.27	3.40	5.10	3.84	5.49	3.92	5.74	3.93	6.22	4.16	6.43	4.05		
	28	3.87	3.35	4.27													

(15) Outdoor air processing unit (FDU-F)

Model **FDU650FKXZE1** Cooling mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	15°CWB		20°CWB		25°CWB		28°CWB		30°CWB		32°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	20°CDB	2.70	2.70										
	25°CDB	2.70	2.70	3.91	2.32								
	30°CDB	3.67	3.67	3.90	3.38	6.94	2.96	9.07	2.67				
	35°CDB	4.59	4.59	4.60	4.60	6.83	3.97	8.94	3.68	10.48	3.47	12.13	3.24
	40°CDB	5.49	5.49	5.50	5.50	6.75	4.97	8.81	4.67	10.34	4.45	11.97	4.22
13	20°CDB	2.88	2.88										
	25°CDB	2.88	2.88	4.15	2.48								
	30°CDB	3.92	3.92	4.13	3.61	7.35	3.13	9.61	2.81				
	35°CDB	4.92	4.92	4.92	4.92	7.24	4.23	9.48	3.90	11.11	3.67	12.80	3.41
	40°CDB	5.88	5.88	5.89	5.89	7.16	5.29	9.34	4.97	10.96	4.72	12.69	4.47
15	20°CDB	3.10	3.10										
	25°CDB	3.10	3.10	4.40	2.65								
	30°CDB	4.20	4.20	4.39	3.87	7.80	3.34	10.16	2.99				
	35°CDB	5.26	5.26	5.27	5.27	7.68	4.52	10.01	4.16	11.74	3.90	13.59	3.61
	40°CDB	6.29	6.29	6.30	6.30	7.60	5.69	9.92	5.30	11.58	5.03	13.41	4.75

Heating mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	-10°CWB	-5°CWB	0°CWB	4°CWB	8°CWB	12°CWB
11	-10°CDB	8.10					
	-5°CDB	7.30	7.30				
	0°CDB	6.49	6.50	6.50			
	4°CDB	5.50	5.50	5.51	5.51		
	8°CDB	4.53	4.53	4.53	4.54	4.54	
	12°CDB	3.58	3.58	3.58	3.59	3.59	3.59
	16°CDB	2.50	2.50	2.50	2.50	2.50	2.50
	20°CDB	1.54	1.54	1.54	1.54	1.54	1.54
13	-10°CDB	8.62					
	-5°CDB	7.77	7.77				
	0°CDB	6.91	6.91	6.92			
	4°CDB	5.85	5.85	5.86	5.86		
	8°CDB	4.82	4.82	4.82	4.83	4.83	
	12°CDB	3.81	3.81	3.81	3.82	3.82	3.82
	16°CDB	2.66	2.66	2.66	2.66	2.66	2.66
	20°CDB	1.70	1.71	1.71	1.71	1.71	1.71
15	-10°CDB	9.10					
	-5°CDB	8.21	8.21				
	0°CDB	7.30	7.30	7.31			
	4°CDB	6.18	6.18	6.19	6.19		
	8°CDB	5.09	5.09	5.10	5.10	5.10	
	12°CDB	4.02	4.03	4.03	3.06	4.03	4.04
	16°CDB	2.81	2.81	2.81	2.81	2.81	2.81
	20°CDB	1.83	1.82	1.83	1.83	1.83	1.83

Notes(1) These data show average statuses out of those possible to occur in the system control.
(Depending on controls, there may be ranges where the operation is not conducted continuously.)

(2) Symbols are as follows
TC :Total cooling capacity (kW)
SHC :Sensible heat capacity (kW)

(3) When outdoor air temperature is -5°CDB—-10°CDB in heating, the supply air temperature become 10°C or lower for 5—10minutes after the defrost operation.

PJG000Z312

Model **FDU1100FKXZE1** Cooling mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	15°CWB		20°CWB		25°CWB		28°CWB		30°CWB		32°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	20°CDB	3.84	3.84										
	25°CDB	3.84	3.84	5.31	3.13								
	30°CDB	4.95	4.95	5.30	4.97	10.16	3.73	13.63	2.87				
	35°CDB	6.85	6.85	6.86	6.86	10.00	5.53	13.42	4.67	15.92	4.04	18.62	3.36
	40°CDB	8.27	8.27	8.28	8.28	9.90	7.30	13.20	6.42	15.65	5.79	18.30	5.10
20.5	20°CDB	3.94	3.94										
	25°CDB	3.94	3.94	5.42	3.21								
	30°CDB	5.07	5.07	5.41	5.10	10.37	3.82	13.90	2.93				
	35°CDB	7.02	7.02	7.03	7.03	10.20	5.67	13.68	4.78	16.24	4.12	18.99	3.43
	40°CDB	8.48	8.48	8.49	8.49	10.10	7.48	13.46	6.58	15.97	5.93	18.67	5.21
23	20°CDB	4.15	4.15										
	25°CDB	4.15	4.15	5.71	3.38								
	30°CDB	5.37	5.37	5.70	5.40	10.93	4.03	14.58	3.07				
	35°CDB	7.43	7.43	7.44	7.44	10.75	5.97	14.42	5.04	17.03	4.34	19.92	3.60
	40°CDB	8.97	8.97	8.99	8.99	10.64	7.92	14.12	6.93	16.75	6.25	19.58	5.49

Heating mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	-10°CWB	-5°CWB	0°CWB	4°CWB	8°CWB	12°CWB
18	-10°CDB	12.90					
	-5°CDB	11.70	11.70				
	0°CDB	10.49	10.49	10.50			
	4°CDB	8.88	8.89	8.89	8.90		
	8°CDB	7.31	7.32	7.32	7.32	7.33	
	12°CDB	5.60	5.60	5.60	5.60	5.60	5.60
	16°CDB	3.70	3.70	3.70	3.70	3.70	3.70
	20°CDB	2.56	2.56	2.55	2.55	2.55	2.55
20.5	-10°CDB	13.57					
	-5°CDB	12.31	12.31				
	0°CDB	11.03	11.04	11.05			
	4°CDB	9.34	9.35	9.35	9.36		
	8°CDB	7.69	7.70	7.70	7.71	7.71	
	12°CDB	5.89	5.89	5.89	5.89	5.89	5.89
	16°CDB	3.89	3.89	3.89	3.89	3.89	3.89
	20°CDB	2.67	2.67	2.67	2.67	2.66	2.66
23	-10°CDB	14.19					
	-5°CDB	12.87	12.87				
	0°CDB	11.54	11.54	11.55			
	4°CDB	9.77	9.77	9.78	9.79		
	8°CDB	8.04	8.05	8.05	8.06	8.06	
	12°CDB	6.16	6.16	6.16	6.16	6.16	6.16
	16°CDB	4.07	4.07	4.07	4.07	4.07	4.07
	20°CDB	2.77	2.77	2.77	2.77	2.77	2.77

Notes(1) These data show average statuses out of those possible to occur in the system control.
(Depending on controls, there may be ranges where the operation is not conducted continuously.)

(2) Symbols are as follows

TC :Total cooling capacity (kW)

SHC :Sensible heat capacity (kW)

(3) At heating operation outdoor temperature -5°CDB—-10°CDB,a wind of 10°C or lower in temperature is blown out for 5—10minutes when starting a outdoor air processing unit after ending a defrost operation.

Model **FDU1800FKXE1** Cooling mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	15°CWB		20°CWB		25°CWB		28°CWB		30°CWB		32°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
30	20°CDB	6.39	6.39										
	25°CDB	6.39	6.39	9.04	5.41								
	30°CDB	8.84	8.84	8.98	8.29	16.72	6.65	22.00	5.49				
	35°CDB	11.19	11.19	11.21	11.21	16.46	9.44	21.69	8.28	25.44	7.42	29.42	6.48
	40°CDB	13.36	13.36	13.38	13.38	16.00	12.11	20.99	10.90	24.56	10.01	28.35	9.05
33	20°CDB	6.68	6.68										
	25°CDB	6.68	6.68	9.41	5.66								
	30°CDB	9.24	9.24	9.34	8.66	17.39	6.92	22.88	5.68				
	35°CDB	11.70	11.70	11.71	11.71	17.12	9.87	22.56	8.61	26.33	7.72	30.44	6.71
	40°CDB	13.97	13.97	13.98	13.98	16.64	12.65	21.72	11.39	25.42	10.41	29.34	9.41
36	20°CDB	7.00	7.00										
	25°CDB	7.00	7.00	9.77	5.90								
	30°CDB	9.68	9.68	9.70	9.08	17.98	7.22	23.65	5.87				
	35°CDB	12.26	12.26	12.27	12.27	17.69	10.29	23.32	8.94	27.22	7.97	31.47	6.93
	40°CDB	14.57	14.57	14.59	14.59	17.20	13.20	22.45	11.82	26.28	10.81	30.19	9.72

Heating mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	-10°CWB	-5°CWB	0°CWB	4°CWB	8°CWB	12°CWB
30	-10°CDB	19.90					
	-5°CDB	17.74	17.75				
	0°CDB	15.98	15.99	16.00			
	4°CDB	13.53	13.54	13.55	13.56		
	8°CDB	11.15	11.16	11.16	11.17	11.18	
	12°CDB	8.52	8.53	8.53	8.54	8.54	8.55
	16°CDB	6.14	6.15	6.15	6.16	6.16	6.17
	20°CDB	4.06	4.06	4.07	4.07	4.07	4.07
33	-10°CDB	20.70					
	-5°CDB	18.45	18.46				
	0°CDB	16.62	16.63	16.64			
	4°CDB	14.07	14.08	14.09	14.10		
	8°CDB	11.59	11.60	11.61	11.62	11.62	
	12°CDB	8.86	8.87	8.87	8.88	8.88	8.89
	16°CDB	6.41	6.42	6.42	6.43	6.44	6.44
	20°CDB	4.21	4.21	4.21	4.21	4.22	4.22
36	-10°CDB	21.42					
	-5°CDB	19.09	19.10				
	0°CDB	17.19	17.21	17.22			
	4°CDB	14.56	14.57	14.58	14.59		
	8°CDB	12.00	12.00	12.01	12.02	12.03	
	12°CDB	9.17	9.18	9.18	9.19	9.19	9.20
	16°CDB	6.66	6.66	6.67	6.68	6.68	6.69
	20°CDB	4.35	4.36	4.36	4.36	4.36	4.37

- Notes(1) These data show average statuses out of those possible to occur in the system control.
(Depending on controls, there may be ranges where the operation is not conducted continuously.)
- (2) Symbols are as follows
 TC :Total cooling capacity (kW)
 SHC :Sensible heat capacity (kW)
- (3) At heating operation outdoor temperature -5°CDB—-10°CDB,a wind of 10°C or lower in temperature is blown out for 5—10minutes when starting a outdoor air processing unit after ending a defrost operation.

PJG000Z312

Model **FDU2400FKXZE1** Cooling mode (kW)

Air flow (m ³ /min)	Outdoor air temperature	15°CWB		20°CWB		25°CWB		28°CWB		30°CWB		32°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
40	20°CDB	8.49	8.49										
	25°CDB	8.49	8.49	11.57	7.11								
	30°CDB	11.00	11.00	11.62	11.12	21.12	8.58	27.58	6.85				
	35°CDB	14.83	14.83	14.85	14.85	20.81	12.36	27.22	10.64	31.75	9.37	36.52	8.00
	40°CDB	17.64	17.64	17.66	17.66	20.09	15.94	26.14	14.16	30.41	12.85	34.90	11.46
43.5	20°CDB	8.83	8.83										
	25°CDB	8.83	8.83	11.98	7.40								
	30°CDB	11.44	11.44	12.09	11.62	21.76	8.88	28.41	7.06				
	35°CDB	15.43	15.43	15.45	15.45	21.44	12.85	28.03	11.02	32.70	9.65	37.62	8.24
	40°CDB	18.34	18.34	18.36	18.36	20.70	16.58	26.92	14.65	31.17	13.30	35.77	11.80
47	20°CDB	9.17	9.17										
	25°CDB	9.17	9.17	12.32	7.65								
	30°CDB	11.88	11.88	12.55	12.12	22.39	9.18	29.10	7.23				
	35°CDB	16.02	16.02	16.04	16.04	22.06	13.28	28.71	11.39	33.50	9.94	38.53	8.44
	40°CDB	18.96	18.96	18.98	18.98	21.30	17.13	27.57	15.22	32.08	13.75	36.64	12.20

Heating mode (kW)

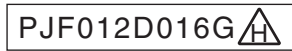
Air flow (m ³ /min)	Outdoor air temperature	-10°CWB	-5°CWB	0°CWB	4°CWB	8°CWB	12°CWB
40	-10°CDB	26.26					
	-5°CDB	23.70	23.71				
	0°CDB	21.48	21.49	21.50			
	4°CDB	18.19	18.20	18.21	18.22		
	8°CDB	14.99	15.00	15.01	15.02	15.02	
	12°CDB	11.55	11.56	11.57	11.58	11.59	11.59
	16°CDB	7.79	7.80	7.81	7.81	7.82	7.82
20°CDB	5.33	5.33	5.33	5.34	5.34	5.34	
43.5	-10°CDB	27.10					
	-5°CDB	24.46	24.47				
	0°CDB	22.17	22.18	22.19			
	4°CDB	18.77	18.79	18.80	18.81		
	8°CDB	15.47	15.48	15.49	15.50	15.51	
	12°CDB	11.92	11.93	11.94	11.95	11.96	11.97
	16°CDB	8.04	8.05	8.06	8.06	8.07	8.07
20°CDB	5.50	5.50	5.51	5.51	5.51	5.52	
47	-10°CDB	27.94					
	-5°CDB	25.22	25.23				
	0°CDB	22.85	22.87	22.88			
	4°CDB	19.36	19.37	19.38	19.39		
	8°CDB	15.95	15.96	15.97	15.98	15.99	
	12°CDB	12.29	12.30	12.31	12.32	12.33	12.34
	16°CDB	8.32	8.30	8.31	8.31	8.32	8.32
20°CDB	5.77	5.78	5.78	5.79	5.79	5.79	

- Notes(1) These data show average statuses out of those possible to occur in the system control.
(Depending on controls, there may be ranges where the operation is not conducted continuously.)
- (2) Symbols are as follows
 TC :Total cooling capacity (kW)
 SHC :Sensible heat capacity (kW)
- (3) At heating operation outdoor temperature -5°CDB--10°CDB, a wind of 10°C or lower in temperature is blown out for 5–10minutes when starting a outdoor air processing unit after ending a defrost operation.

9. APPLICATION DATA

9.1 Installation of indoor unit

(1) Ceiling cassette-4 way type (FDT)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 407. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
 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.
- **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 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 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.** ⊘
 It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas 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 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			
Flat washer (M10)	Level gauge	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
8	1	1	1	4	1	1	1	1
For unit hanging	For unit hanging and adjustment	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.
 - 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.)

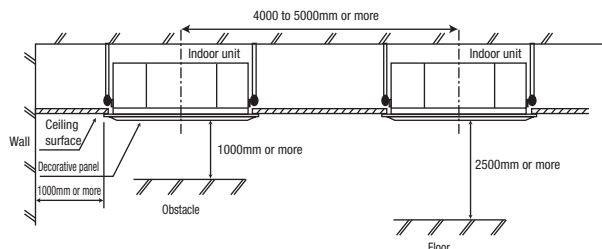
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

- 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 4 to 5m.

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 airflow.
- Install the indoor unit at a height of more than 2.5m above the floor.



Set blow-out pattern

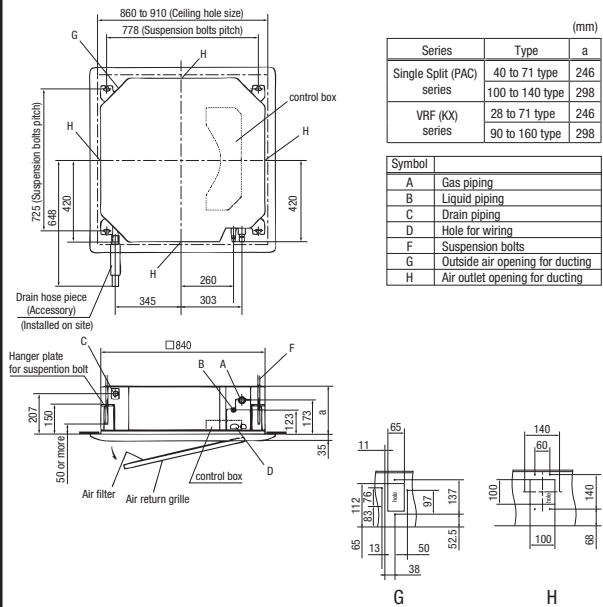
- Select the most proper number of blow-out air supply port direction from 4 way, 3 way or 2 way according to the shape of the room and installation position. (1 way is not available.)
- If it is necessary to change the number of air supply port, prepare the covering materials. (sold as accessory)
- 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 airflow 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.

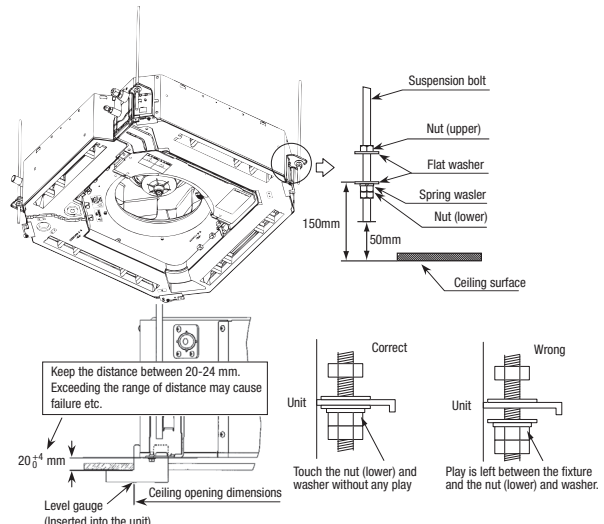
Ceiling opening, Suspension bolts pitch, Pipe position



④ Installation of indoor unit

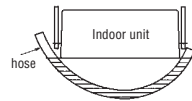
Work procedure

- Prepare a ceiling hole with the size of from 860mm × 860mm to 910mm × 910mm referring to the template attached in the package.
- Arrange the suspension bolt at the right position (725mm×778mm).
- 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 50mm above the ceiling plane. Temporarily put the four lower nuts 150mm 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 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.



④ Installation of indoor unit (continued)

- 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.
- Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after decorative panel attached, still the unit height can be adjusted finely. Refer to the installation manual for decorative panel for details.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, put the cardboard template for installation attached on the package (packing material of cardboard box) on the bottom of the unit in order to avoid dust coming into the indoor unit.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
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.
- In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
- In case of reuse: Flare the end of pipe replaced partially for R410A.

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 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 specified in JIS H 3300) 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 R410A refrigerant.

Work procedure

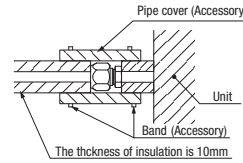
- Remove the flare nut and blind flanges on the pipe of the indoor unit.
※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
● Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- 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.
※ Do a flare connection as follows:
● 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.
● 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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)

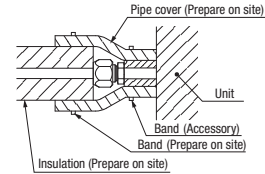
Caution:

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.

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



<The case of using reinforced insulation>



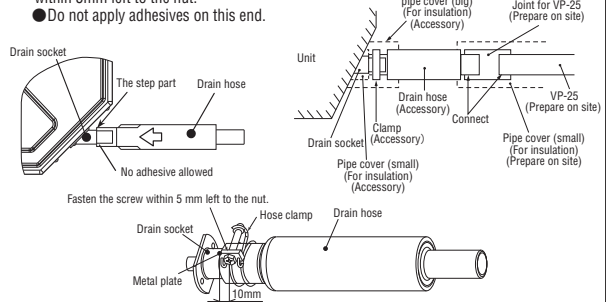
⑥ Drain pipe

Caution

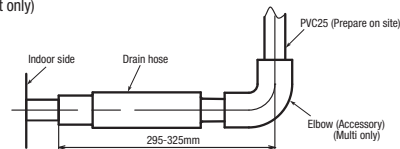
- Install the drain pipe according to the installation manual in order to drain properly.
Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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

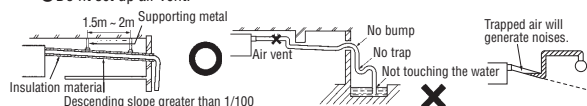
- Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
● Do not apply adhesives on this end.



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

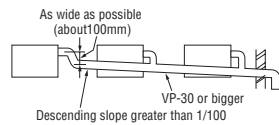


- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
● Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
● Do not set up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



⑥ Drain pipe (continued)

- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger for main drain pipe.

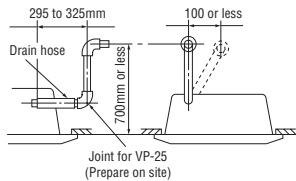


4. Insulate the drain pipe.

- 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 make joint part gapless.

Drain up

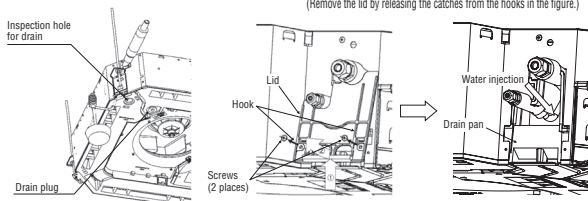
- The position for drain pipe outlet can be raised up to 700mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water 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 installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan. Check if the motor sound of drain pump is normal or not.
 - Do drain test even if installation of heating season.
 - For new building cases, make sure to complete the test before hanging the ceiling.
1. Fill water of approx. 1,000 cc in the drain pan of the main unit. Take care not to wet electrical equipment such as the drain pump, etc. Inject water through the blow outlet using a feed water pump, or the like, or through the refrigerant pipe joint.

- When injecting water through the blow outlet
- When removing the lid to inject water through the refrigerant joint
 - (1) Remove screws at 2 places.
 - (2) While pressing the lid in the direction ①, pull and remove the lid in the direction ②.
 (Remove the lid by releasing the catches from the hooks in the figure.)



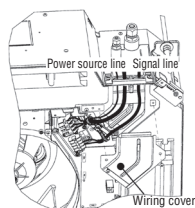
2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test. Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.
3. Unplug the drain plug on the indoor unit to remove remaining water on the drain pan after the test, and re-plug it. And insulate the drain pipe properly finally.

Drain pump operation

- In case electrical wiring work finished
Drain pump can be operated by remote control (wired). For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not finished
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.

- 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 (3 screws) and the wiring cover (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.

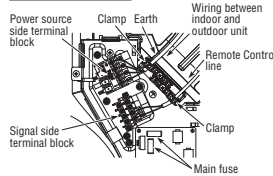


Main fuse specification

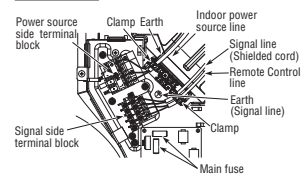
Specification	Part No.
T3.15A L250V	SSA564A149AF

⑦ Wiring-out position and wiring connection

Single Split (PAC) series



VRF (KX) series



⑧ Panel installation

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to next page.

⑨ Check list after installation

- Check the following items after all installation work completed.

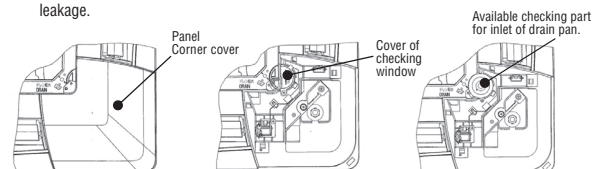
Check if;	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Power source voltage is same as mentioned in the 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 (Maintenance)

The method of checking the dirt of drain pan

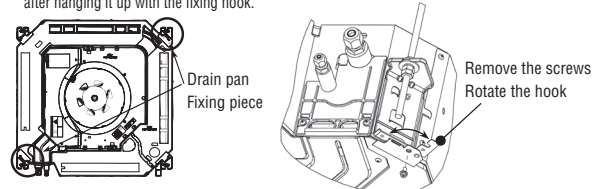
- It is possible to check the dirt for inlet of drain pan without detaching the panel. (Inspection is not possible when the high efficient filter and option spacer is installed.)

1. Open the air return grille and remove the panel corner cover on drain pan side.
2. Remove the cover of inspection window. (1 screw)
3. Check the drain pan from the inspection window.
If the drain pan is very dirty, remove the drain pan and clean it.
4. After checking of the dirty of drain pan, restore the cover of the inspection window securely. Improper restoration of the cover may cause dew condensation and water leakage.



Attention for removing drain pan

- The fixing components have been attached with the drain pan. Pay attention to these components during installation and removing. Take off the hanging hook after removing four screws. During the installation of drain pan, fix the drain pan firmly by using four screws after hanging it up with the fixing hook.





PANEL INSTALLATION MANUAL

PJF012D003C 

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

WARNING

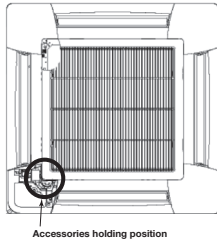
- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connection or hold will cause abnormal heat generation or fire. 
- Make sure the power source is turned off when electric wiring work. Otherwise, electric shock, malfunction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

1 Before installation

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

Accessories	Quantity	Use
Bolt	4 pieces	For panel installation
Strap	4 pieces	For avoiding the corner panel from falling
Screw	4 pieces	For fixing the corner panel

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



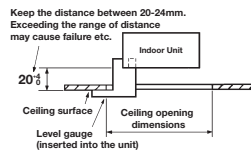
Accessories holding position

2 Checking the indoor unit installation position

- 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 ceiling 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.

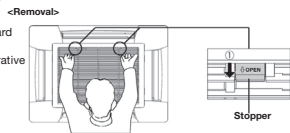
Caution
If there is a height difference beyond the design limit between the installation level of the indoor unit and the ceiling plane, the panel may be subject to excessive stress during installation, it may cause distortion and damage.

- The installation level of the indoor unit can be adjusted finely from the opening provided on the corner, even after panel is attached. (Refer to 6 Attaching the panel for details.)



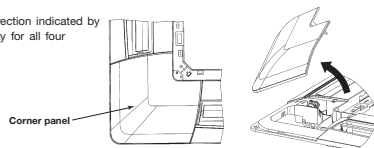
3 Removing the air return grille

1. Hold the stoppers on the air return grille (2 places) toward OPEN direction, open the air return grille.
2. Remove the hooks of the air return grille from the decorative panel while it is in the open position.



4 Removing a corner panel

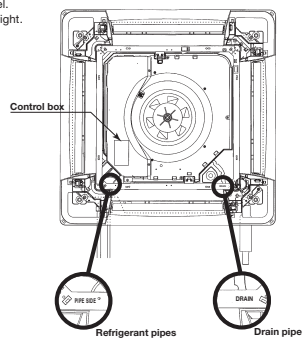
- Pull the corner panel toward the direction indicated by the arrow and remove it. (Same way for all four corner panels)



5 Orientation of the panel installation

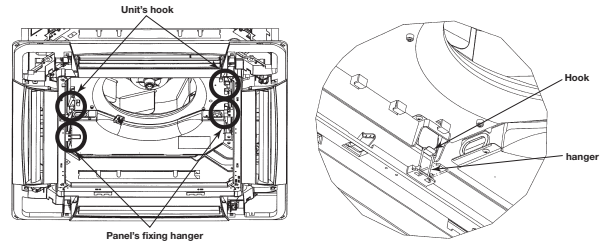
- Take note that there is an orientation to install the panel.
- Attach the panel with the orientation shown on the right.
- Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
- Align the "DRAIN" mark (on the panel) with the drain pipe on the indoor unit.

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 louver motor wiring.



6 Attaching the panel

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

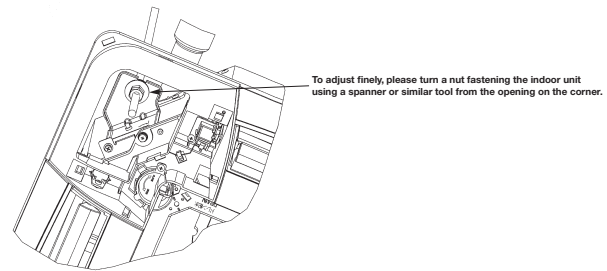


2. Fix the panel on the indoor unit
 - Fasten the panel on the indoor unit with the four bolts supplied with the panel.

Caution
• Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.
• If there is a gap remaining between the ceiling and the decorative panel even after the installation level of the indoor unit again.



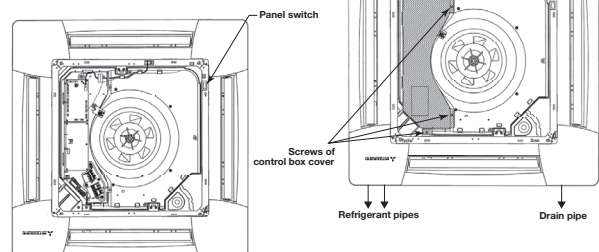
- It is possible to adjust the installation height of the indoor unit with the panel attached as long as there is no influence on the drain pipe inclination and/or the indoor unit levelness.



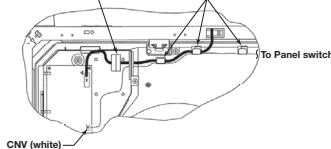
Caution
Make sure there is no stress given on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the air return grille.

7 Electrical wiring

1. After removing three screws of control box, detach the cover of control box (the hatched part).
2. Connect the connector for louver motor (white 20P).
 - Hold the wiring by using the clamps of the indoor unit.
 - Hold the connector inside the control box.
3. Connect the connector for panel switch.
 - Hold the wiring by using the clamps of the indoor unit.
 - Connect CNV (white) inside the control box.



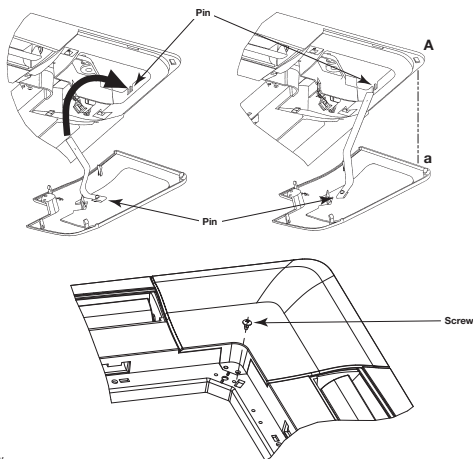
Connector for louver motor (white) Clamps of unit main body



CAUTION
• If the air return grill is opened, the panel switch is turned off so that the air-conditioner cannot be operated any more.
• To start the air-conditioner, close the air return grill.

⑧ Attaching a corner panel

1. To avoid unexpected falling of the corner panel, put the strap onto the corner panel's pin with turning the strap up.
2. Then hang the strap of a corner panel onto the decorative panel's pin.
3. First insert the part "a" of a corner panel into the part "A" of the decorative panel, and then engage four hooks.



4. Fix with screw.

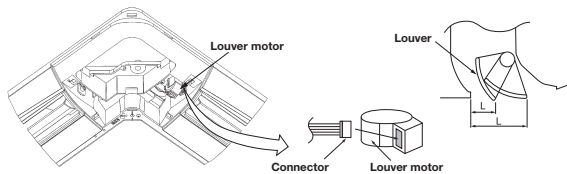
⑨ How to set the airflow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.

For the setting method of the louver's operating range, refer to the instruction manual of the wired remote control.

If it is necessary to fix the louver position manually, follow the procedure mentioned below.

1. Shut off the main power switch.
2. Unplug the connector of the louver motor which you want to fix the position. Make sure to insulate unplugged connectors electrically with a vinyl tape.
3. Adjust the louver position slowly by hand so as to be within the applicable range mentioned below table.



<Range of louver setting>

Vertical airflow direction	Horizontal 0°	Downwards 45°
Dimension L (mm)	43	26

※It can be set between 26-43mm freely.

Caution

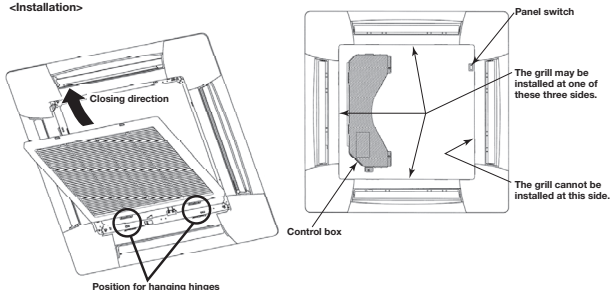
- Any automatic control or operation from the remote control will be disabled on the louver whose position is fixed in the above way.
- Do not set a louver beyond the specified range. Failure to observe this instruction may result in dripping, dew condensation, the fouling of the ceiling and the malfunctioning of the unit.

⑩ Attaching the air return grille

To attach the air return grille, follow the procedure described in ④ Removing the air return grille in the reverse order.

1. Hang the hooks of the air return grille in the hole of the panel. (The hooks of the grille can be hung in three side of the panel as following.)
2. After the grille is hung, close the grille while the stoppers on the grille (2 places) are kept pressed to "OPEN" direction. When the grille comes to the original position, release the stoppers to hold the grille. Make sure to hear the sound of "CLICK" in both stoppers.

<Installation>



Caution







- Attaching the air return grille from the hinge side.
- Be careful in air return grille attaching, unstable attaching may cause grille falling.
- Repair or replace the distorted, broken stopper at once, or the grille falling may occur.

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


















PJA012D786C 

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to page 323. For remote control installation, refer to page 319.
For wireless kit installation, refer to page 415. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
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 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.
- **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 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 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 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 pin.
- **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 items

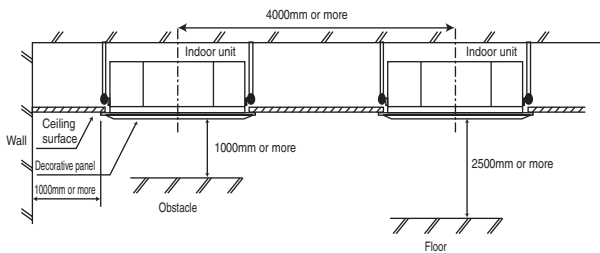
For unit hanging		For refrigerant pipe			For drain pipe				
Flat washer (M10)	Level gauge (insulation)	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp	
8	4	1	1	4	1	1	1	1	
For unit hanging		For adjustment in hoisting in the unit's main body	For heat insulation 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.
 - 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.
- If there are 2 units of wireless type, keep them away for more than 5m 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

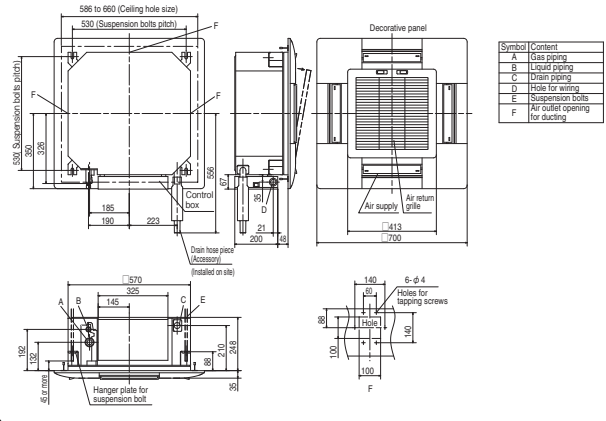
- When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short circuit of airflow.
- Install the indoor unit at a height of more than 2.5m above the floor.



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.

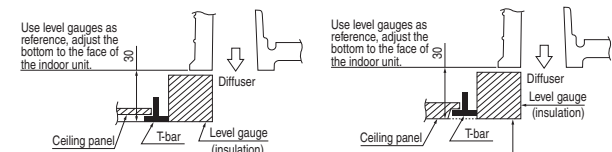
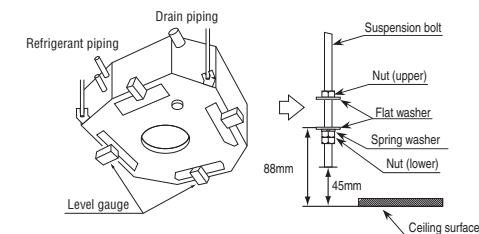
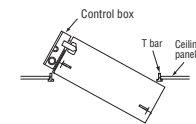
Ceiling opening, Suspension bolts pitch, Pipe position



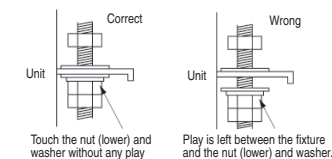
④ Installation of indoor unit

Work procedure

- This unit is designed for 2 x 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 x 2 grid ceiling, provide an inspection port on the control box side.
- Arrange the suspension bolt at the right position (530mmx530mm).
- 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 45mm above the ceiling plane. Temporarily put the four lower nuts 88mm 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 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.

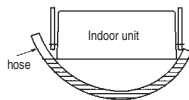


When the ceiling panel comes below the T bar, align the bottom of the level gauge to the lower face of the ceiling panel.



4 Installation of indoor unit (continued)

- 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.
- Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

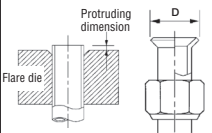
- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after decorative panel attached, still the unit height can be adjusted finely. Refer to the installation manual for decorative panel for details.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, put the cardboard template for installation attached on the package (packing material of cardboard box) on the bottom of the unit in order to avoid dust coming into the indoor unit.

5 Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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.

- In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
- In case of reuse: Flare the end of pipe replaced partially for R410A.



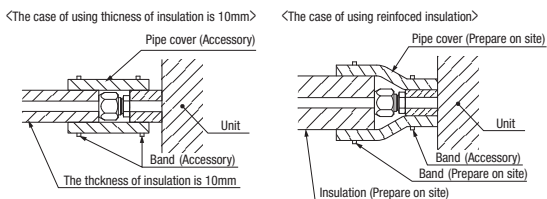
Pipe dia. d mm	Min. pipe wall thickness mm	Protruding dimension for flare, mm		Flare O.D. D mm	Flare nut tightening torque N·m
		For R410A	Conventional tool		
6.35	0.8	0 - 0.5	0.7 - 1.3	8.9 - 9.1	14 - 18
9.52	0.8			12.8 - 13.2	34 - 42
12.7	0.8			16.2 - 16.6	49 - 61
15.88	1			19.3 - 19.7	68 - 82
19.05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

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigerant 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 R410A refrigerant.

Work procedure

- 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.)
 - 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.
 - Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
 - 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.
- 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.



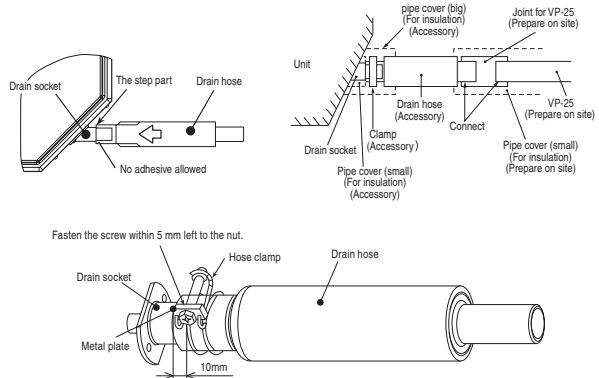
6 Drain pipe

Caution

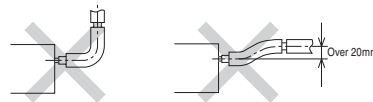
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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

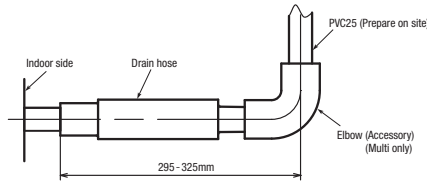
- Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket. Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
 - Do not apply adhesives on this end.



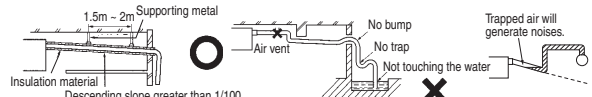
- Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end mode of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).
 - As for drain pipe, apply VP-25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - Do not bend or make an excess offset on the drain hose as shown in the picture. Bend or excess offset will cause drain leakage.



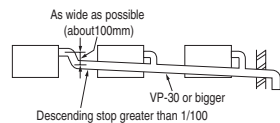
- As for drain pipe, apply VP25 (OD32). If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)



- 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.

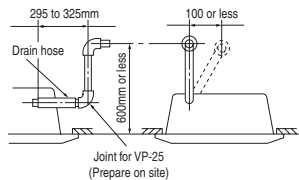


⑥ Drain pipe (continued)

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.

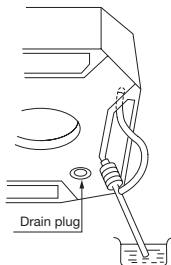
Drain up

- 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.



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. Check if the motor sound of drain pump is normal or not.
 - Do drain test even if installation of heating season.
 - For new building cases, make sure to complete the test before hanging the ceiling.
1. Pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
 2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test. Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.
 3. Unplug the drain plug on the indoor unit to remove remaining water on the drain pan after the test, and re-plug it. And insulate the drain pipe properly finally.



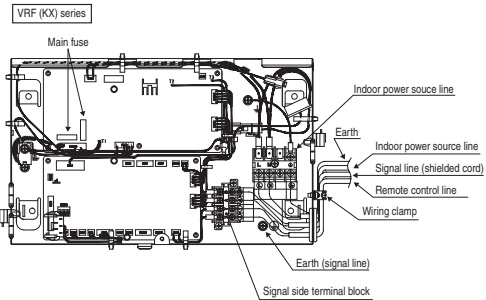
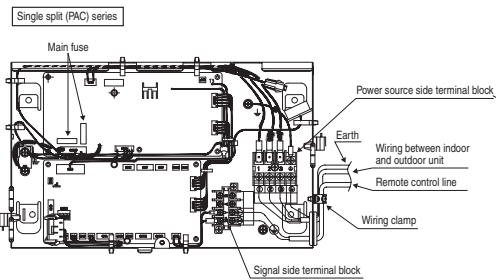
Drain pump operation

- In case electrical wiring work finished
Drain pump can be operated by remote control (wired).
For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not finished
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 (220-240VAC on the terminal block [① and ②] or [④ and ⑤]) 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.
1. Remove a lid of the control box (1 screws).
 2. Hold each wiring inside the unit and fasten them to terminal block securely.
 3. Fix the wiring with clamp.
 4. Install a lid of the control box back to original place.

⑦ Wiring-out position and wiring connection



Main fuse specification

Specification	Part No.
T3.15A L250V	SSA564A149F

⑧ Panel installation

- After wiring work finished, install the panel on the indoor unit.
- Refer to next page.

Accessory items

No.	Item	Quantity	Use
1	Hook	1 piece	For fixing temporarily
2	Chain	2 pieces	
3	Bolt	4 pieces	For installing the panel
4	Screw	1 piece	For attaching a hook
5	Screw	2 pieces	For attaching a chain

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to 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	

PANEL INSTALLATION MANUAL

PJA012D783

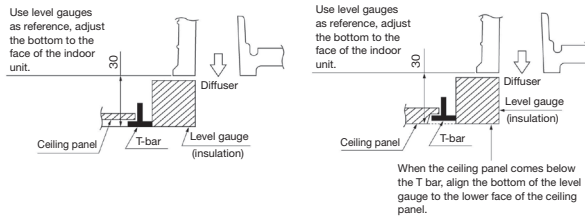
Please read this manual together with the indoor unit's installation manual.

⚠ 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.

① Checking the indoor unit installation position

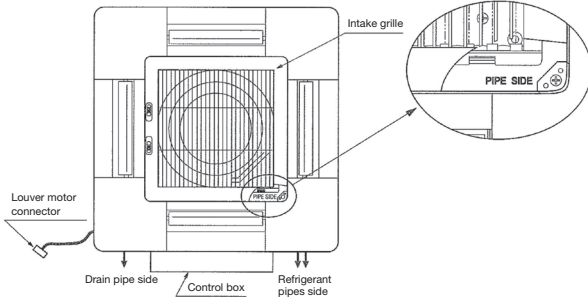
- Read this manual together with the air-conditioner installation manual carefully.
- Check if the gap between the ceiling plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.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



② Orientation of the panel and return air grille installation

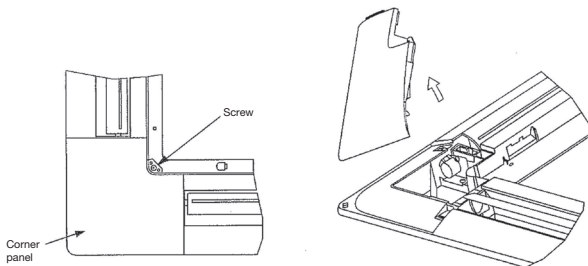
1. Take note that there is an orientation to install the panel.
 - Attach the panel with the orientation shown on the below.
 - Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
2. The intake grille can also be attached in a rotated position by 90 degrees.

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 louver motor wiring.



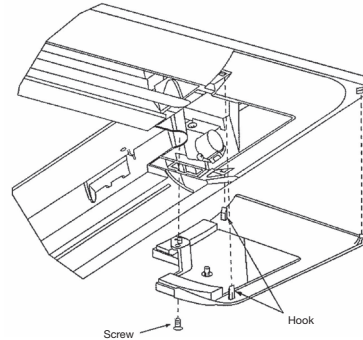
③ Removing a corner panel

- Unscrew the screw from the corner area, pull the corner panel toward the direction indicated by the arrow mark.



④ Attaching a corner panel

- First insert the part "a" of a corner panel into the part "A" of the cover panel, engage two hooks and tighten the screw.



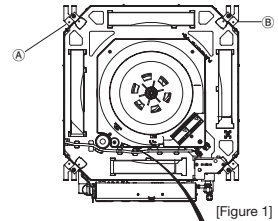
⑤ Panel installation

- Install the panel on the unit after completing the electrical wiring.

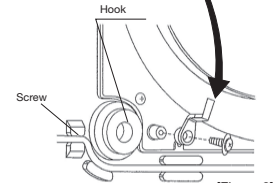
Accessories

No.	Part Name	Image	Quantity	Use
1	Hook		1 piece	For fixing temporarily
2	Chain		2 pieces	
3	Screw		4 pieces	For hoisting the panel
4	Screw		1 piece	For attaching a hook
5	Screw		2 pieces	For attaching a chain

1. Screw in two bolts out of the four supplied with the panel by about slightly less than 5mm.
● mark (A) (B) [Figure 1]

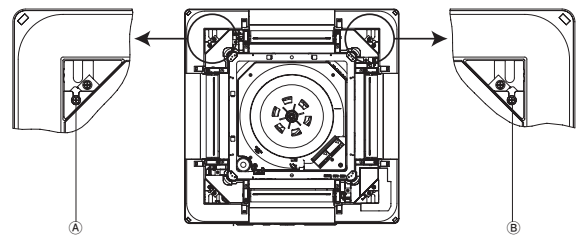


2. Attach the hook supplied with the panel to the main body with the hook fixing screw (1 screw). [Figure 2]

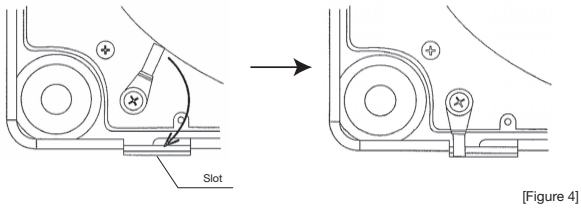


3. Open the intake grille.
4. Please remove the screw of a corner panel and remove a corner panel. (four places)

5. A panel is hooked on two bolts (● mark (A) (B)). [Figure 3]



6. Please rotate a hook, put in the slot on the panel, and carry out fixing the panel temporarily. [Figure 4]



[Figure 4]

7. Tighten the two bolts used for fixing the panel temporarily and the other two.

Caution

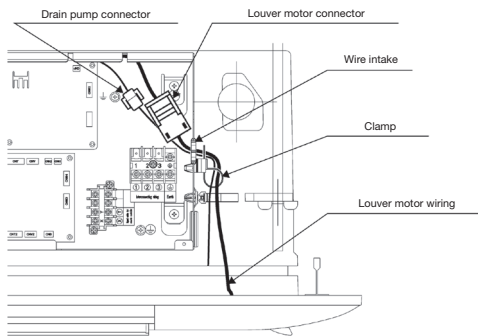
- Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.
- If there is a gap remaining between the ceiling and the decorative panel even after the hanging bolts are tightened, adjust the installation level of the indoor unit again.



8. Please open the lid of a control box.

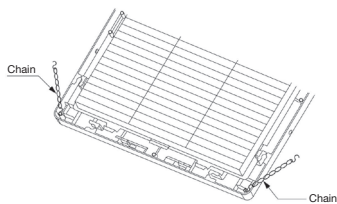
9. Like drain pump wiring, please band together by the clamp and put in louver motor wiring into a control box. [Figure 5]

10. Please connect a louver motor connector. [Figure 5]



[Figure 5]

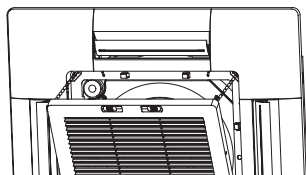
11. Attach two chains to the intake grille with two screws. [Figure 6]



[Figure 6]

12. Replace the corner panels. Please also close a chain with a screw together then. [Figure 7]

13. Close the intake grill.



[Figure 7]

Caution

Make sure there is no stress given 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 air return grille.

⑦ How to set the airflow direction *1

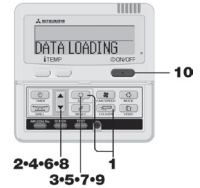
It is possible to change the movable range of the louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.

1 Stop the air-conditioner and press SET button and LOUVER button simultaneously for three seconds or more.
The following is displayed if the number of the indoor units connected to the remote control is one. Go to step 4.

"DATA LOADING"
↓
No.1

The following is displayed if the number of the indoor units connected to the remote control are more than one

"SELECT 1/1"
↓
1/0000



2 Press ▲ or ▼ button. (selection of indoor unit)
Select the indoor unit of which the louver is set.

[EXAMPLE]
1/0000 ▲ 1/0001 ◀ 1/0002 ▶ ◀
1/0003 ▶

3 Press SET button. (determination of indoor unit)
Selected indoor unit is fixed.

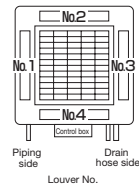
[EXAMPLE]
1/0001 (displayed for two seconds)
↓
"DATA LOADING"
↓
No.1

NOTICE

• In case the louver No to be set is uncertain, set any louver temporarily. The louver will swing once when the setting is completed and it is possible to confirm the louver No and the position. After that, choose the correct louver No and set the top and bottom position.

4 Press ▲ or ▼ button. (selection of louver No.)
The louver No. to be set according to the right figure.

[EXAMPLE]
No.1 ▲ No.2 ▶ No.3 ◀ No.4 ▼



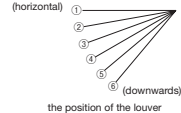
5 Press SET button. (Determination of louver No.)
The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

[EXAMPLE] If No.1 louver is selected,
No.1 UPPER 1 (current upper limit position)

6 Press ▲ or ▼ button. (selection of upper limit position)
Select the upper limit of louver movable range.

"position 1" is the most horizontal, and "position 6" is the most downward.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

- No.1 UPPER 1 (the most horizontal)
- No.1 UPPER 2
- No.1 UPPER 3
- No.1 UPPER 4
- No.1 UPPER 5
- No.1 UPPER 6 (the most downwards)
- No.1 UPPER -- (return to the default setting)



7 Press SET button. (Fixing of the upper limit position)
The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

[EXAMPLE]
No.1 UPPER 2 (displayed for two seconds)
↓
No.1 LOWER 5 (shows current setting)

8 Press ▲ or ▼ button. (Selection of lower limit position)
Select the lower limit position of louver.

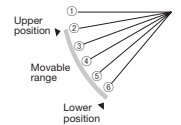
"position 1" is the most horizontal, and "position 6" is the most downwards.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

- No.1 LOWER 1 (the most horizontal)
- No.1 LOWER 2
- No.1 LOWER 3
- No.1 LOWER 4
- No.1 LOWER 5
- No.1 LOWER 6 (the most downwards)
- No.1 LOWER -- (return to the default setting)

9 Press SET button. (Fixing of the lower limit position)
Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.

• After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)

[EXAMPLE]
No.1 U2 L6 (displayed for two seconds)
↓
SET COMPLETE
↓
No.1



10 Press ON/OFF button.
Louver adjusting mode ends and returns to the original display.

Caution *2

If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not function.

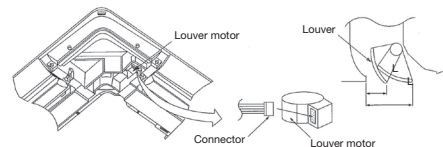
ATTENTION

If you press RESET button during settings, the display will return to previous display.
If you press ON/OFF button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controls are connected, louver setting operation cannot be set by slave remote control.

If it is necessary to fix the louver position manually, follow the procedure mentioned below.

1. Shut off the main power switch.
2. Unplug the connector of the louver motor which you want to fix the position. Make sure to insulate unplugged connectors electrically with a vinyl tape.
3. Adjust the louver position slowly by hand so as to be within the applicable range mentioned below table.



<Range of louver setting>

Vertical airflow direction	Horizontal 23°	Downwards 50°
Dimension L (mm)	40	24

※It can be set between 24-40mm freely.


Caution

- Any automatic control or operation from the remote control will be disabled on the louver whose position is fixed in the above way.
- Do not set a louver beyond the specified range. Failure to observe this instruction may result in dripping, dew condensation, the fouling of the ceiling and the malfunctioning of the unit.

*1 This function is not able to be set with wireless remote controls or simple remote control (RCH-H3).

*2 For setting the swing range of other louvers, return to 1 and proceed same procedure respectively.

(3) Ceiling cassette-2 way type (FDTW)







PJB012D305B 

This manual is for the installation of an indoor unit.

For electrical wiring work of indoor unit, refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 423. For electrical wiring work of outdoor unit and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

This unit must be always used with the panel.































SAFETY PRECAUTIONS

- First of all, read the “SAFETY PRECAUTIONS” carefully and strictly follow the instruction 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.	
● 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 property. 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.	








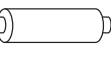

⚠ CAUTION

- **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 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 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 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 the unit correctly according to this installation manual.
- Check the following items:
 - Unit type/Power source specification
 - Piping/Wiring/Small parts
 - Accessory

Accessory

For unit suspension		For refrigerant pipe			For drain pipe			
Flat washer (M10)	Level gauge	Pipe cover (Large)	Pipe cover (Small)	Strap	Pipe cover (Large)	Pipe cover (Small)	Drain hose	Hose clamp
								
8 pc	1 pc	1 pc	1 pc	4 pc	1 pc	1 pc	1 pc	1 pc
For unit suspension	For adjustment of unit suspension	For heat insulation of gas pipe	For heat insulation of liquid pipe	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

- 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 do maintenance.
 - 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%.

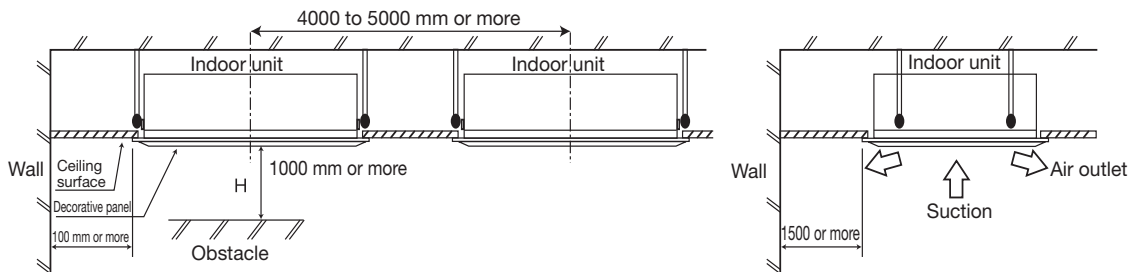
[This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.]

[If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thickness 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 ware, 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.)
- ② Check if the place where the air-conditioner is installed is strong enough to support the weight of the unit. If it is not strong enough to support, reinforce the structure with boards, beams and soon. If the strength is not enough, the unit may fall and it could injure someone.
- ③ If there are 2 units using wireless remote control, keep them away for more than 6m to avoid malfunction due to cross communication.
- ④ When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

Space for installation and maintenance

- Install the unit at 2.5 m or higher.



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.

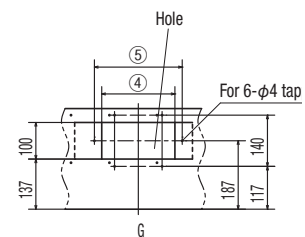
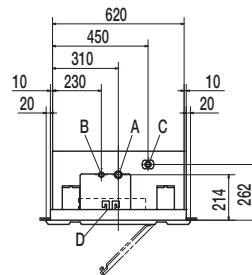
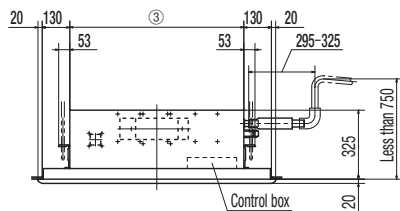
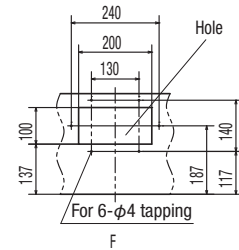
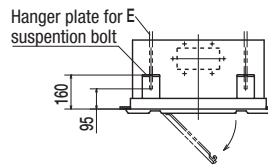
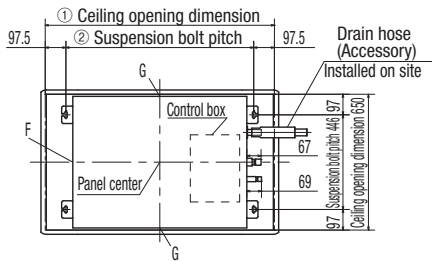
③ Preparation before installation - Continued

Ceiling opening, suspension bolt pitch and pipe position

(mm)

Symbol	Description	Symbol	Description
A	Gas piping	E	Suspension bolt
B	Liquid piping	F	Outside air opening for ducting
C	Drain piping	G	Air outlet opening for ducting
D	Hole for wiring		

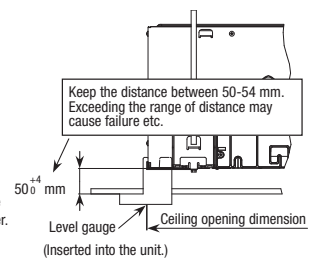
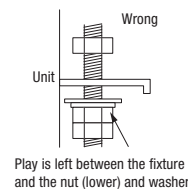
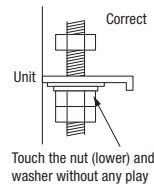
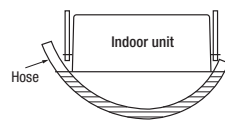
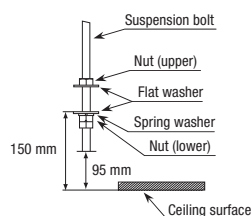
Series	Type	①	②	③	④	⑤
VRF (KX) Series	28 to 71 type	1080	885	820	200	240
	90 to 140 type	1795	1600	1535	440	480



④ 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 and fix them so as to be able to hold 500N load.
4. Ensure that the lower end of the suspension bolt should be 95mm above the ceiling plane. Temporarily put the four lower nuts 150mm 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.
5. Adjust the indoor unit position after hanging it by inserting the level gauge 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.
6. 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.
7. Tighten four upper nuts and fix the unit after height and levelness adjustment.



④ Installation of indoor unit - Continued

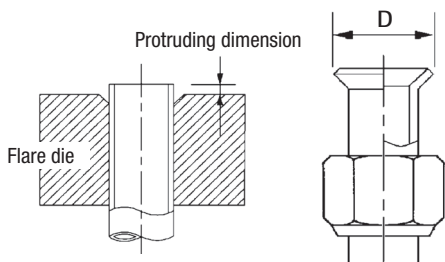
Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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

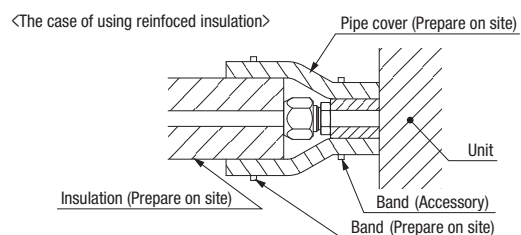
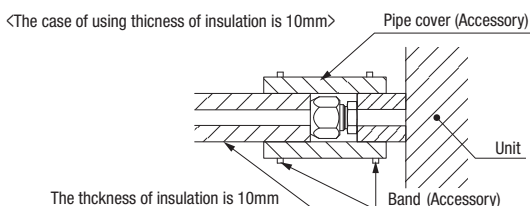
- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not 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 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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.



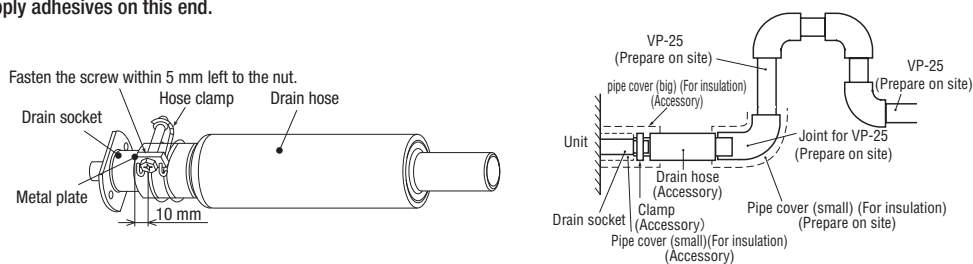
⑥ Drain pipe

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.

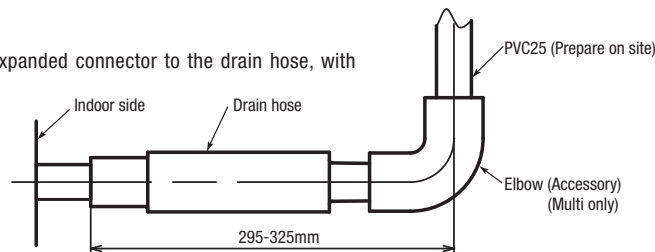
Work procedure

1. Make sure 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.

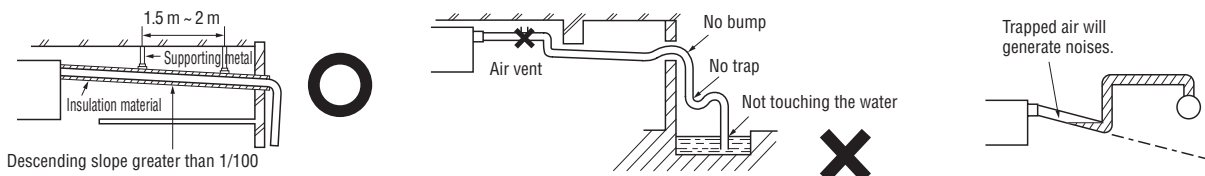


2. Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP-25 made of rigid PVC which is on the market.

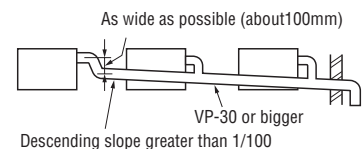
- Make sure that the adhesive will not get into the supplied drain hose.
It may cause the flexible part broken after the adhesive is dried up and gets rigid.
- The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.
- As for drain pipe, apply VP25 (OD32).
If apply PVC25 (OD25), 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 VP-30 or bigger size for main drain pipe.

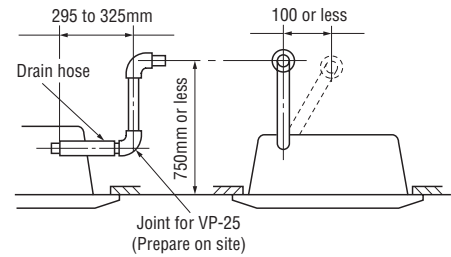


4. Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
 - ※ After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to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

⑥ Drain pipe connection – Continued

Drain up

- The position for drain pipe outlet can be raised up to 700mm 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 in 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 on the right.

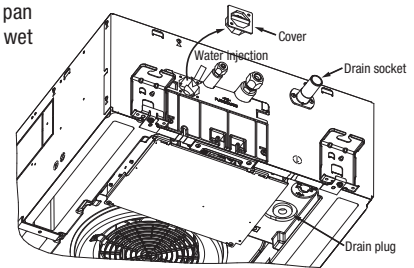


Drain test

- After installation of drain pipe, make sure that drain system works in good condition and there is no water leakage from joint and drain pan. Check if the motor sound of drain pump is normal or not.
- Do drain test even if installation of heating season.
- For new building cases, make sure to complete the test before hanging the ceiling.

Work procedure

1. Remove the cover from the piping lid (2 screws), inject water of approx. 1,000 cc into the drain pan of main unit using a water pump, or other, from the section shown in the figure with care not to wet electrical parts.
2. Confirm that water is drained properly and that no water leaks from drain pipe joints. Test the draining while hearing the operating sound of drain motor. Draining can be seen through the drain socket (transparent).
3. When the drain test is over, remove the drain plug and drain water. After checking the draining, reinstall the drain plug.



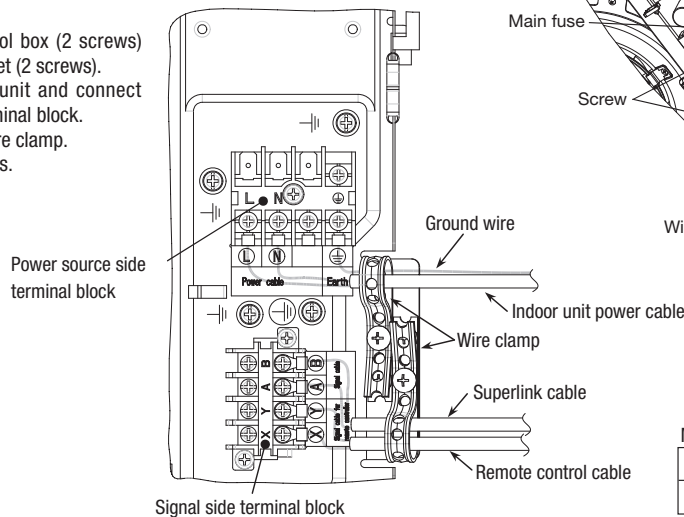
Drain pump operation

- In case electrical wiring work finished
Drain pump can be operated by remote control (wired).
For the operation method, refer to [Operation for drain pump](#) in the installation manual for wiring work.
- In case electrical wiring work not finished
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 firmly, 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 the lid of control box (2 screws) and the wire fixing bracket (2 screws).
2. Introduce wires in the unit and connect them securely to the terminal block.
3. Fix each wire with the wire clamp.
4. Reinstall all removed parts.



Main fuse specification

Specification	Part No.
T5A L250V	SSA564A149H

8 Panel installation

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to next page.

9 Check list after installation

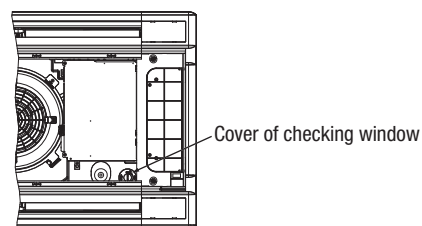
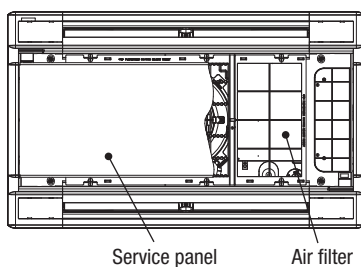
- Check the following items after all installation work completed.

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 (Maintenance)

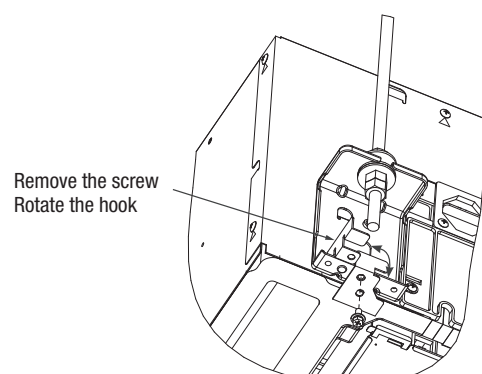
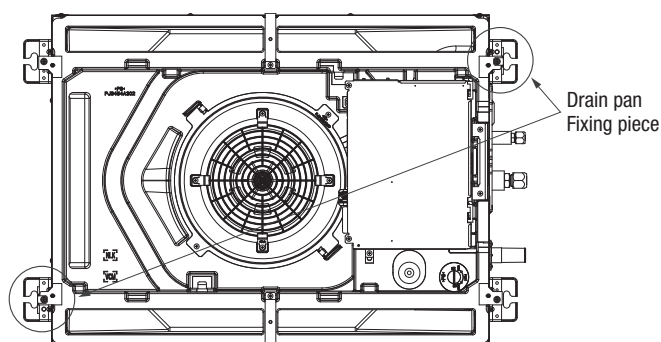
The method of checking the dirt of drain pan

- It is possible to check the dirt for inlet of drain pan without detaching the panel.
1. Remove the service panel and the air filter.
 2. Remove the inspection hole cover located at the corner of drain pan.
 3. Observe the condition of drain pan through the inspection hole.
When the drain pan is fouled heavily, remove it and clean.
 4. Reinstall the inspection hole cover securely after the check. Unless it is fitted properly, it could cause dewing or water leakage.



Attention for removing drain pan

- The fixing components have been attached the with drain pan. Pay attention to these components during installation and removing. Take off the hanging hook after removing four screws. During the installation of drain pan, fix the drain pan firmly by using four screws after hanging it up with the fixing hook.



PANEL INSTALLATION MANUAL

PJB012D300A

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

SAFETY PRECAUTIONS

- First of all, read the "SAFETY PRECAUTIONS" carefully and strictly follow the instruction 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. ⚠️
- 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. ⚠️
- 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 property.
Improper fitting may cause abnormal heat and fire. ⚠️
- 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. ⓧ
- 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. ⚠️

① Before installation

- Follow installation manual carefully, and install the panel properly.
- Confirm that the item shown at right is contained in the packing.

Accessory

Bolt		6 pieces	For panel installation
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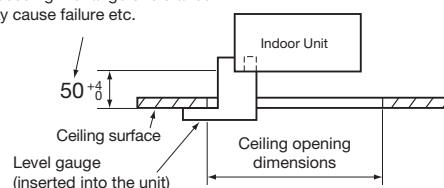
② Checking the indoor unit installation position

- 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 ceiling plane and the indoor unit is correct by inserting the level gauge into the air outlet part of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.
- Remove the level gauge before installing the panel.

Caution

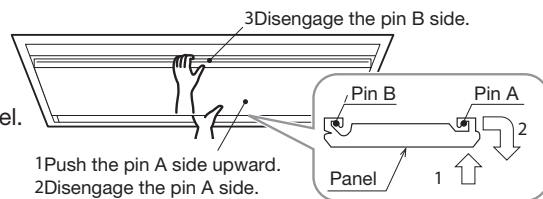
If there is a height difference beyond the design limit between the installation level of the indoor unit and the ceiling surface, the panel may be subject to excessive stress during installation, it may cause distortion and damage.

Keep the distance between 50~54mm.
Exceeding the range of distance may cause failure etc.



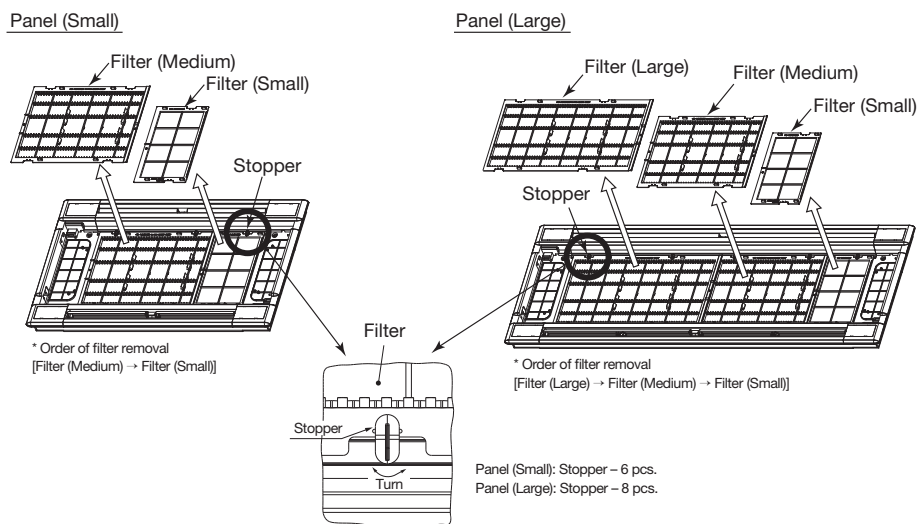
③ Removing the service panel

1. Push one side of the inlet panel (pin A side) upward.
2. Disengage the panel from pin A.
3. Disengage the panel from the pin B and remove the panel.



④ Removing the filters

- To remove a filter, turn the stopper as shown below while holding down the filter.

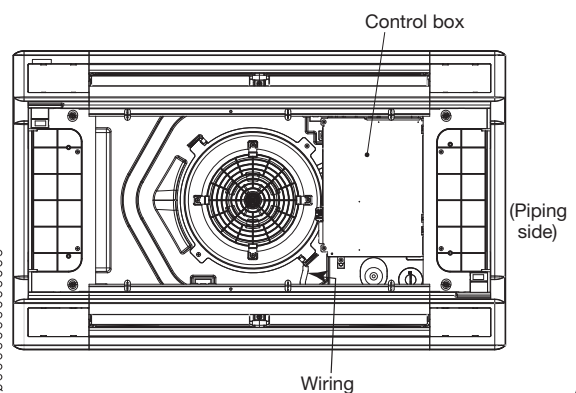


⑤ Orientation to attach the panel

1. Orientation to attach the panel on the unit body is specified.
 - Attach the panel such that the electrical wiring will become closer to the control box as shown at right.

Caution

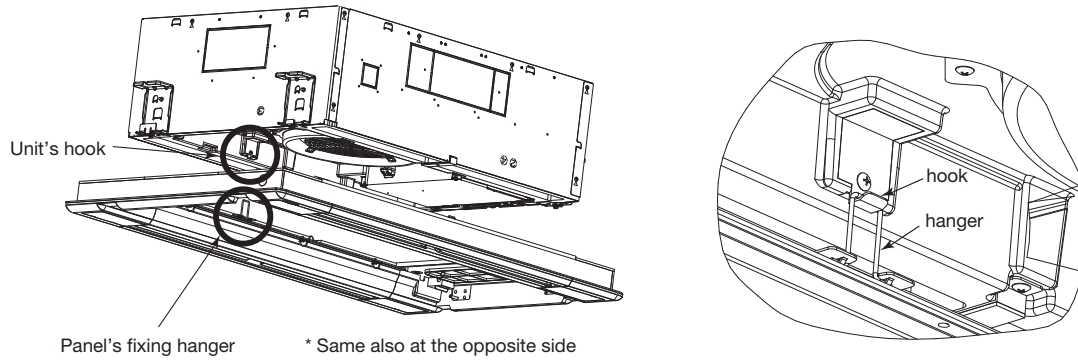
- If the panel is installed in a way other than as shown at right, air could leak because the air filter interferes with the control box, It will also make impossible to connect electric wires.



⑥ Attaching the panel

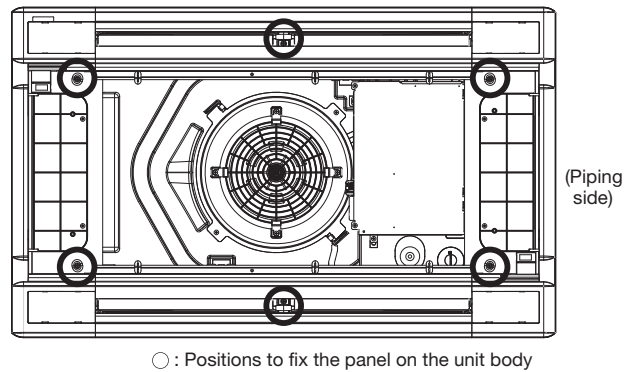
1. Temporary attaching

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



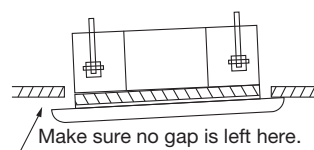
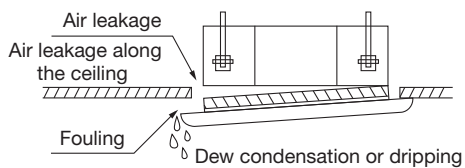
2. Fix the panel on the indoor unit

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



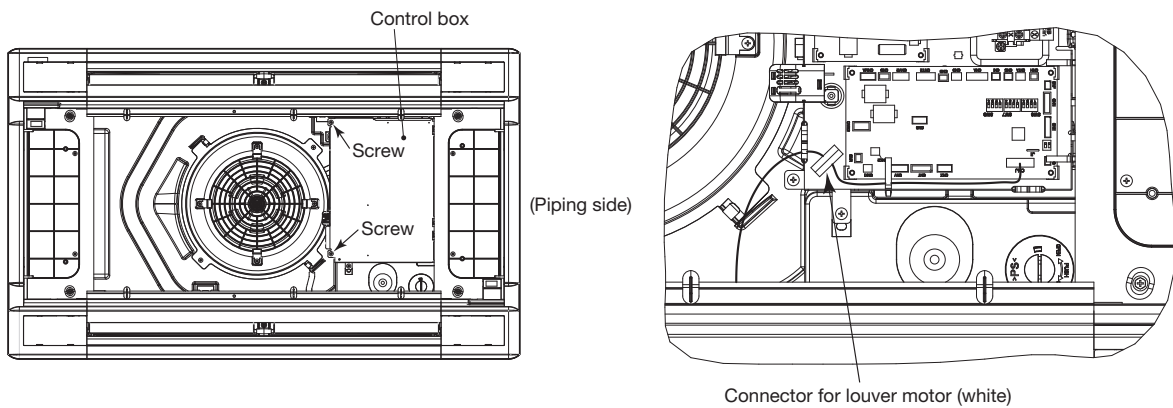
Caution

- Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.
- If there is a gap remaining between the ceiling and the decorative panel even after the hanging bolts are tightened, adjust the installation level of the indoor unit again.



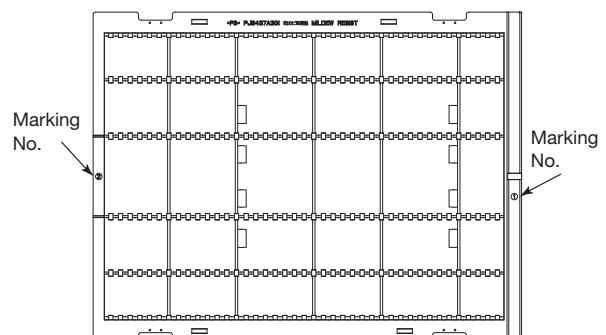
⑦ Electrical wiring

1. After removing two screws of control box, detach the cover of control box.
2. Connect the connector for louver motor (white 20P).
 - Hold the connector inside the control box.
3. Attach the cover of control box.



⑧ Installing the filter

1. Orientation is specified for installing the filters.
2. Install the filters in the reverse order of
 - ④ Removing the filter .
3. Install each filter according to the No. marked on it.



⑨ Installing the service panel

1. Orientation is not specified to install the panel and the service panel.
2. Install the service panel in the reverse order of
 - ③ Removing the service panel .

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



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
 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.
- **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 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.
 - Places 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.

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

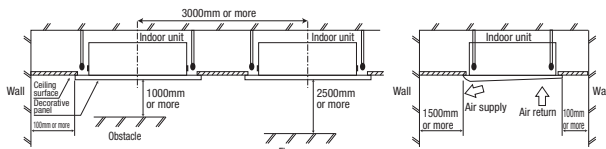
For refrigerant pipe			For drain pipe			
Pipe cover(big)	Pipe cover(small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
1	1	4	1	1	1	1
For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For heat insulation of drain socket	For heat insulation of drain 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.
 - 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.
- 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 3m.

Space for installation and service

- Install the indoor unit at a height of more than 2.5m above the floor.



③ Preparation before installation

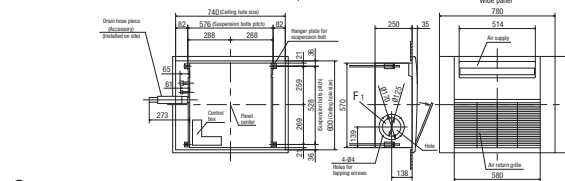
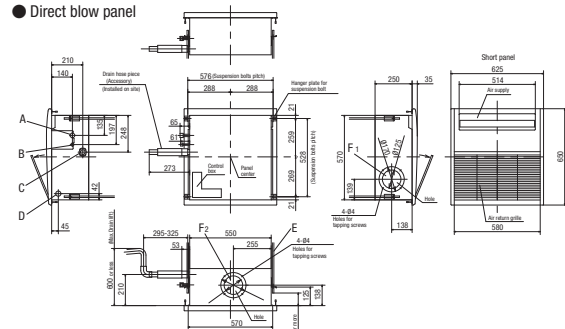
- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and 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) on site.

Ceiling opening, Suspension bolts pitch, Pipe position

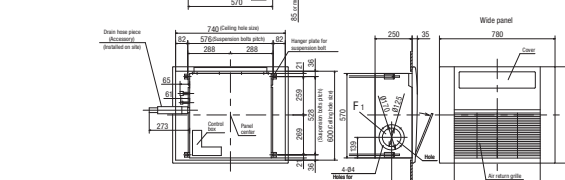
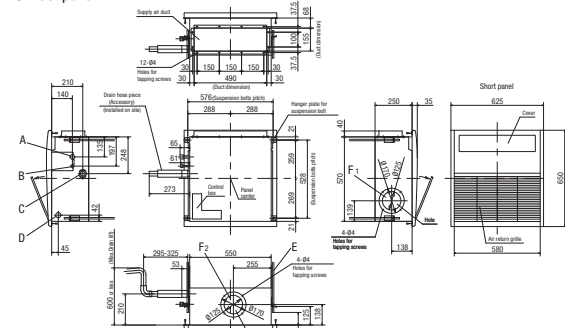
Symbol	Content
A	Gas piping
B	Liquid piping
C	Drain piping
D	Hole for wiring
E	Suspension bolts
F1.2	Outside air opening for ducting

③ Preparation before installation (continued)

● Direct blow panel



● Duct panel



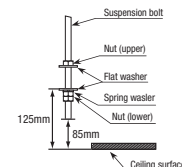
④ Installation of indoor unit

Work procedure

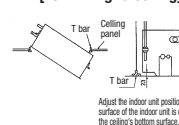
- In case of installing on a ceiling other than 2 x 2 grid ceiling, prepare a ceiling hole with the size of 600mm x 740mm.
- Arrange the suspension bolt at the right position (528mm x 576mm).
- Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
- Ensure that the lower end of the suspension bolt should be 85mm above the ceiling plane. Temporarily put the four lower nuts 125mm 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 so that the bottom surface of the indoor unit is on the same level as the ceiling (bottom surface of the T bar). The allowable gap between the bottom surface of the ceiling and that of the indoor unit is when the bottom surface of the indoor unit is no higher than 5mm. 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.

Caution

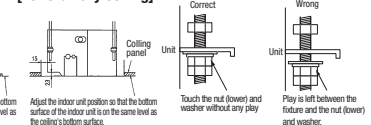
- Do not install the bottom surface of the indoor unit lower than the bottom surface of the ceiling.



[For 2 x 2 grid ceiling]

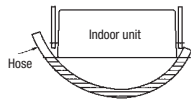


[For ordinary ceiling]



④ Installation of indoor unit (continued)

- 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.
- Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

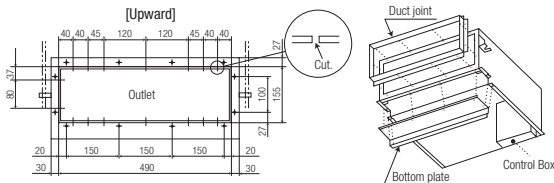
- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, avoid dust coming into the indoor unit.

⑤ The indoor unit change procedure for duct type

Prepare a duct panel.

(1) Drill hole for duct

- While referring to the dimensions, cut the insulation.
- Cut sheet metal for the hole, and drill hole.
- Install the duct joint with screws attached to the panel.
- Install the bottom plate with screws attached to the panel.



(5) Set up as follows:

Inactivating the louver switch

Invalidate the louver switch by the remote control.

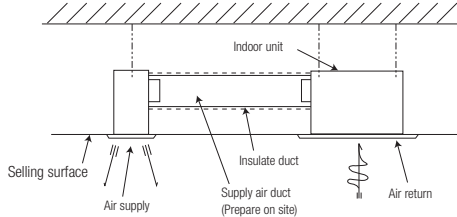
[Method]

- Stop the operation of air-conditioner. Press **(SET)** button and **(MODE)** button for 3 seconds at the same time.
- Select **FUNCTION** (Remote Control Function) and press **(SET)** button.
- Select **LOUVER S/W** (Louver Switch Setting) of No. "07" and press **(SET)** button.
- Select **INVALID** (Louver Switch Invalid) and press **(SET)** button.
- Press **EXIT** button to exit.

As for details, refer to the installation manual of remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
FUNCTION	07	LOUVER S/W	INVALID

(2) Duct work



Request

- Calculate air flow and the static pressure to select the duct's length and shape.

Caution

- Take care that the static pressure does not exceed 30 Pa. The indoor unit has condensation owing to the decrease of air flow, may cause wetting the ceiling and household goods.

Request

- The duct should be minimum bends. (Make the bend radius as large as possible.)
- Conduct the duct work before ceiling attachment.



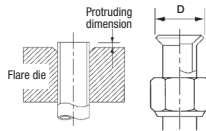
(3) Connecting duct for outside air intake

- Outside air intake
 - Use the intake, which is easier for work, either at the rear or the side.
- Duct connection
 - Connect the 125 mm diameter duct, using the duct flange for 125mm diameter duct. (Clamp with band)
 - Insulate the duct to prevent condensation.

⑥ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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.
 - In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
 - In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) 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 R410A refrigerant.

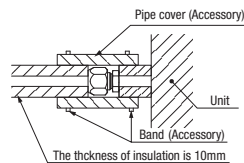
Work procedure

- 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.)
- 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.
 - Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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.

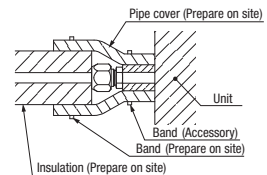
Caution:

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>



⑦ Drain pipe

Caution

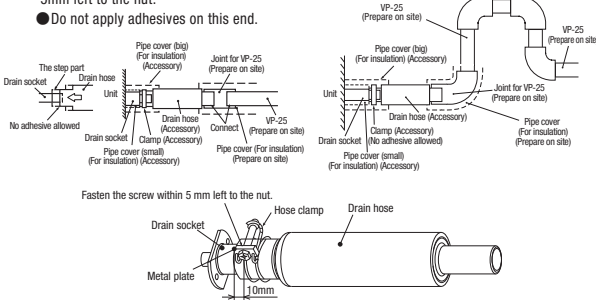
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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.

⑦ Drain pipe (continued)

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 within 5mm left to the nut.

● Do not apply adhesives on this end.



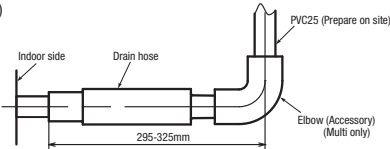
Fasten the screw within 5 mm left to the nut.

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.

- When drain pipe is set to rising in the nearest of the unit, use the VP-25 pipe.
When drain pipe is set to after the horizontal pulling, use the VP-25 and above pipe.
- 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.

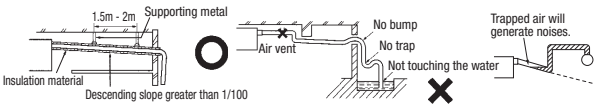
● As for drain pipe, apply VP25 (OD32).

If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)

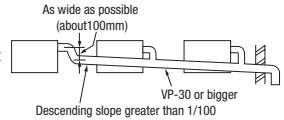


3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.

- 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.

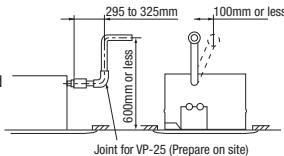


4. Insulate the drain pipe.

- 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.

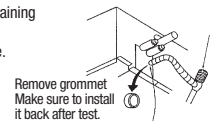


Drain test

- After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan. Check if the motor sound of drain pump is normal or not.
 - Do drain test even if installation of heating season.
 - For new building cases, make sure to complete the test before hanging the ceiling.
1. Remove the drain grommet, and pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
 2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test.
Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.

⑦ Drain pipe (continued)

3. Unplug the drain plug on the indoor unit to remove remaining water on the drain pan after the test, and re-plug it.
4. Make sure to install the grommet back to original place.
5. Insulate the drain pipe properly finally.



Drain pump operation

- In case electrical wiring work finished
Drain pump can be operated by remote control (wired).
For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not finished
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 (220-240VAC on the terminal block L and N) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

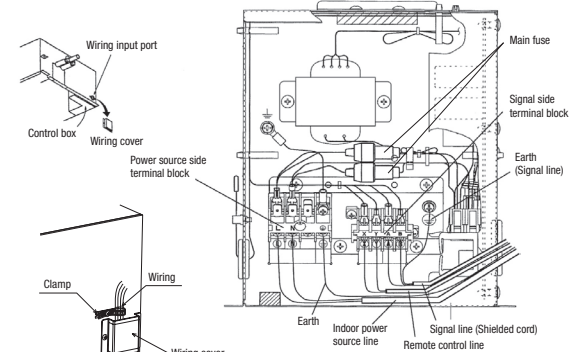
Insert the edge of water pump hose in the drain pan.

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) and the wiring cover (2 screws).
 2. Hold each wiring inside the unit and fasten them to terminal block securely.
 3. Take out the wiring to upper direction of wiring cover, and fix the wiring with clamp.
 4. Install the removed parts back to original place.

Caution

Make sure to install the wiring cover. Otherwise it may cause dew condensation into the control box.



Main fuse specification

Specification	Port No.
T3.15A L250V	SSA564A116G

⑨ Panel installation

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to next page.

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 airflow on air inlet and outlet?	Insufficient capacity	

PANEL INSTALLATION MANUAL

PJC012D118

(a) Parts models : TQ-PSA-15W-E, TQ-PSB-15W-E

Please read this manual together with installation manual of indoor unit.

Warning

- Please perform electrical work after cutting off main power. **!**
Otherwise, electrical shock or malfunction, etc. may occur.

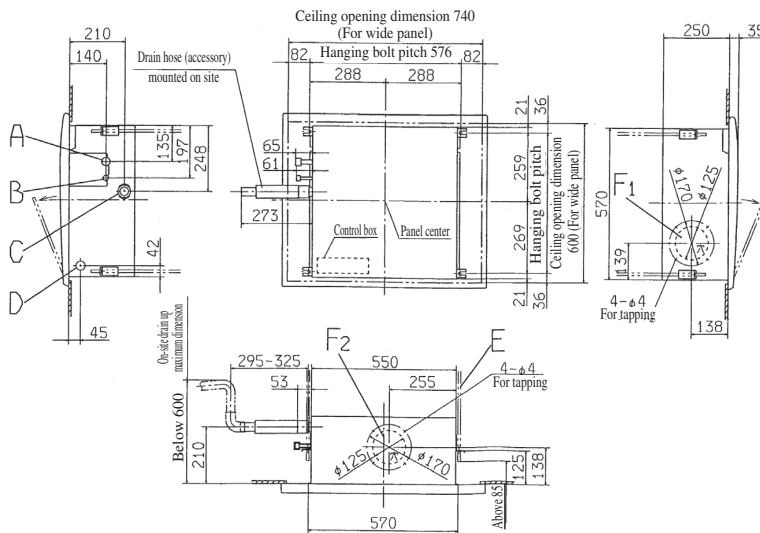
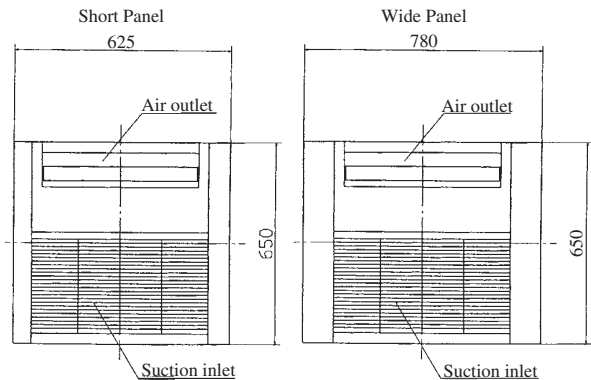
Notice

If the louver cannot be moved by remote control operation, cut off the main power for over 10 seconds after confirming the connection of connector, then turn on the power again.

1 Accessories

1	Air filter	1	
2	Hanging bolts	4	For mounting panel
3	Screws (M4 L=8mm)	2	For mounting chains

2 Confirm the mounting level of main unit



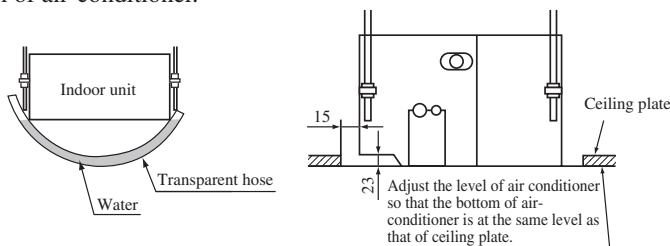
Marks	Description
A	Piping for refrigerant gas side
B	Piping for refrigerant liquid side
C	Drain piping
D	Power inlet
E	Hanging bolt
F1,2	OA inlet

- Confirm the mounting level of air-conditioner and ceiling. Adjust the level of air-conditioner so that the bottom of air conditioner is at the same level as that of ceiling plate (the T-bar).
The level differential tolerance between the bottom surface of ceiling and that of main unit is that air-conditioner main unit cannot be higher than ceiling bottom surface for 5mm.

Caution

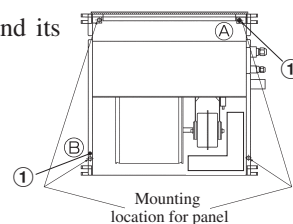
Do not set the main unit below the bottom surface of ceiling.

- Confirm the level of air-conditioner.

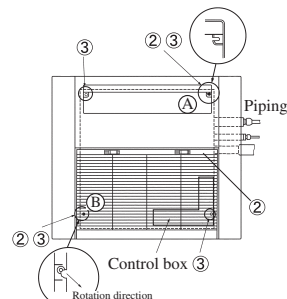


3 Mount the panel

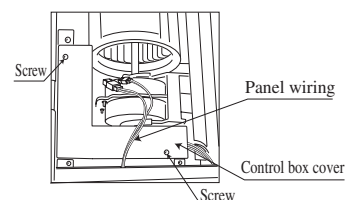
- ① Attach 2 of 4 hanging bolts supplied with the panel on the indoor piping side and its diagonal position respectively, and tighten them gently for 5mm. (A B ● marks)



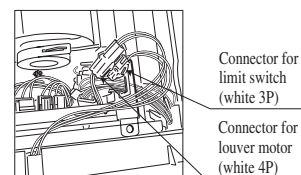
- ② Open the suction grille, hang the panel onto 2 bolts, and secure it temporarily. When securing the panel temporarily, hang the panel onto A side bolts as shown in the left figure, then hang onto B side while turning it.
- ③ Tighten the temporarily secured hanging bolts and other 2 hanging bolts.



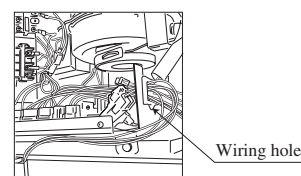
- ④ Remove 2 screws on the control box, and open the cover.



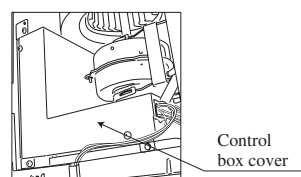
- ⑤ Connect the connector for louver motor (white 4P) and the connector for limit switch (white 3P). The connector on the indoor unit side is in the control box.



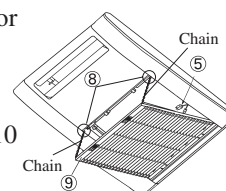
- ⑥ After connecting the connectors, pass the wiring on the panel side through wiring hole. Hold the connector in the control box.



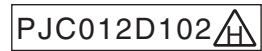
- ⑦ Close control box cover, and tighten 2 screws.



- ⑧ Mount the chain attached with suction grille on the panel using screw. The screws for mounting chain and hanging bolts are in the same bag.
- ⑨ Close suction grille, then work is completed.
- ⑩ If the louver cannot be moved by remote control operation, cut off the power for over 10 seconds after confirming the connection of connector, then turn on the power again.



(b) Parts models : QR-PNA-14-ER, QR-PNB-14-ER



Read with the installation instructions for the main body of the indoor unit.

⚠ Warning	
● Do electric construction after turning off original power. It becomes the cause of an electric shock, trouble and operation defective.	!

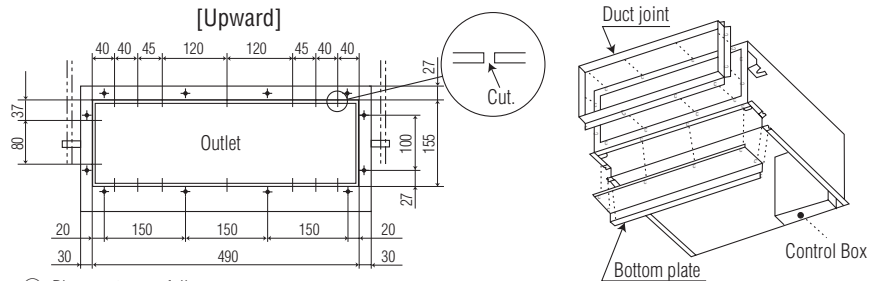
1. Accessories

1	Air filter	1 pc.	
2	Blow outlet cover	1 pc.	
3	Bolt	4 pcs.	For panel installation
4	Screw (M4, L=8mm)	2 pcs.	For chain installation
5	Duct joint	1 pc.	
6	Bottom plate	1 pc.	
7	Screw (M4, L=8mm)	8 pcs.	For bottom plate installation
8	Screw (M4, L=8mm)	12 pcs.	For duct joint installation

2. Main body change procedure for duct type

(1) Drill hole for duct

- ① While referring to the dimensions, cut the insulation.
- ② Cut sheet metal for the hole, and drill hole.
- ③ Install the duct joint with screws attached to the panel.
- ④ Install the bottom plate with screws attached to the panel.



⑤ Please set up as follows:

● In the case of FDTQ-KXE6

Changing the fan tap

Change the fan tap to the high speed by the remote control.

[Method]

- ① Stop the operation of air-conditioner. Press (SET) button and (MODE) button for 3 seconds at the same time.
- ② Select "I/U FUNCTION ▲" (Indoor Unit Function) and press (SET) button.
- ③ Select "FAN SPEED SET" (Fan Speed Setting) of No."02" and press (SET) button.
- ④ Select "HIGH SPEED 1" (High Fan Speed 1) and press (SET) button.
- ⑤ Press (ON/OFF) button to exit.

As for details, refer to the installation manual of remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
I/U FUNCTION ▲	02	FAN SPEED SET	HIGH SPEED 1

Invalidating the louver switch

Invalidate the louver switch by the remote control.

[Method]

- ① Stop the operation of air-conditioner. Press (SET) button and (MODE) button for 3 seconds at the same time.
- ② Select "FUNCTION ▼" (Remote Control Function) and press (SET) button.
- ③ Select "LOUVER S./W" (Louver Switch Setting) of No."07" and press (SET) button.
- ④ Select "INVALID" (Louver Switch Invalid) and press (SET) button.
- ⑤ Press (ON/OFF) button to exit.

As for details, refer to the installation manual of remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
FUNCTION ▼	07	LOUVER S./W	INVALID

● In the case of FDTQA-KXE4 (R)

Changing the fan tap connection

The following two methods are available in switching the fan tap. Switch to the High-speed tap with one of these methods.

[Method]

(1) Set SW9-4 provided on the indoor unit board to ON.

SW9-4	ON	Fan control, high speed (High ceiling)
	OFF	Fan control, standard

(2) Change the fan tap to the high speed by the remote control.

- ① Stop the operation of air-conditioner. Press (SET) button and (MODE) button for 3 seconds at the same time.
 - ② Select " I/U FUNCTION " (Indoor Unit Function) and press (SET) button.
 - ③ Select " Hi CEILING SET " (Fan Speed Setting) of No. "01" and press (SET) button.
 - ④ Select " Hi CEILING 1 " (High Fan Speed 1) and press (SET) button.
 - ⑤ Press (ON/OFF) button to exit.
- As for details, refer to the installation manual of remote control.

CATEGORY	NUMBER	FUNCTION	SETTING
I/U FUNCTION	01	Hi CEILING SET	Hi CEILING 1

Invalidating the louver switch

Invalidate the louver switch by the remote control.

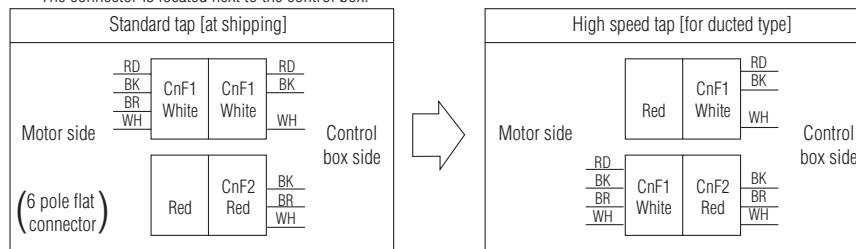
[Method]

- ① Stop the operation of air-conditioner. Press (SET) button and (MODE) button for 3 seconds at the same time.
 - ② Select " FUNCTION ▼ " (Remote Control Function) and press (SET) button.
 - ③ Select " LOUVER S/W " (Louver Switch Setting) of No. "07" and press (SET) button.
 - ④ Select " INVALID " (Louver Switch Invalid) and press (SET) button.
 - ⑤ Press (ON/OFF) button to exit.
- As for details, refer to the installation manual of remote control.

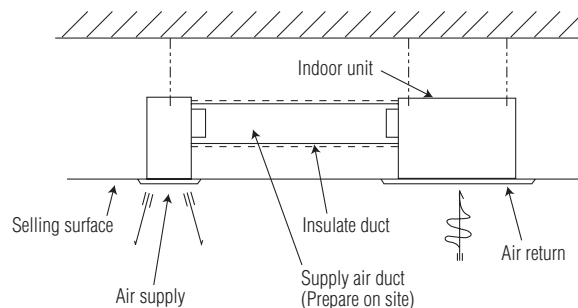
CATEGORY	NUMBER	FUNCTION	SETTING
FUNCTION ▼	07	LOUVER S/W	INVALID

● In the case of FDTQJ-HKXE3

Switch the fan motor connector to one designated for the high speed tap as illustrated below.
The connector is located next to the control box.



(2) Duct work



Request

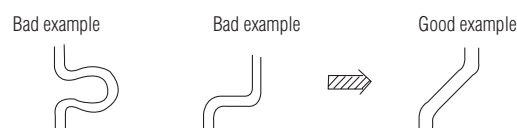
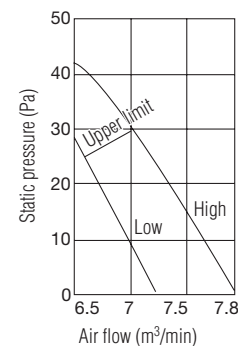
- Calculate air flow and the static pressure to select the duct's length and shape.

Caution

- Take care that the outside static pressure does not exceed 30 Pa. The indoor unit has condensation owing to the decrease in air flow, may cause wetting the ceiling and household goods to become wet.

Request

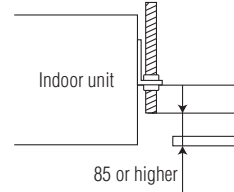
- The duct should be minimum bends. (Make the bend radius as large as possible.)
- Conduct the duct work before ceiling attachment.



3. Installation of indoor unit

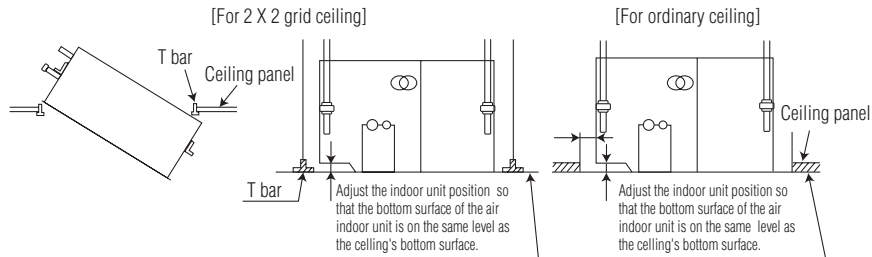
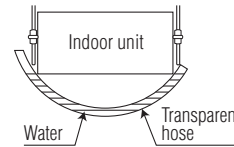
Work procedure

1. In case of installing on a ceiling other than 2 x 2 grid ceiling, prepare a ceiling hole with the size of 600mm x 740mm.
2. Arrange the suspension bolt at the right position (528mm x 576mm).
3. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
4. Ensure that the lower end of the suspension bolt should be 85mm above the ceiling plane. Temporarily put the four lower nuts 125mm 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.
5. Adjust the indoor unit position after hanging it so that the bottom surface of the indoor unit is on the same level as the ceiling (bottom surface of the T bar). The allowable gap between the bottom surface of the ceiling and that of the indoor unit is when the bottom surface of the indoor unit is no higher than 5mm. 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.



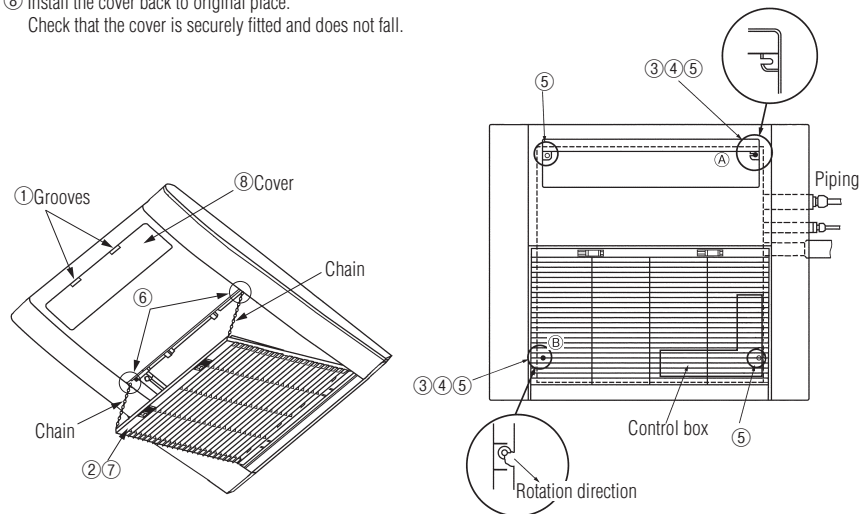
Caution

- Do not install the bottom surface of the indoor unit lower than the bottom surface of the ceiling.
6. 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.
 7. Tighten four upper nuts and fix the unit after height and levelness adjustment.




4. Panel installation

- ① By inserting a flat-blade screwdriver into grooves of the cover, remove the cover from the panel.
- ② Open the air return grill.
- ③ Screw in two of the four hanging bolts attached to the panel, on the piping side (A) and at its opposite angle (B), by a little less than 5 mm (●marks.)
- ④ Hang the panel on two bolts, and install it temporarily. When install the panel temporarily, hang the panel to bolt (A), then hang to bolt (B) while rotating the panel. (Take care so that the indoor unit does not rotate.)
- ⑤ Tighten the two bolts which were used to install the panel temporarily and the other two bolts.
- ⑥ Use the supplied screws to tighten chains to the panel. The screws for install chains are contained in the same bag as bolts.
- ⑦ Close the air return grill. (Check that chains are securely installed.)
- ⑧ Install the cover back to original place. Check that the cover is securely fitted and does not fall.



(5) Ceiling cassette-1 way type (FDTS)







PJC012D304A 

This manual is for the installation of an indoor unit.

For electrical wiring work of indoor unit, refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 430. For electrical wiring work of outdoor unit and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

This unit must be always used with the panel.































SAFETY PRECAUTIONS

- First of all, read the “SAFETY PRECAUTIONS” carefully and strictly follow the instruction 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.	
● 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 property. 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 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 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 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 the unit correctly according to this installation manual.
- Check the following items:
 - Unit type/Power source specification
 - Piping/Wiring/Small parts
 - Accessory

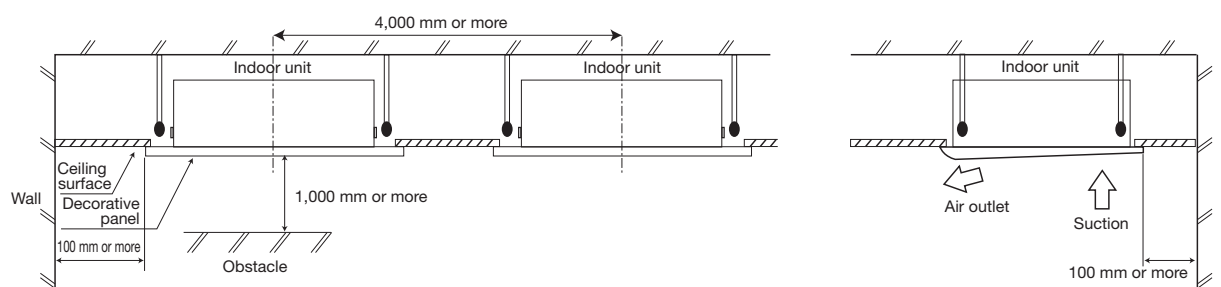
Accessory

For unit suspension	For refrigerant pipe			For drain pipe			
Flat washer (M10)	Pipe cover (Large)	Pipe cover (Small)	Strap	Pipe cover (Large)	Pipe cover (Small)	Drain hose	Hose clamp
8 pc	1 pc	1 pc	4 pc	1 pc	1 pc	1 pc	1 pc
For unit suspension	For heat insulation of gas pipe	For heat insulation of liquid pipe	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

- 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 do maintenance.
 - 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 thickness 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 ware, 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.)
- ② Check if the place where the air-conditioner is installed is strong enough to support the weight of the unit. If it is not strong enough to support, reinforce the structure with boards, beams and soon. If the strength is not enough, the unit may fall and it could injure someone.
- ③ If there are 2 units using wireless remote control, keep them away for more than 6m to avoid malfunction due to cross communication.
- ④ When plural indoor units are installed nearby, keep them away for more than 4m.

Indoor unit installation space

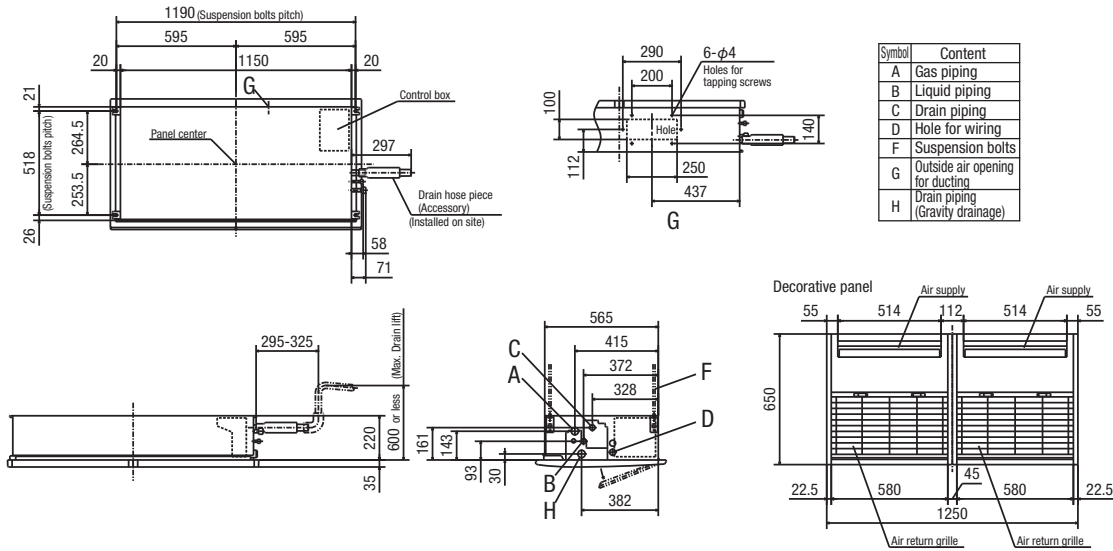


③ Preparation before installation

- 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) on site.

③ Preparation before installation (continued)

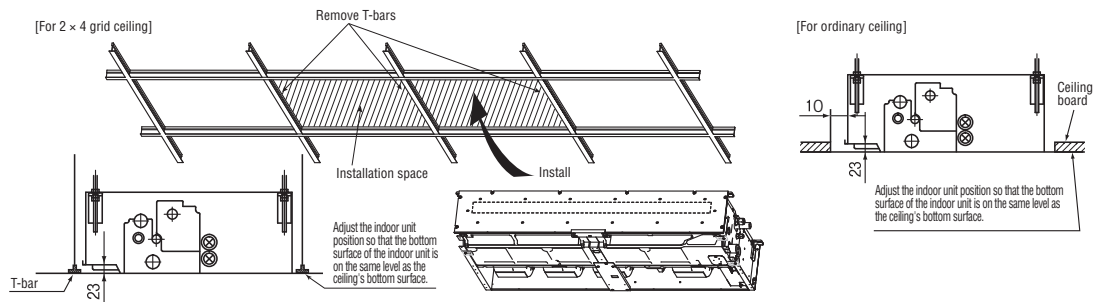
Size of hole on the ceiling, suspension bolt pitch and pipe position



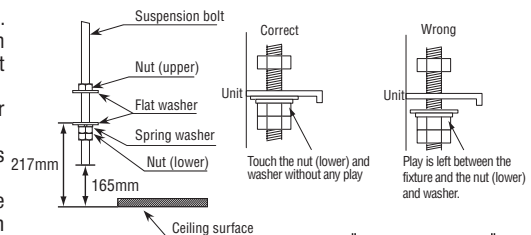
④ Installation of indoor unit

Work procedure

1. In case of installing on the 2 × 4 grid ceiling, remove three T-bars.
2. In case of installing on the ceiling other than 2 × 4 grid ceiling, prepare a ceiling hole with the size of 1420mm × 600mm.
3. Arrange the suspension bolt at the right position (1190mm × 518mm).
4. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.



5. Ensure that the lower end of the suspension bolt should be 165mm above the ceiling plane. Temporarily put the four lower nuts 217mm 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.
6. Adjust the indoor unit position after hanging it so that the bottom surface of the indoor unit is on the same level as the ceiling (bottom surface of the T bar). The allowable gap between the bottom surface of the ceiling and that of the indoor unit is when the bottom surface of the indoor unit is no higher than 5mm. 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.



Caution

- Do not install the bottom surface of the indoor unit lower than the bottom surface of the ceiling.
7. 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.
 8. Tighten four upper nuts and fix the unit after height and levelness adjustment.

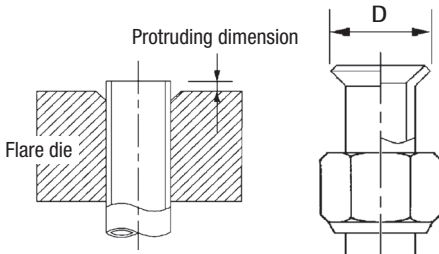
Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, avoid dust coming into the indoor unit.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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 or compatible with JIS B 8607, Class 2.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) 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 R410A refrigerant.

Work procedure

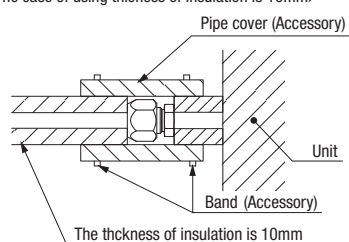
1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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.

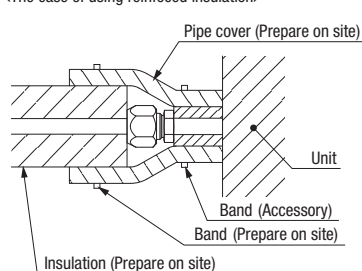
Caution:

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>



⑥ Drain pipe

Caution

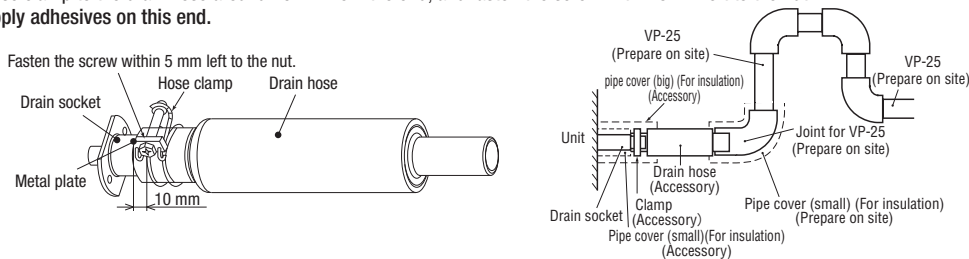
- Install the drain pipe according to the installation manual in order to drain properly.
Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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 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.

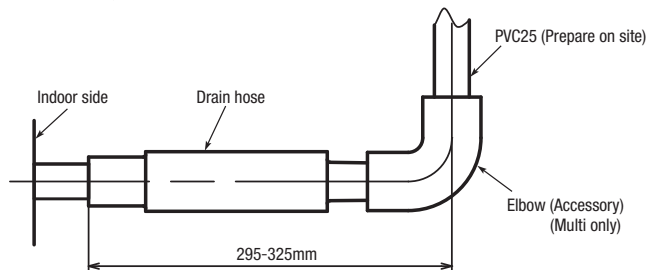
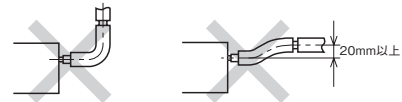
- Do not apply adhesives on this end.



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.

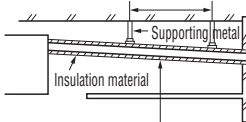
- Make sure that the adhesive will not get into the supplied drain hose.
It may cause the flexible part broken after the adhesive is dried up and gets rigid.
- The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may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



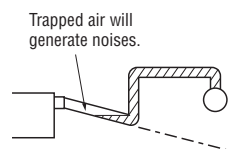
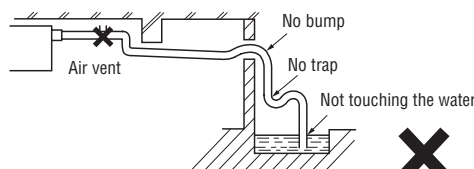
3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.

- 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.

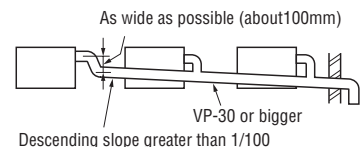
- Do not set up air vent.



Descending slope greater than 1/100



- 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.



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.

⑥ Drain pipe (continued)

Drain up

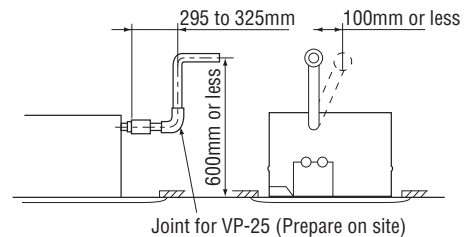
- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water 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.

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. Check if the motor sound of drain pump is normal or not.
- Do drain test even if installation of heating season.
- For new building cases, make sure to complete the test before hanging the ceiling.

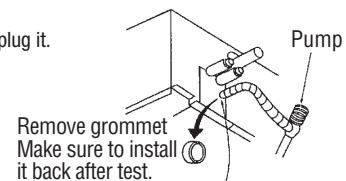
Work procedure

1. Remove the drain grommet, and pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test.
Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.
3. Unplug the drain plug on the indoor unit to remove remaining water on the drain pan after the test, and re-plug it.
4. Make sure to install the grommet back to original place.
5. Insulate the drain pipe properly finally.



Drain pump operation

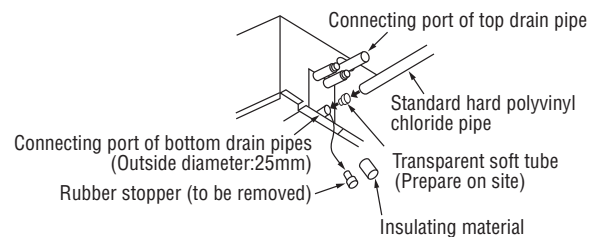
- In case electrical wiring work finished
Drain pump can be operated by remote control (wired).
For the operation method, refer to **Operation for drain pump** in the installation manual for wiring work.
- In case electrical wiring work not finished
Drain pump will run continuously when the dip switch "SW7-1" on the indoor unit PCB is turned ON, the Connector CNB is disconnected, and then the power source (220-240VAC on the terminal block L and N) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.



Insert the edge of water pump hose in the drain pan.

Outline of bottom drain piping work

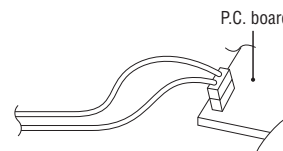
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



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.)

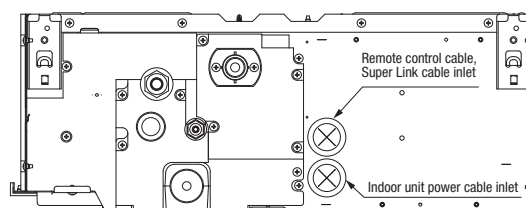


⑦ Wiring-out position and wiring connection

- 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 firmly, 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 the control box cover (2 screws).
 2. Introduce cables into the unit.
 3. Securely connect wires to the terminal block.
 4. Fix each wire with the wire clamp.
 5. Reinstall the control box cover with 2 screws.

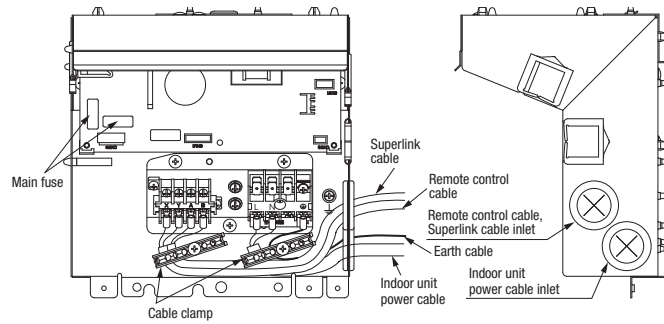
Main fuse specification

Specification	Part No.
T3.15A L250V	SSA564A149AF



7 Wiring-out position and wiring connection (continued)

Wire connection



8 Panel installation

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to next page.

9 Check list after installation

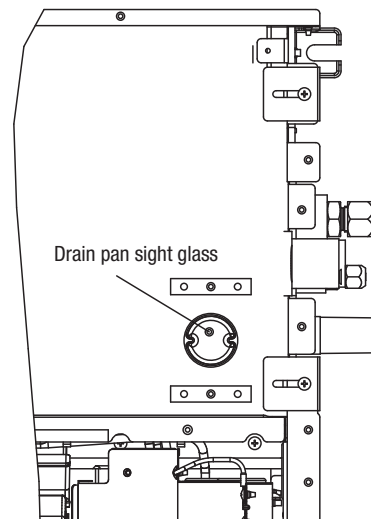
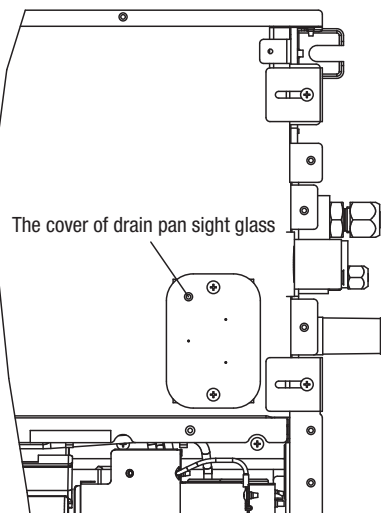
- Check the following items after all installation work completed.

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	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 (Maintenance)

The method of checking the dirt of drain pan

- Dirt on the drain pan at the suction inlet of drain pump can be inspected without removing the drain pan.
 1. Remove the panel.
 2. Remove the cover of the drain pan sight glass.
 3. Inspect the dirt on the drain pan through the sight glass.
When it is heavily diirt, remove and clean the drain pan.
 4. Reinstall the sight glass cover securely after the inspection of dirt. Unless it is installed properly, it could cause water leakage.





PANEL INSTALLATION MANUAL












PJC012D300A

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

SAFETY PRECAUTIONS

- First of all, read the "SAFETY PRECAUTIONS" carefully and strictly follow the instruction 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. 
- 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. 
- 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. 
- 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. 
- 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. 

① Before installation

- Follow installation manual carefully, and install the panel properly.
- Confirm that the item shown at below is contained in the packing.

Accessory

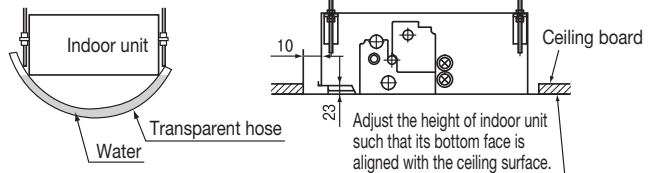
Bolt		4 pieces (For the right panel) 4 pieces (For the left panel)	For panel installation
Screw (M4 L=8mm)		2 pieces (For the right panel) 2 pieces (For the left panel)	For chains installation

② Confirmation of the installation level of main unit

- Read also the installation manual for the indoor unit, in addition to this manual.
- Confirm the installation level of main unit of indoor unit relative to the ceiling material.
Adjust the height of indoor unit such that its bottom face is aligned with the ceiling surface.
(The air outlet is hidden above the ceiling.)
- Limit the difference between the levels of the ceiling surface and the bottom face of indoor unit to less than 5 mm.

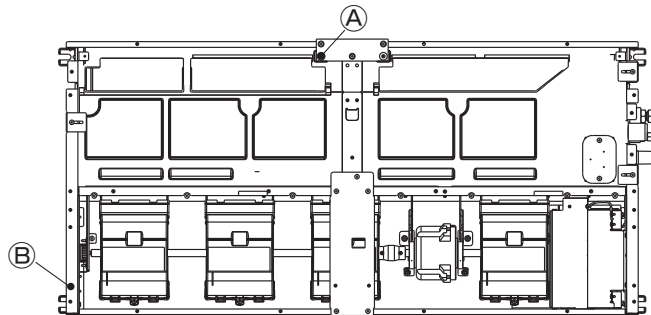
Caution

Install the main unit of indoor unit such that it will not protrude beyond the ceiling surface.

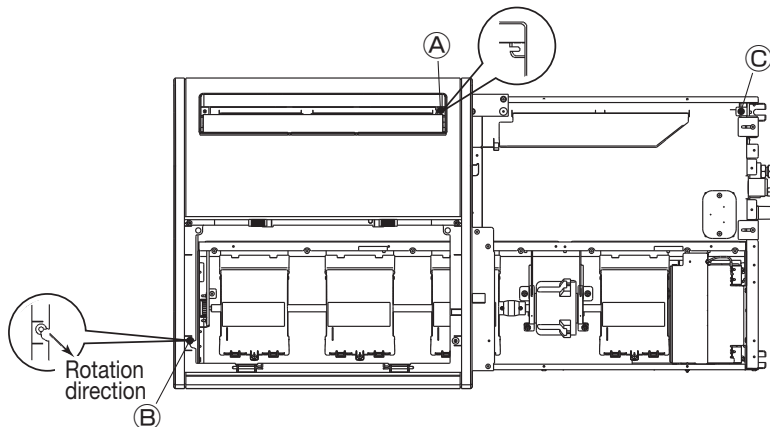


③ Installation of panel

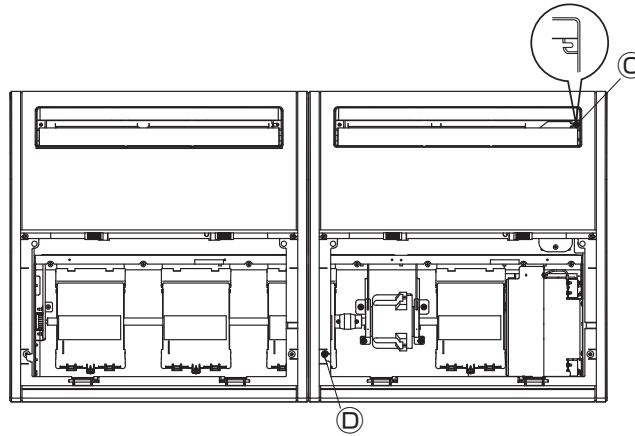
1. Tighten 2 out of 4 bolts attached to the left panel, one at the center of indoor unit at blowout side and the other at the opposite to it on the diagonal line (A and B in the figure), by less than 5 mm.



2. Open the suction grill. Hook the left panel on 2 pieces of bolt and tighten them provisionally.
To do this, hook the panel on the bolt (A) at first, and then turn the panel to hook it on the bolt (B).

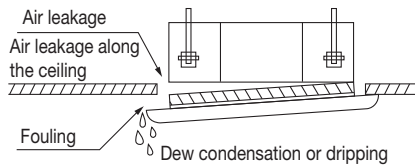


3. Tighten 1 out of 4 bolts attached to the right panel at the pipe side of indoor unit by less than 5 mm. (Bolt ㉓)
4. Hook the panel on the bolt ㉓ and then tighten provisionally the bolt opposite to it on the diagonal line (bolt ㉔).
5. While adjusting the clearance between the right and left panels, tighten up the provisionally tightened bolts and remaining bolts.

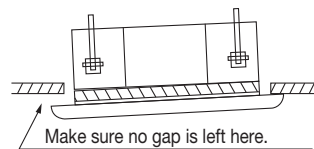


Caution

- Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.

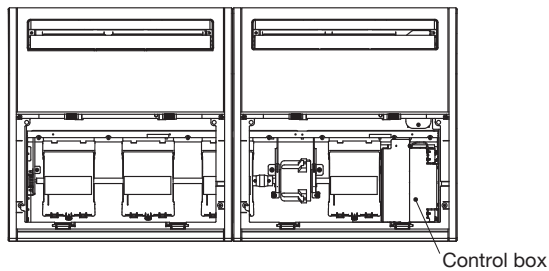


- If there is a gap remaining between the ceiling and the decorative panel even after the hanging bolts are tightened, adjust the installation level of the indoor unit again.

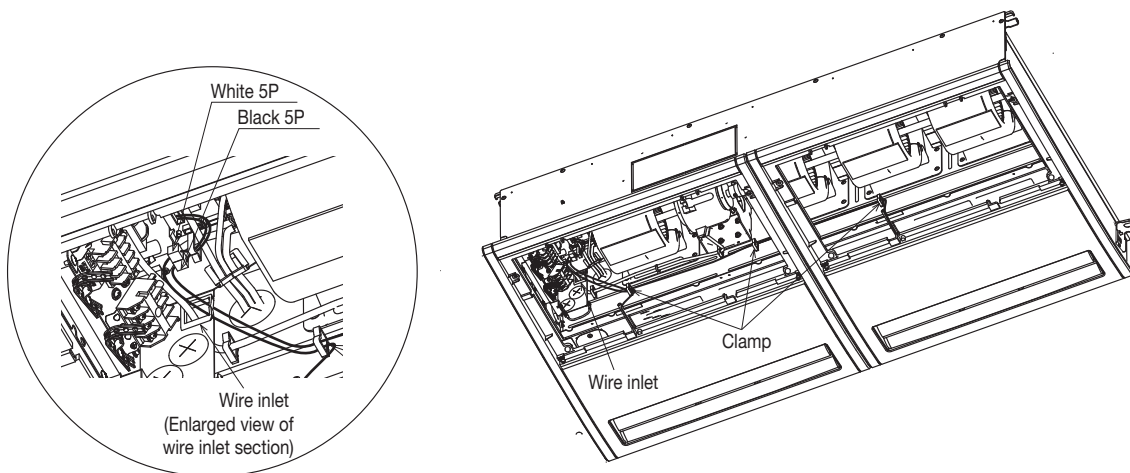


④ Electric wiring

1. Removing 2 screws, remove the control box cover of the main unit of unit.



2. Pass the louver motor wires through the clamp on the indoor unit.



3. Connect the left panel louver motor connector (Black 5P) and the right panel louver motor connector (White 5P) respectively.

Connectors at the indoor unit side are provided in the control box.

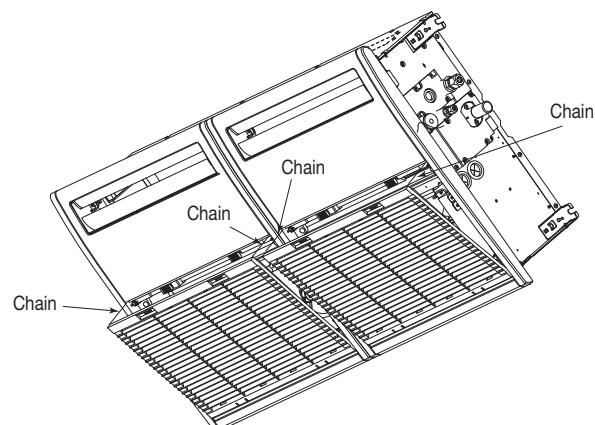
Connect the connectors according to the color designation.

4. After connecting the connectors, pass the panel side wires through the wire inlet on the control box. Put the connectors in the control box.

5. Close the control box cover, and fix with 2 screws.

6. Install the chains attached to the suction grill on the panel with screws.

The screws to install chains are put in the same bag as bolts.



7. Close the suction grill finally.

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

PJG012D004B

(a) Models FDU45-140KXE6F

(i) 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 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

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.
FDU850FKXEZ1 = 90, FDU1100FKXEZ1 = 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 all 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.
- **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 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, chlorine 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.
- **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

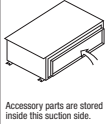
● Install correctly according to the installation manual.

● 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 drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting	For drain pipe connecting	



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 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.)

• 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.

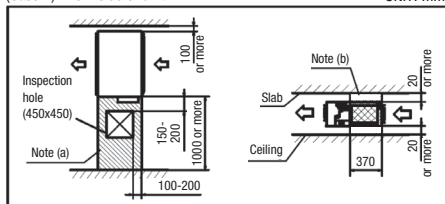
Space for installation and service

● Make installation altitude over 2.5m.

(Indoor Unit)

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

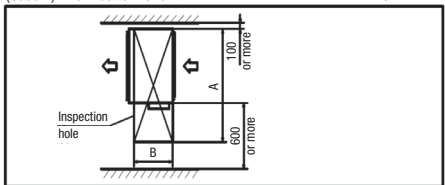
(Case 1) From side of unit



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

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

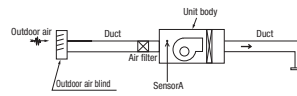
(Case 2) From bottom of unit



(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.

- 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

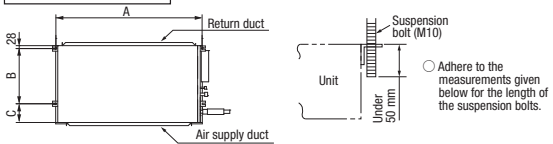
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

○ 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.

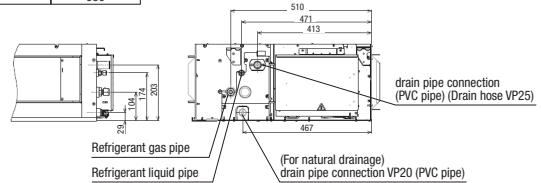
Suspension Bolt Location



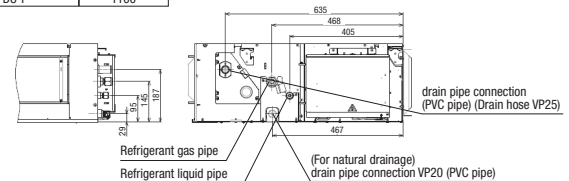
UNIT: mm			
Single type	-	71	100-140
Multi type	45, 56	71, 90	112-160
FDU-F	-	650	1100
A	786	986	1720
B	472	472	725
C	135	135	180

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

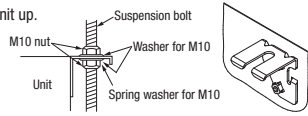


⑤ Installation of indoor unit

Installation

[Hanging]

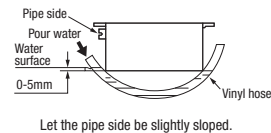
Hang the unit up.



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

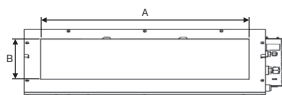
① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.

- 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	—	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.

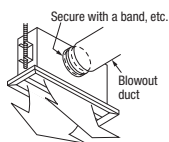
③ Inlet port

- 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	

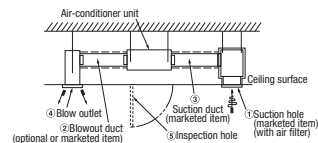


- Make sure to insulate the duct to prevent dewing on it.
- ④ Install the specific blowout duct in a location where the air will circulate to the entire room.
- Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
 - Insulate the area 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.

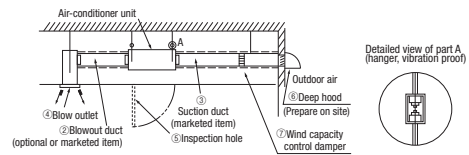


⑥ Duct Work (continued)

FDU

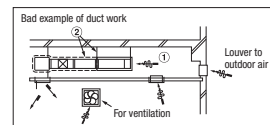


FDU-F



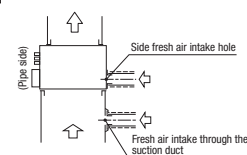
Bad example of duct work

- 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.
 - 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.)
 - 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..
 - 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.
- 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.

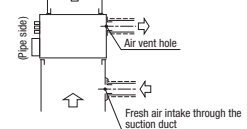


Connecting the air intake/vent ducts the case of FDU

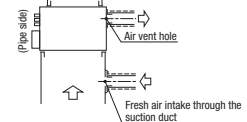
- ① Fresh Air Intake
[for air intake duct only]
- Use the side fresh air intake hole, or supply through a part of the suction duct.



- [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)

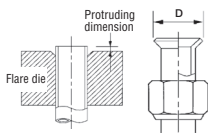


- Insulate the duct to protect it from dew condensation.

7 Refrigerant pipe

Caution

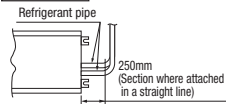
- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
- 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) 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 R410A refrigerant.

Piping work



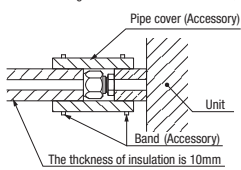
Work procedure

- 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.
 - ※ 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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.

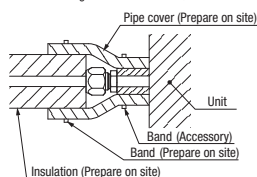
Caution:

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>



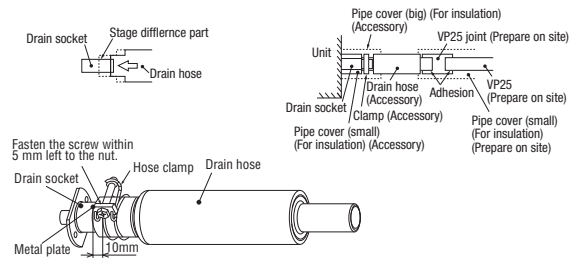
8 Drain pipe

Caution

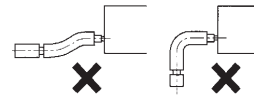
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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

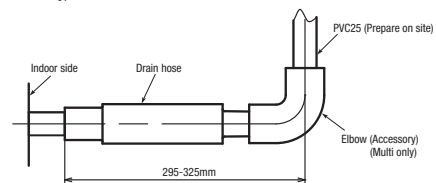
- Make sure to insert the drain hose (the end made of soft PVC) to the end of the step part of drain socket.
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
 - Do not apply adhesives on this end.
 - Do not use acetone-based adhesives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



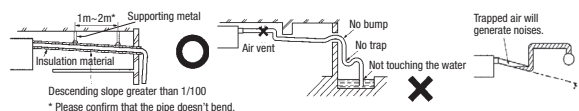
- Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP-25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into 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.



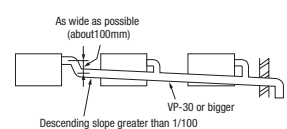
- As for drain pipe, apply VP25 (OD32).
If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)



- 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 for main drain pipe.

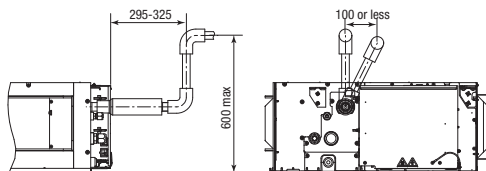


⑧ Drain pipe (continued)

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.



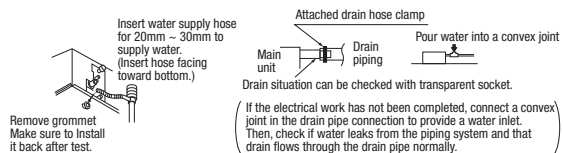
Otherwise, the construction point makes it same as drain pipe construction.

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.

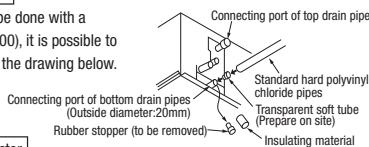
Procedures

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

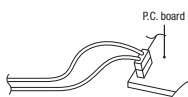
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

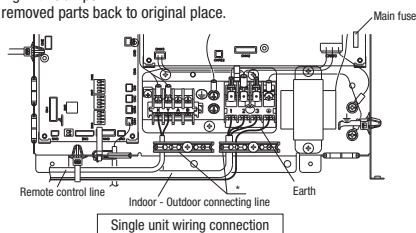
- Uncouple the connector CNR for the drain motor as illustrated in the drawing on the right.

(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.)

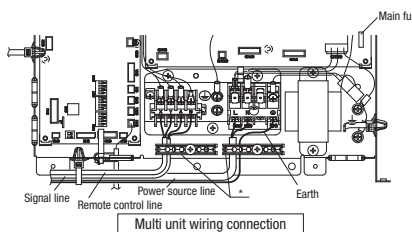


⑨ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power 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.



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-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 .
 - ③ Select setting No. by using button and set E.S.P. by .



Notice

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

E.S.P. button

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.

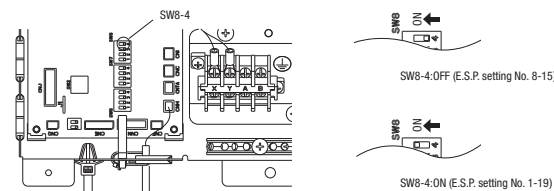
Setting No.	8	9	10	11	12	13	14	15
E.S.P. (Pa)	80	90	100	110	120	130	140	150

- ※ 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.



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	

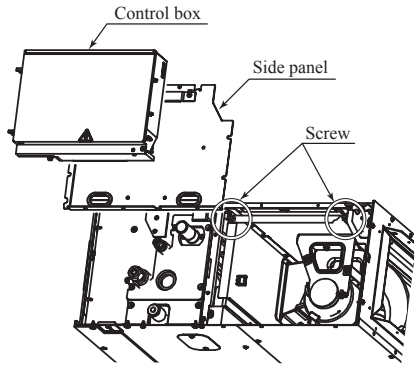
(ii) Replacement procedure of the fan unit

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.

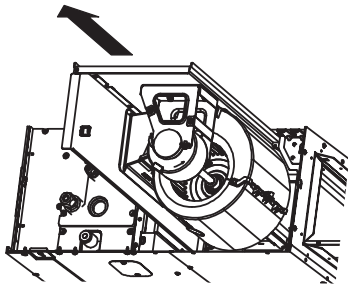
(2) For the maintenance space, refer to page 270 (FDU-F:315).

1) Models FDU45, 56KXE6F

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

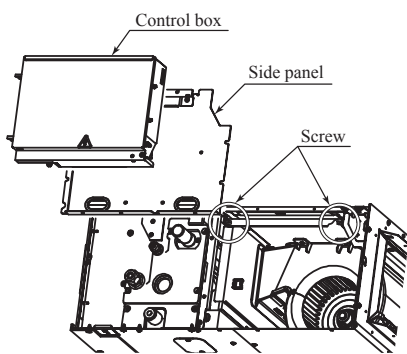


- b) Take out the fan unit in the arrow direction.

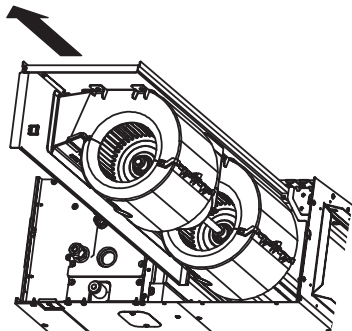


2) Models FDU71, 90KXE6F, 650FKXZE1

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

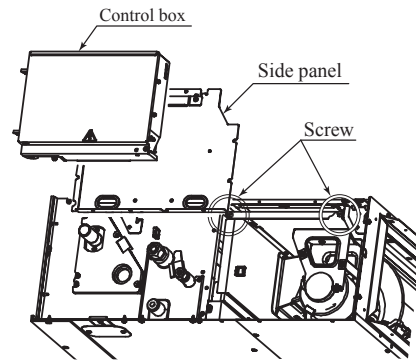


- b) Take out the fan unit in the arrow direction.

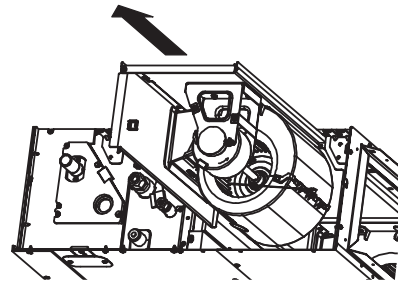


3) Models FDU112, 140, 160KXE6F, 1100FKXZE1

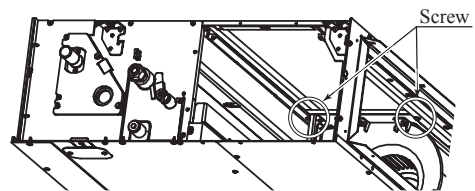
- a) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



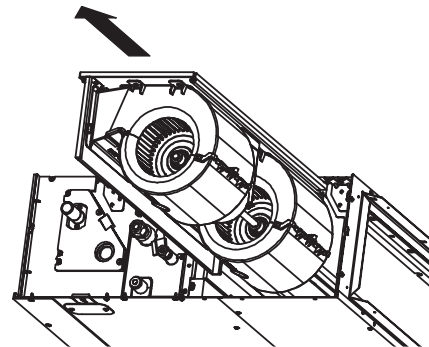
- b) Take out the fan unit located at the near side in the arrow direction.



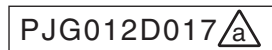
- c) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.



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



**(b) Models FDU224, 280KXZE1
Models FDU1800, 2400FKXE1**



- 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 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
- 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.
FDU1800FKXE1 = 224, FDU2400FKXE1 = 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.
[S] Never do it under any circumstances. [E] 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. [E]
- **Install the system correctly according to these installation manuals.**
Improper installation may cause explosion, injury, water leakage, electric shock, and fire. [E]
- **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. [E]
- **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. [E]
- **Ventilate the working area well in case the refrigerant leaks during installation.**
If the refrigerant contacts the fire, toxic gas is produced. [E]
- **Install the unit in a location that can hold heavy weight.**
Improper installation may cause the unit to fall leading to accidents. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **Do not repair by yourself. And consult with the dealer about repair.**
Improper repair may cause water leakage, electric shock or fire. [E]
- **Consult the dealer or a specialist about removal of the air-conditioner.**
Improper installation may cause water leakage, electric shock or fire. [E]
- **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. [E]
- **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. [E]
- **Shut off the power before electrical wiring work.**
It could cause electric shock, unit failure and improper running. [E]

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. [E]
- **Earth leakage breaker must be installed.**
If the earth leakage breaker is not installed, it could cause electric shocks or fire. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **Do not install the remote control at the direct sunlight.**
It could cause breakdown or deformation of the remote control. [E]
- **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 [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **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. [E]
- **Do not operate the system without the air filter.**
It may cause the breakdown of the system due to clogging of the heat exchanger. [E]
- **Do not touch any button with wet hands.**
It could cause electric shock. [E]
- **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. [E]
- **Do not clean up the air-conditioner with water.**
It could cause electric shock. [E]
- **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. [E]
- **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. [E]

○ 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	

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 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.)

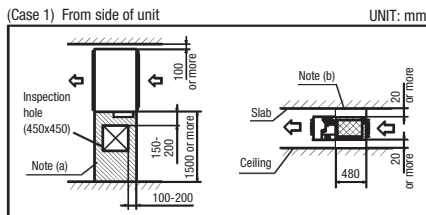
② Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

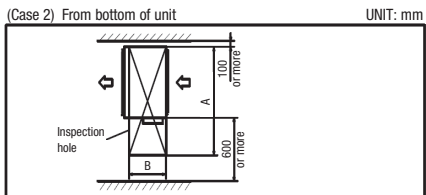
● Make installation altitude over 2.5m.

(Indoor Unit)

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



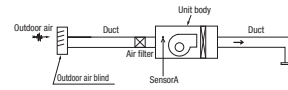
- Notes (a) There must not be obstacle to draw out fan motor. (hatched area)
 (b) Install refrigerant pipe, drain pipe, and wiring so as not to cross (cross-hatched) marked area.



(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

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 optional 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 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

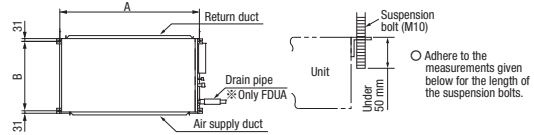
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

○ 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.

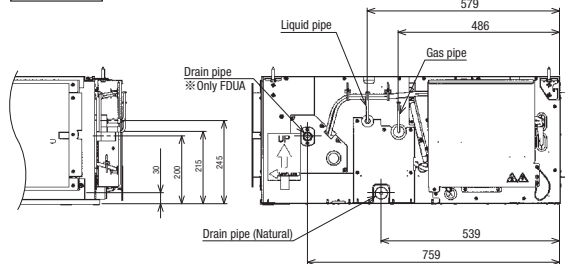
● Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Suspension Bolt Location



	UNIT: mm
Single type	200, 250
Multi type	224, 280
FDU-F	1800, 2400
A	1634
B	831

Pipe locations

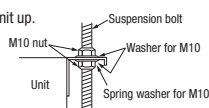


⑤ Installation of indoor unit

Installation

[Hanging]

Hang the unit up.

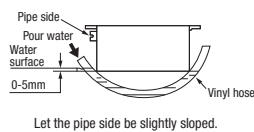


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

Adjustment for horizontality

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

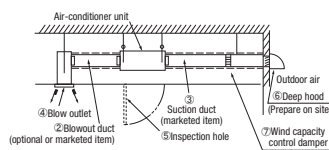
- Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.



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

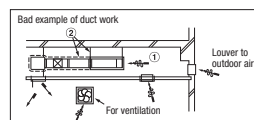
⑥ Duct Work (continued)

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 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 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.



⑥ Duct Work

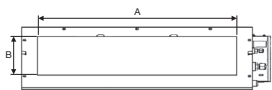
- ① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.

- 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

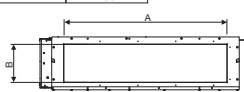


- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.

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.

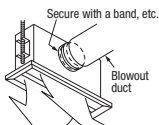
UNIT: mm	
Single type	200, 250
Multi type	224, 280
FDU-F	1800, 2400
A	1450
B	250



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

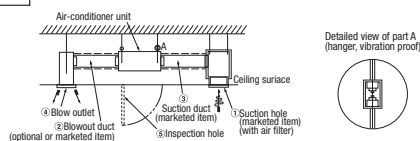
④ Install the specific blowout duct in a location where the air will circulate to the entire room.

- 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 · FDU-A



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 H 3300) for refrigerant 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 R410A 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

1. When brazing work, perform it while cool down around the brazing port with wet towels to prevent the overheating.
2. 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.
3. 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.

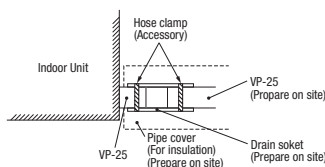
⑧ Drain pipe

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.

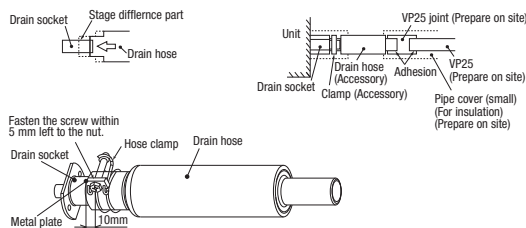


○The cases of FDUA and mounting a Drain-up KIT (option parts)

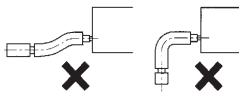
Make sure to insert the drain hose (the end made of soft PVC) to the end of the step part of drain socket.

Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.

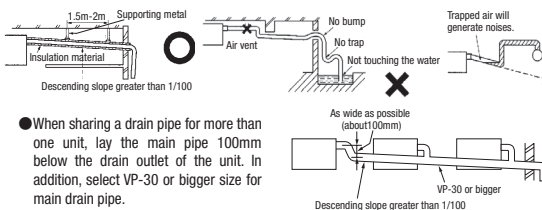
- Do not apply adhesives on this end.
- Do not use acetone-based adhesives to connect to the drain socket.



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.

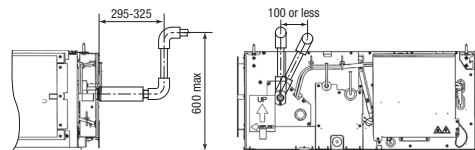
⑧ Drain pipe (continued)

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.



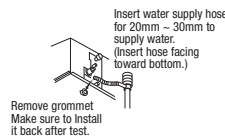
Otherwise, the construction point makes it same as drain pipe construction.

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.

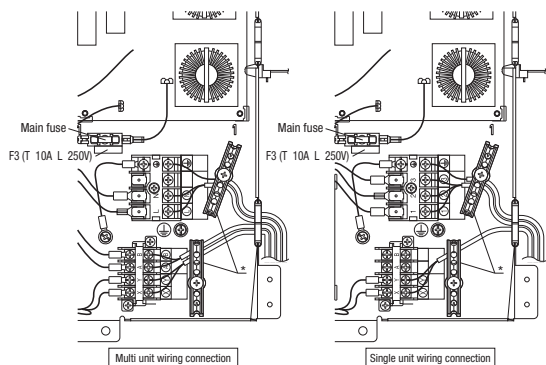
Procedures

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.

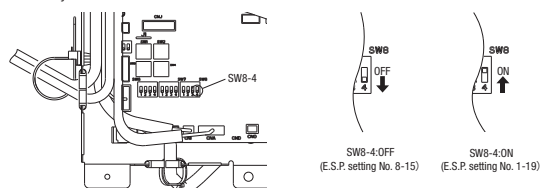
Setting No.	8	9	10	11	12	13	14	15
E.S.P. (Pa)	80	90	100	110	120	130	140	150

※ 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.

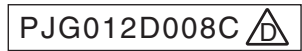
The Case of FDU-F

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.



(7) Duct connected - Low / Middle static pressure type (FDUM)
(i) Indoor unit



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 323. For remote control installation, refer to page 319. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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 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.** [🚫]

<ul style="list-style-type: none"> - 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 ammoniac atmospheres. - Places exposed to oil mist or steam directly. - On vehicles and ships - Places where machinery which generates high harmonics is used. 	<ul style="list-style-type: none"> - 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)** [🚫]

<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Locations where drainage cannot run off safely. - Locations where drainage cannot run off safely. - Locations where drainage cannot run off safely. - Locations where drainage cannot run off safely.
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- **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

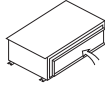
● Install correctly according to the installation manual.

● 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	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

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 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.)

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.

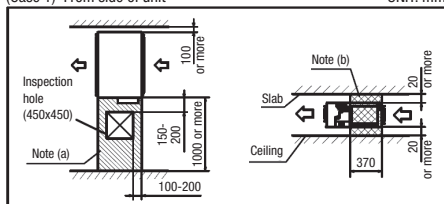
Space for installation and service

● Make installation altitude over 2.5m.

(Indoor Unit)

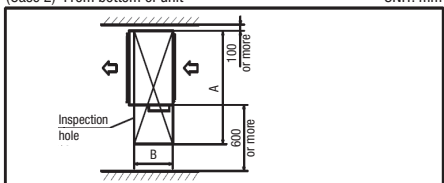
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



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

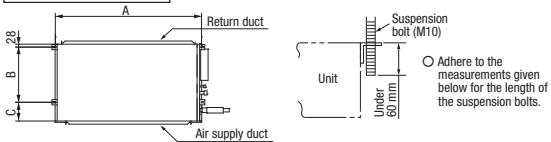
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

○ 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.

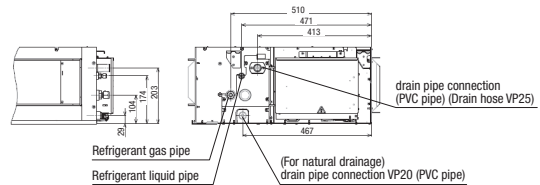
Suspension Bolt Location



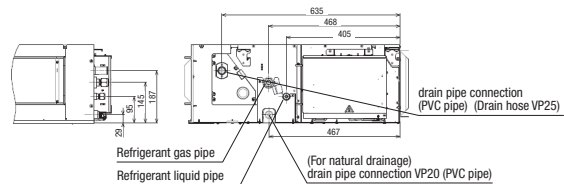
UNIT: mm			
Multi type	22-56	71, 90	112-160
Single type	40-50	60, 71	100-140
A	786	986	1404
B	472	472	530
C	135	135	180

Pipe locations UNIT: mm

Multi type	22-90
Single type	40-71



Multi type	112-160
Single type	100-140

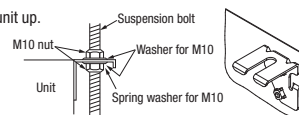


④ Installation of indoor unit

Installation

[Hanging]

Hang the unit up.

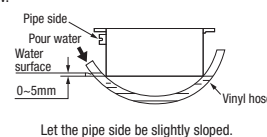


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

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

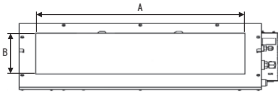
① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.

● 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.

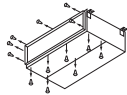
	UNIT: mm		
Single type	40-50	60-71	100-140
Multi type	22-56	71-90	112-140
A	682	882	1202
B	172	172	172



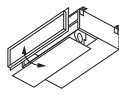
● Duct should be at their minimum length.
● We recommend to use sound and heat insulated duct to prevent it from condensation.
● Connect duct to unit before ceiling attachment.

③ Inlet port

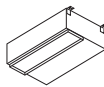
● When shipped the inlet port lies on the back.
● When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
● When placing the inlet port to carry out suction from the bottom side, use the following procedure to replace the suction duct joint and the bottom 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.

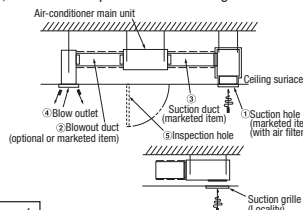
● Make sure to insulate the duct to prevent dewing on it.

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

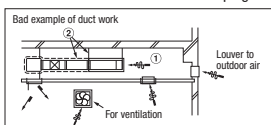
① If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the outdoor air louver, weather (rainy day) and others.

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 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.

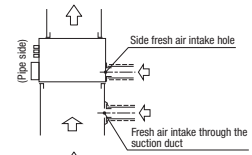


⑤ Duct Work (continued)

Connecting the air intake/vent ducts

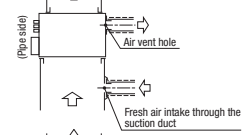
① Fresh Air Intake (for air intake duct only)

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



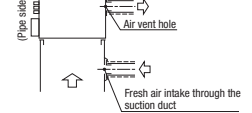
[for simultaneous air intake/vent]

○ 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.

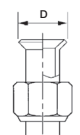
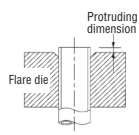
⑥ Refrigerant pipe

Caution

● Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) for refrigerant 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.

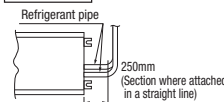
● Do not use any refrigerant other than R410A.

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 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)

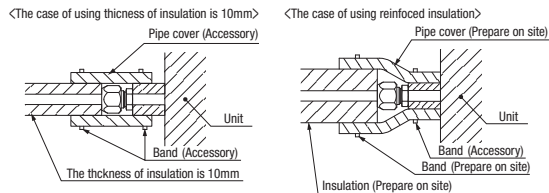
Work procedure

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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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

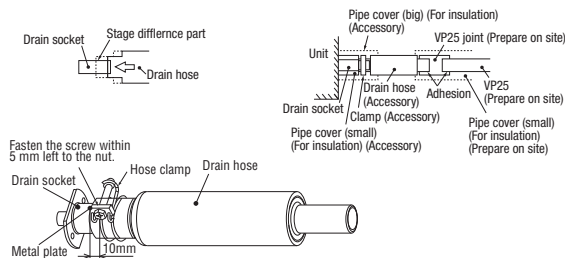
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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.

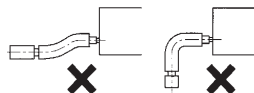
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.

- Do not apply adhesives on this end.
- Do not use acetone-based adhesives to connect to the drain socket.

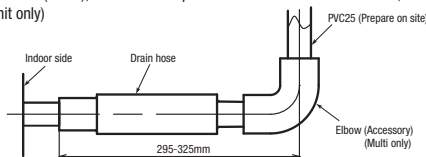


2. Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).

- ※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.



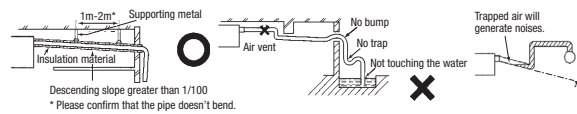
- As for drain pipe, apply VP25 (OD32). If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)



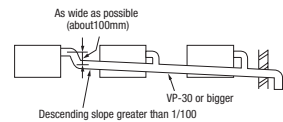
⑦ Drain pipe (continued)

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 VP-30 or bigger size for main drain pipe.

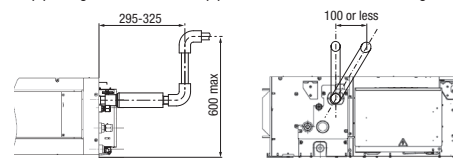


4. Insulate the drain pipe.

- 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.



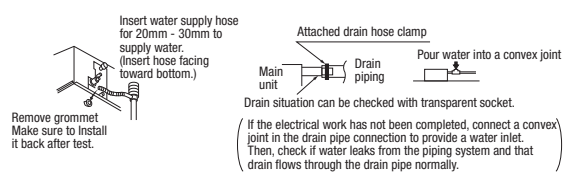
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trail, 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.

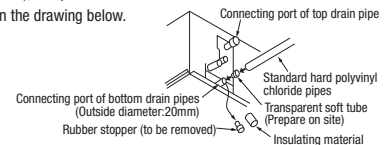
Procedures

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

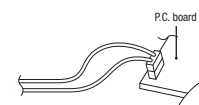
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

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

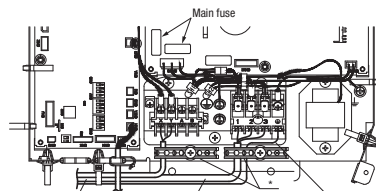
(Note: If the unit is run with the connector coupled, drain water will be discharged from the upper drain pipe joint, causing a water leak.)



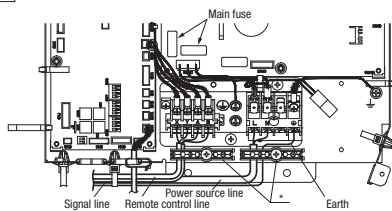
⑧ Wiring-out position and wiring connection

- 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.
 - 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	Port No.
22-56	T3.15A L250V	SSA564A149AF
71-160	T5A L250V	SSA564A149AM

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.

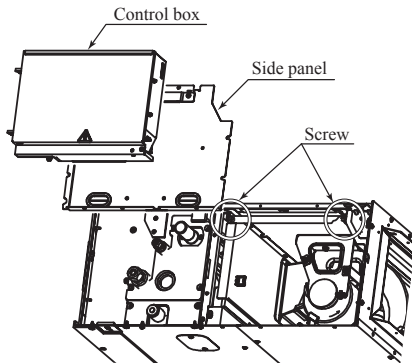
Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Power source voltage is same as mentioned in the 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 airflow on air inlet and outlet?	Insufficient capacity	
Is setting of E.S.P finished?	Excessive air flow, water drop blow out	

(a) Replacement procedure of the fan unit

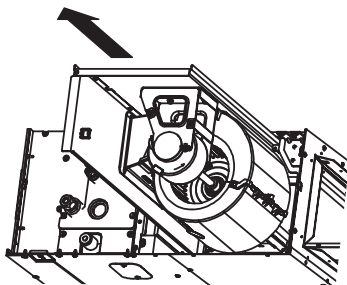
Notes(1) The unit is a heavy item. It must be supported securely and handled with care not to drop when it is necessary to replace.
 (2) For the maintenance space, refer to page 281.

(i) Models FDUM22, 28, 36, 45, 56KXE6F

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

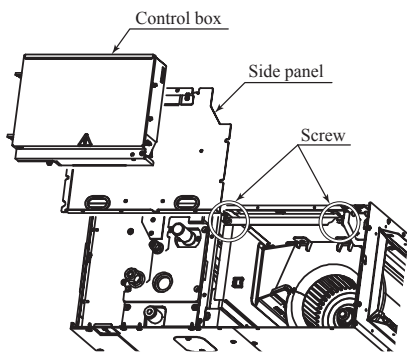


- 2) Take out the fan unit in the arrow direction.

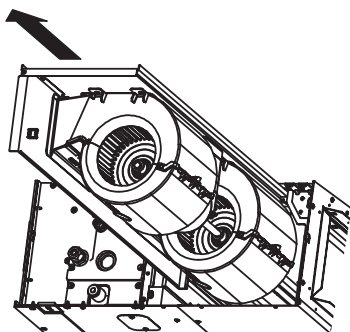


(ii) Models FDUM71, 90KXE6F

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

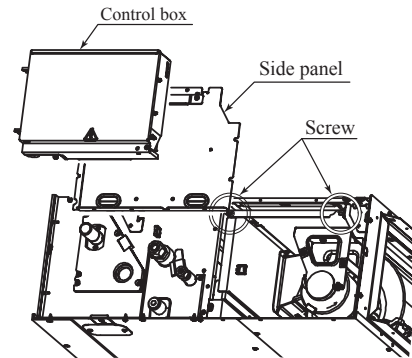


- 2) Take out the fan unit in the arrow direction.

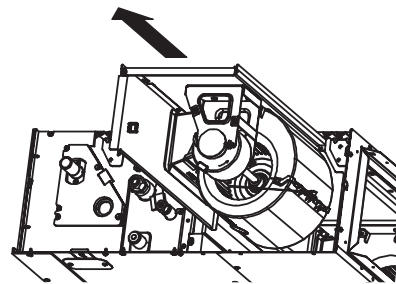


(iii) Models FDUM112, 140, 160KXE6F

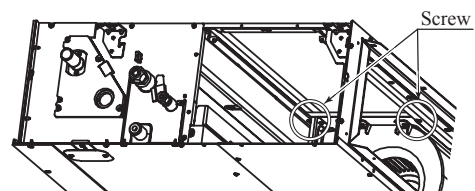
- 1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



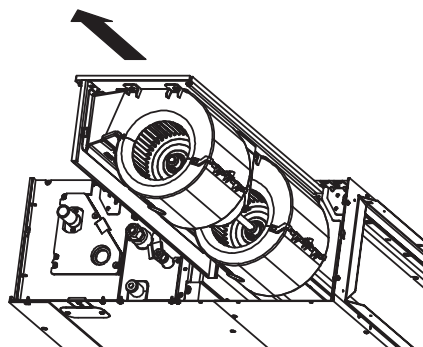
- 2) Take out the fan unit located at the near side in the arrow direction.



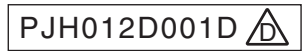
- 3) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.



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



(8) Duct connected (thin)-Low static pressure type (FDUT)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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 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, chlorine gas, acid, alkali or ammonia 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 dripping 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.
- **When it has been changed to the bottom suction configuration at site, install a guard to protect hands from the fan.** ⚠️

○ This model is low 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

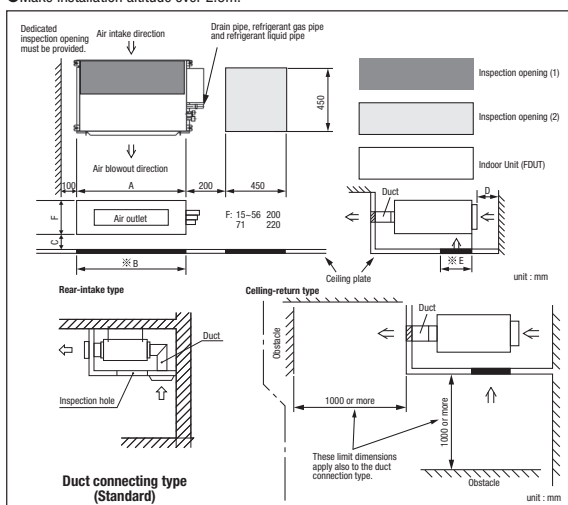
For refrigerant pipe			For drain pipe					
Pipe cover (big)	Pipe cover (small)	Strap	Pipe cover (big)	Pipe cover (small)	Drain hose	Hose clamp (big)	Hose clamp (small)	Joint
1	1	4	1 (71 only)	1 (71 only)	1 (71 only)	1	1 (15-56 only)	1 (15-56 only)
For heat insulation of gas pipe	For heat insulation of 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	For drain hose mounting	For drain pipe connecting

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.



※ Dimensions of the opening on the ceiling after removing inspection opening (1)
 FDUT, standard method of air intake: Rear intake (Specification at shipping from factory)

	A	B
15, 22, 28, 36	750	770
45, 56	950	970
71	1150	1170

Dimension C: 100 mm or more
 Dimension D: 150 mm or more
 Dimension E: 270 mm or more

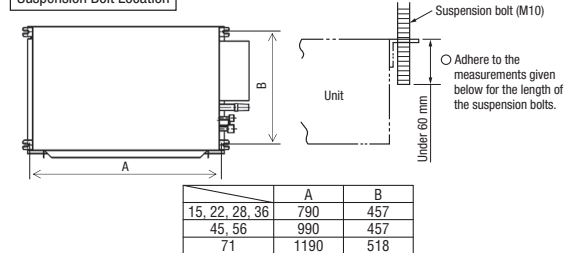
② Selection of installation location for the indoor unit

		Inspection opening (1)	Inspection opening (2)
1	Clamping of the flare of required and gas refrigerant pipe	Use	Not Use
2	Drain pipe connection	Use	Not Use
3	Installation and removal of blower	Not Use	Use
Control box			
4	• Power source wire connection	Use	Not Use
	• Signal wire connection (between indoor and outdoor)	Use	Not Use
	• Signal wire connection (Remote control)	Use	Not Use
	• Address setting	Use	Not Use
5	Replace drain pump	Use	Not Use
6	Replace heat exch sensor	Use	Not Use

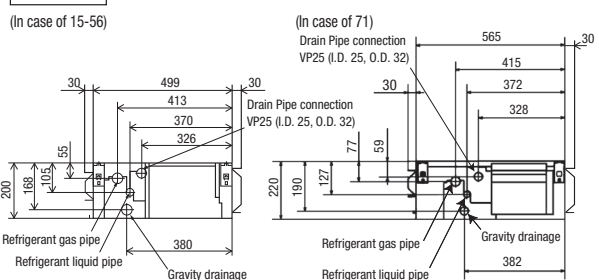
③ Preparation before installation

- 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) on site.

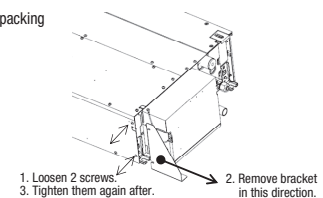
Suspension Bolt Location



Pipe locations



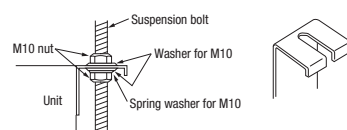
- Remove bracket from the unit after unpacking according to process as shown below. (in case of 15-56 only)



④ Installation of indoor unit

Installation

[Hanging]
 Hang the unit up.



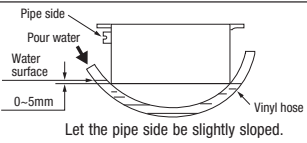
If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

④ Installation of indoor unit

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.

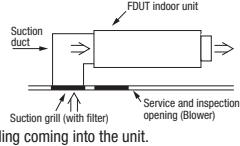


○ If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

⑤ Duct Work

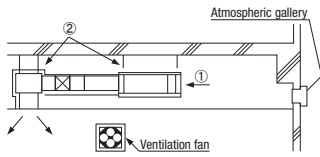
Caution

- To prevent fire accident caused by dust or trouble of water leakage, install a filter provided at site at a place convenient for maintenance.
 - When employing the ceiling return configuration, instead, install the suction guard (option) specified by us to prevent dust or small living things in the ceiling coming into the unit.
 - Indoor unit for small rooms of house, hotel or office, such as reception room, meeting room, etc.
 - Where air is inhaled from the back of indoor unit and the air intake opening on the ceiling is disposed under the bottom face of blower, the suction duct is not used.
- Where the air inhaling space is open to a large space or outdoor air, FDUT and the suction grill on the ceiling are connected to ducts. In this case, it is necessary to provide respectively the suction grill at the back of unit on the ceiling, and the service and inspection opening at the bottom face of FDUT. (One for both purposes is not allowed.)
- Suction grill is one of important parts for the air-conditioner. Install it in front of the suction duct. Make sure to install an air filter on it.
 - Air outlet duct: Make it short as practicable as possible. Reduce the number of bends as less as possible.
Radius of bend on the duct must be as large as possible.
 - Inhale section (Larger noises generate if air is inhaled from the underside). Install the suction inlet in front of the suction duct in a manner that the air filter can be brought down.
 - Insulation must be performed for the duct to prevent water condensation on the duct.
 - For the blowing outlet, select a shape and location where air may circulate, and a structure where airflow may be controlled.
 - An inspection hole must be made in the ceiling surface. This is necessary for the repair and maintenance of the electrical parts, motor and functional parts, as well as for cleaning the heat exchanger.



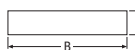
A bad example of duct work

- If the suction duct is not used, and the attic is used as a suction duct, the attic will become extremely humid depending on the performance of the ventilation fan, the strength of wind blowing to the atmospheric gallery and the climate (e.g., rainy days).
 - Condensation occurs on the outer board of the unit and water may fall on the ceiling. Use the unit according to the air-conditions in the above table and airflow limits. In concrete constructions, high humidity can occur in new constructions even when the attic is not used as a suction duct. In this case, insulate the entire unit with glass wool (25 mm) (use a metal net to hold the wool).
 - Operation of the unit may exceed its limits (for example, when the temperature of the suction air is 24 °C with the outdoor temperature of 35 °C DB). In such a cases, problems such as an overload of the compressor may occur.
 - The volume of the air blowing in may increase due to the performance of the ventilation fan and the wind strength blowing against the atmospheric gallery. The air usage limit may be exceeded, and the water from the heat exchanger will not be able to drain to the drain pan. Instead it will drain outside and cause a water leak (to the ceiling).
- 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.



Adaptation to suction duct (max. length 10 m)

- Size of duct fit to the air blowout duct plate



	unit : mm	
	A	B
15-36	99	660
45, 56	99	860
71	99	1060

- When installing air outlet ducts on site, branch the duct near the air outlets and connect them to the air outlets provided on site, with care to achieve the designed blowout wind velocity on site.

15-36	2 or less
45, 56	3 or less
71	4 or less
- Note 1) Max. duct length must be 10 m.
2) Number of air outlets provided on site must be as follows.
2. Speed of fan can be increased. Select the high ceiling mode with remote control.

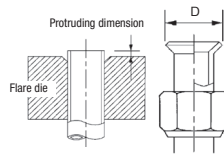
⑥ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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.

⑥ Refrigerant pipe (continued)

- In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
- In case of reuse: Flare the end of pipe replaced partially for R410A.



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 R410A	Conventional tool		
6.35	0.9	0.05	0.7 - 1.3	8.9 - 9.1	14 - 19
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 specified in JIS H 3300) 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 R410A refrigerant.

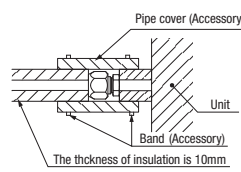
Work procedure

- 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.)
- 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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 with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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.

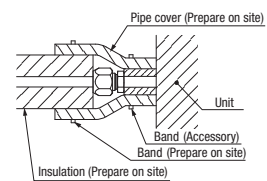
Caution:

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>



⑦ Drain pipe

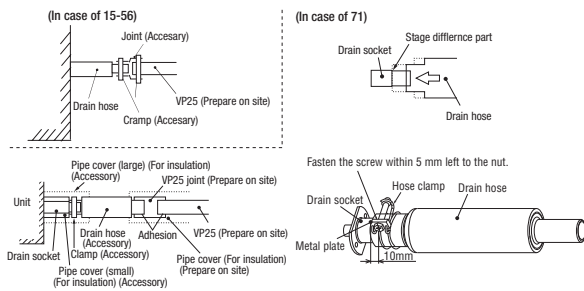
Caution

- 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.

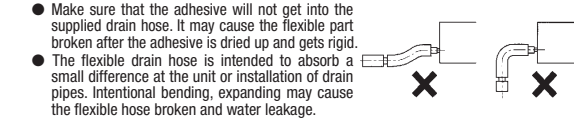
⑦ Drain pipe (continued)

Work procedure

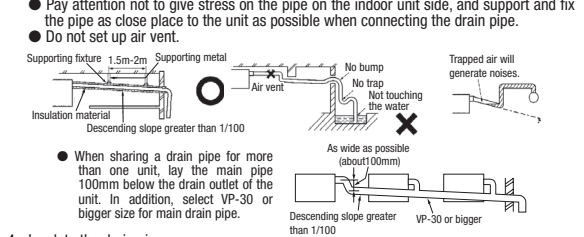
1. Insert the supplied drain hose (the end made of soft PVC) to the step of the drain socket on the indoor unit and fix it securely with the clamp.
 - Do not apply adhesives on this end.



2. Prepare a joint for connecting VP-25 (O.D.32) pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 (O.D.32) pipe (prepare on site).
 - ※As for drain pipe, apply VP-25 (O.D.32) 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 the unit or installation of drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



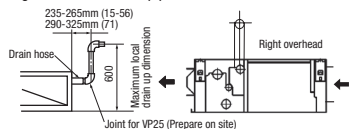
3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set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



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.

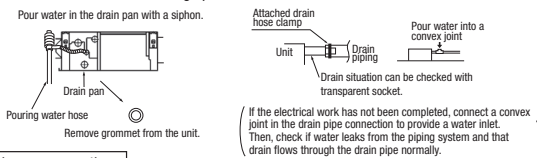


Drain test

1. Conduct a drainage 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.



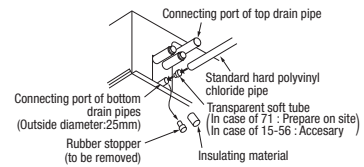
Drain pump operation

- In case electrical wiring work finished
Drain pump can be operated by remote control (wired).
For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not finished
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 Drain pipe (continued)

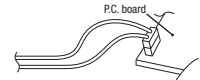
Outline of bottom drain piping work

- 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.)



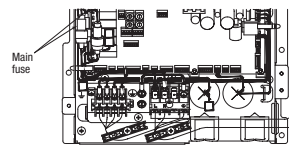
⑧ Wiring-out position and wiring connection

- 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 grounding work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

1. Remove control LID from control box which is attached to the side of control box.
2. Pass each wiring through circle shaped grommet as shown in attached file.
3. Hold each wiring inside the unit and fasten them to terminal block securely.
4. Fix the wirings with cramps.
5. Install the LID back to original position.

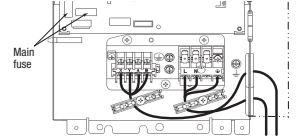
(In case of 15-56)



Main fuse specification

Model	Specification	Part No.
15-56	T3.15A L250V	SSA564A116G
71	T3.15A L250V	SSA564A149AF

(In case of 71)



⑨ External static pressure setting

Notice

This setting is valid for model 71 only.

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

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.1-5 (10Pa-50Pa) from following table according to calculation result. Refer to technical manual for details of air flow characteristic.

Setting No.	1	2	3	4	5
External Static Pressure (Pa)	10	20	30	40	50

※ When you set No.6-19 by remote control, unit will control fan-speed with setting of No.5. Factory default is at No.1.

- 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.

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.

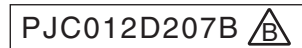


⑩ Check list after installation

- 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 airflow on air inlet and outlet?	Insufficient capacity	

(9) Duct connected (Compact and Flexible) type (FDUH)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
 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. ⚠️
- **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 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 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.
 - 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. ⚠️

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

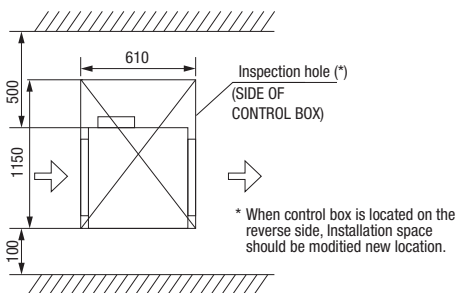
For refrigerant pipe			For drain pipe		
Pipe cover(big)	Pipe cover (small)	Strap	Transparent soft tube	Hose clamp (big)	Hose clamp (small)
1	1	4	1	1	1
For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For drain pipe connecting	For drain hose mounting	For drain hose mounting

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 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.)
- 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.
- ③ If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.

Space for installation and service

- Install the indoor unit at a height of more than 2.5m above the floor.



③ Preparation before installation

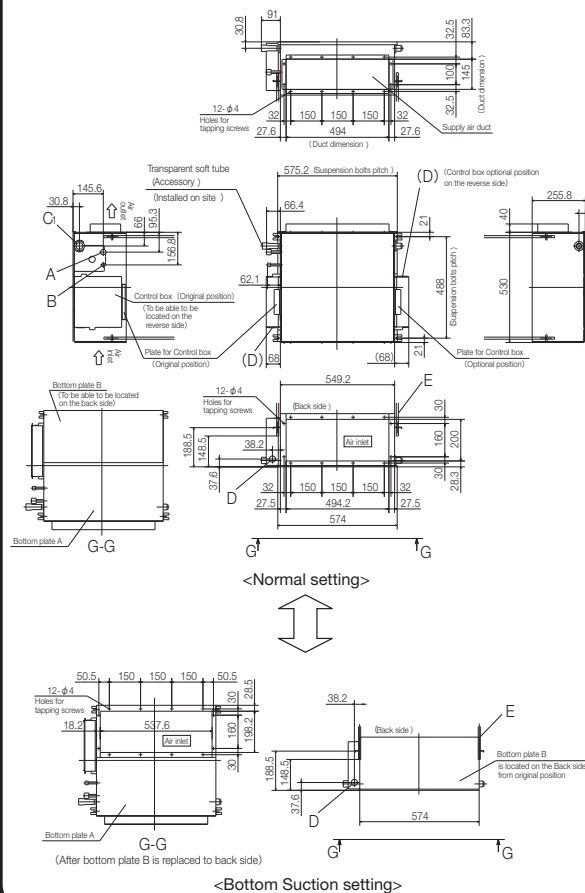
- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and 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) on site.

③ Preparation before installation (continued)

Ceiling opening, Suspension bolts pitch, Pipe position

Symbol	Content		
	Model	FDUH22KXE6, 28KXE6	FDUH36KXE6
A	Gas piping	φ 9.52 (3/8") (Flare)	φ 12.7 (1/2") (Flare)
B	Liquid piping	φ 6.35 (1/4") (Flare)	
C ₁	Drain piping	VP20 Note (2)	
C ₂	Drain piping	To be used instead of "C ₁ ,"	
D	Hole for wiring	φ 30	
E	Suspension bolts	(M10)	

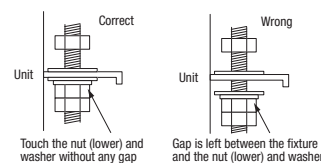
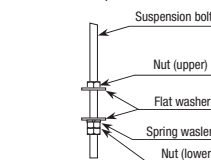
- Notes (1) The model name label is attached on the fan case inside the air return grille.
 (2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C₁ or C₂)



④ Installation of indoor unit

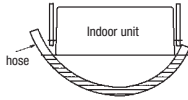
Work procedure

1. Arrange the suspension bolt at the right position (488mm×576mm).
2. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.



④ Installation of indoor unit (continued)

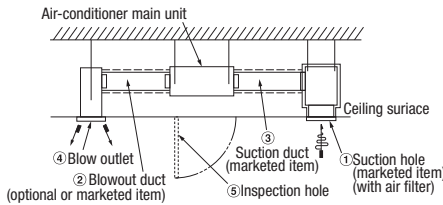
3. Make sure to install the indoor unit horizontally. Confirm the levelness of the indoor unit with a level gauge or transparent hose filled with water. Keep the height difference at both ends of the indoor unit within 3mm.
4. Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.

⑤ Duct work

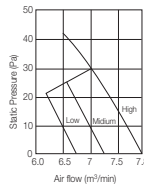


Request

- ① ● Calculate air capacity and the outside static pressure to select the duct's length and shape, and blow outlet.

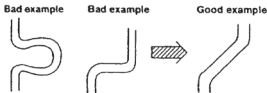
Caution

- Take care that the outside static pressure does not exceed 30 Pa. The unit has condensation owing to the decrease in air capacity, possibly causing the ceiling and household goods to become wet.
- ② The main body of the air-conditioner is not provided with an air filter. Assemble it into the suction grill for which cleaning is easy.



③ Blow duct

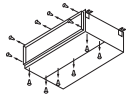
- Make the duct the shortest in length.
- Bend a lot less abruptly. (Make the bend radius a lot larger.)



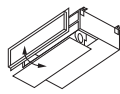
- When connecting the main body to the duct flange of the blow outlet, attach the insulation material to the fixed portion to protect it from condensation.
- Conduct the duct work before ceiling attachment.

④ Inlet port

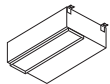
- When placing the inlet port to carry out suction from the bottom side, use the following procedure to replace the suction duct joint (prepare on site) and the bottom plate.



- Remove the screws which fasten the and duct joint (prepare on site).



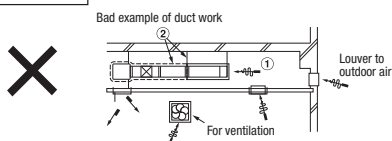
- Replace the removed bottom plate and duct joint (prepare on site) on the inlet port side of the unit.



- Fit the duct joint (prepare on site) with a screw, fit the bottom plate.

- ⑤ Make sure to keep the suction duct warm to protect it from condensation.
- ⑥ Install the blowout hole where air can flow all over the room.
- ⑦ Make sure to install the inspection opening in the ceiling. It is needed for the maintenance of electrical parts, the motor and other parts.

Example of bad duct work



⑤ Duct work (continued)

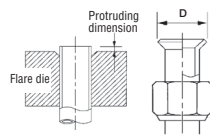
- ① If the suction duct is made in the ceiling without using the suction side duct, the temperature inside the ceiling will be high owing to the ventilating fan's performance, the strength of any wind blowing against the outdoor air louver, weather (on a rainy day) and other factors.

- The outside plate of the unit may have condensation, causing water to drip on the ceiling. Also, in the case of a new house of a concrete structure, the temperature may be high without a duct inside the ceiling. In such a case, keep the whole unit warm using glass wool (25mm). (Cover the glass wool with wire netting or the like.)
- The unit may be beyond its operation limit, causing overloading of the compressor, and other trouble.
- Because the blowing capacity of the unit increases, owing to the ventilating fan's performance and any wind blowing against the outdoor air louver, up to its use limit, draining liquid from the heat exchanger does not flow into the drain pan, possibly flowing to the outside and causing water leaks (in which drained liquid drips on the ceiling).

⑥ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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 or compatible with JIS B 8607, Class 2.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) for refrigerant 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 R410A refrigerant.

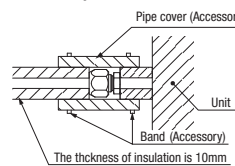
Work procedure

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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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 condensation 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.

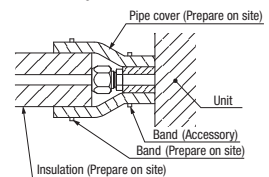
Caution:

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 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 case of using thickness of insulation is 10mm>



<The case of using reinforced insulation>



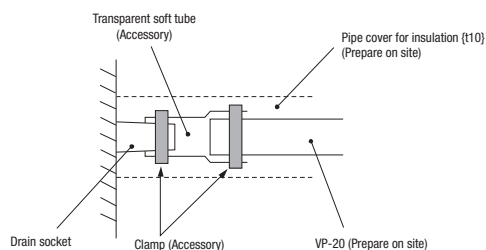
⑦ Drain pipe

Caution

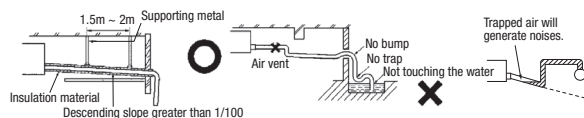
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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

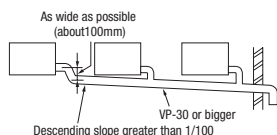
1. Connect the drain pipe (VP-20) to drain socket using "transparent soft tube (accessory)" and secure firmly with a clamp.
 - Do not apply adhesives on both side.
 - {*1 If the drain tube is directly connected with drain socket, the drain socket and drain pan would not be able to be removed.}
 - {*2 As optional setting, rubber hose (inside diameter φ19) can be connected directly with clamp to above drain socket under the later condition.}



2. 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.



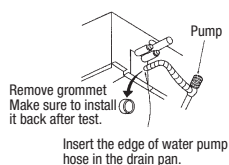
- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



3. 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 test

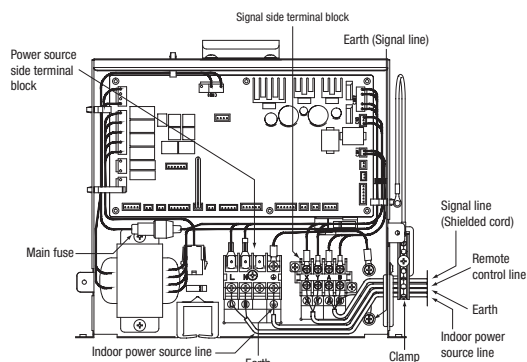
- After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan.
 - Do drain test even if installation of heating season.
 - For new building cases, make sure to complete the test before hanging the ceiling.
1. Remove the drain grommet, and pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
 2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test.
 3. Make sure to install the grommet back to original place.
 4. Insulate the drain pipe properly finally.



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.



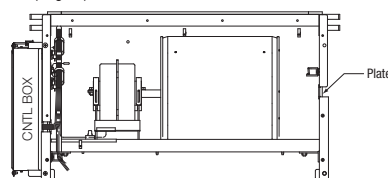
Main fuse specification

Specification	Part No.
T3.15 L250V	SSA564A116G

> Procedure for optional setting of control box

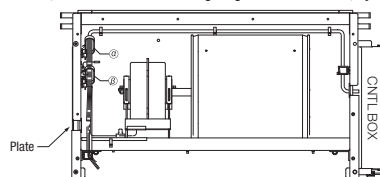
- (i) Remove bottom plate.
 - (ii) Unfasten two (2) "straps" for wire.
 - (iii) Remove the plate for control box. (2 screws), and set it at optional position (opposite side).
 - (iv) Remove the control box (2 screws), and set it at option position (opposite side).
 - (v) Remove the plate. (1 screw)
- Through this space, set and fix all wires by four (4) "clamps" and two (4) "straps".
- (vi) Close the opposite space by the plate, and set the bottom plate again.

① Wiring Location (Original)



② Wiring Location (Option)

After fix ①, the modification of wiring length should be done, by ②

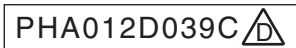


⑨ Check list after installation

- 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) Wall mounted type (FDK)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 437. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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, 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.
 - 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.

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

Installation-related items

Mounting plate	Tapping screw	Insulation	Strap
			
1	10	1	4
Attached to the backside of the indoor unit.	For the mounting plate, 4mm (dia.) x 25mm (length)	For heat insulation, 50mm x 160mm	For wire clamp

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%.

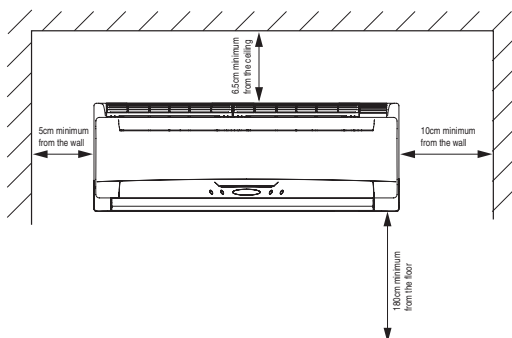
This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.

 - 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.

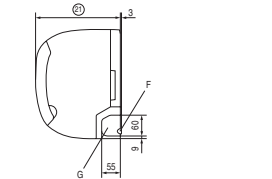
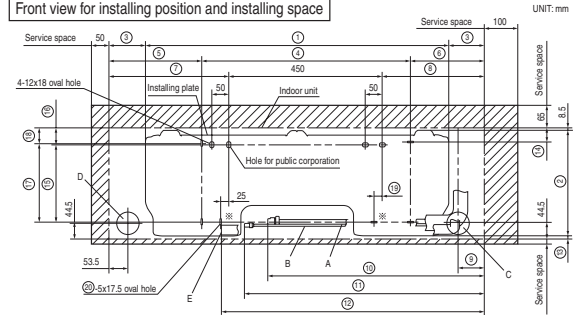
Space for installation and service



- ATTENTION**
- Secure a working space for inspection and maintenance.
 - Install the indoor unit on the wall where the height from the floor is more than 180cm.

3 Preparation before installation

Front view for installing position and installing space



Symbol	Type 22 - 56	Type 71
①	693	886
②	284.2	301.8
③	73.5	106
④	-	610
⑤	-	269
⑥	-	219
⑦	207.5	349
⑧	182.5	299
⑨	63.5	77
⑩	539.5	633.5
⑪	603.5	703.5
⑫	515	772
⑬	5.3	7.7
⑭	-	43
⑮	220.5	221.5
⑯	47.5	49.5
⑰	-	225
⑱	-	46
⑲	0	25
Ⓜ	2 (※)	6
Ⓝ	259	248

Symbol	Type 22 - 56	Type 71
A	Gas piping	
B	Liquid piping	
C	Wall pulling hole for right rear piping	
D	Wall pulling hole for left rear piping	
E	Drain piping	
F	Outlet for wiring	
G	Outlet for piping	

4 Installation of indoor unit

Haulage



ATTENTION

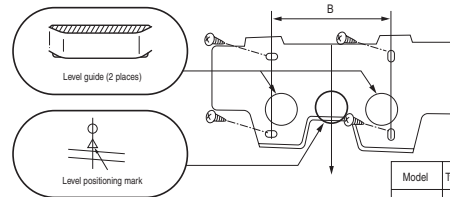
- In carrying the unit into an installation site, carry it in the original packaging to a point as close to the proposed installation site as possible.
- When the unit needs to be unpacked during haulage due to a compelling reason, wrap it with nylon slings or the like to prevent possible damages.

Note: Do not hold the unit by the diffuser louver in carrying it.
- When the unit needs to be laid on a floor after unpacking, always lay it with its front facing upward.

Installation of the mounting plate

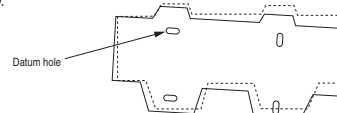
ATTENTION

- This unit cannot be installed directly onto a wall surface. Regardless of the surface it is to be installed onto, you should use the mounting plate supplied with the unit.
- Install it securely by spotting a structural member running underneath the wall (stud or the like) and after ascertaining its levelness.



Model	Type 22~56	Type 71
B Size	450	450,610

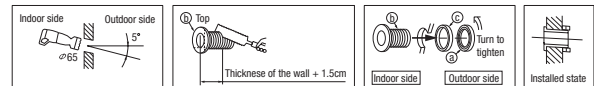
- The levelness of the mounting plate should be adjusted with the four fixing screws fastened temporarily.



- Rotate the plate around the datum hole to achieve the levelness.

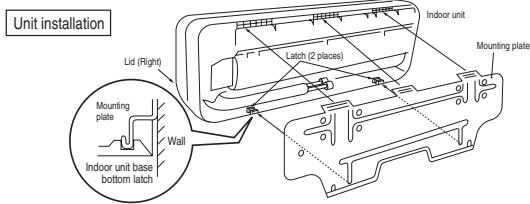
Drilling of holes and fixture of sleeve (Option parts)

When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately.

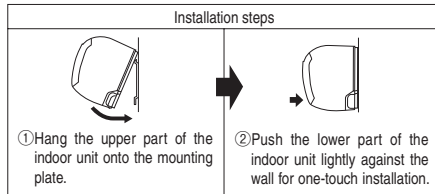


- Drill a hole with whole core drill.
- In case of rear piping draw out, cut off the lower and the right side portions of the sleeve collar.

④ Installation of indoor unit (continued)



- To remove the unit from the mounting plate, first remove the right and left lids and then disengage the indoor unit base bottom latches.



⑤ Wiring-out position and wiring connection

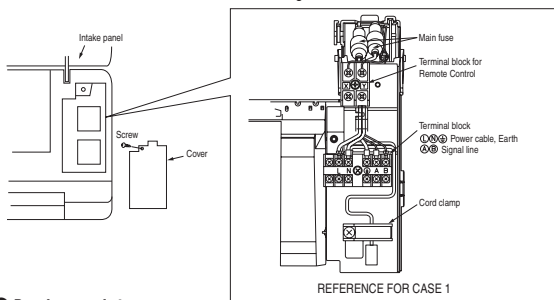
- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country. 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.

CASE 1 : MODEL 22 - 56, CASE 2 : MODEL 71

- Open the intake panel. (Pull the lower part of the intake panel holding both ends, disengage the latches and then lift it until you feel some drag. The intake panel will stay open at an angle of about 60°)
- Remove the screw and detach the cover.
- Connect the remote control line to the upper one of the two terminal blocks provided in the control box.
- Connect the power cable, grounding line and signal line to the lower terminal block. Fix wiring with the clamp securely, in order not to transmit unexpected stress on the terminal.
- Attach the cover and fasten the screw.
- Close the intake panel.

(Note)

- Connect each line to terminal block according to number on label of terminal block.



● Panel removal steps

- Remove the cap.(CASE1.only)
- Remove the fixing screw A and detach the unit bottom guide.(CASE1.only)
- Remove the fixing screw B.
- Pull the lower part of the front panel off the unit toward you, and then push it up to detach its upper part from the unit. (Disengage three hooks located on the top part)

● Panel attachment steps

- Always remove the air filter beforehand.
- Place the front panel over the unit.
- Engage it onto the unit by pressing the areas marked with ◯ in the drawing from the front.
- Fasten the fixing screw B.
- Set the air filter.
- Attach the unit bottom guide and fasten the fixing screw A.(CASE1.only)
- Attach the cap. (Plug it in securely until the end so that it won't come off easily) (CASE1.only)

Fig.1(CASE1)

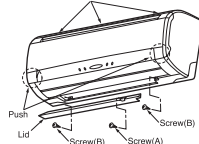
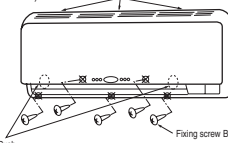


Fig.2(CASE2)

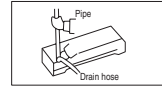


Main fuse specification	
Specification	Part No.
T3.15A L250V	SSA564A116G

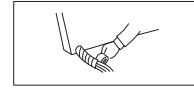
⑥ Shaping of pipes and drain hoses

(When it is routed through the rear)

○ Shaping of pipes



○ Tape wrapping

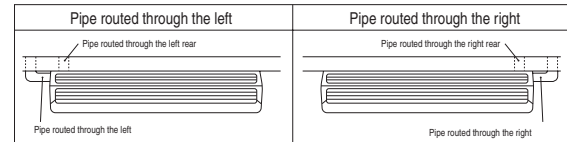


Make sure that wires are connected securely onto the terminal block, before you dress them with a tape after shaping the pipe.

- Hold the root of the pipe to change its direction, straighten it and then shape it.
- Wrap a tape for the length that corresponds to a penetration through the wall.
- The connecting wires must be wrapped together with the pipe.

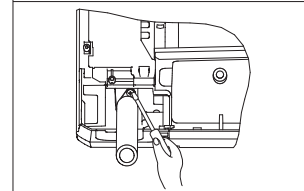
(Points for attention when the pipe is routed through the left or the rear of the unit.)

(View from the top)



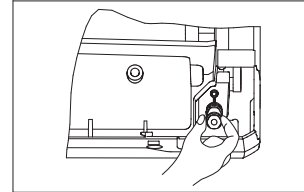
(Steps to change drain hose connection positions)

1. Remove the drain hose.



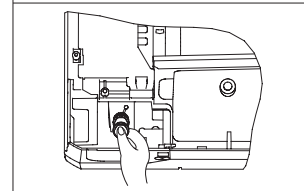
- Remove the screw and drain hose, making it rotate.

2. Remove the drain cap and heat insulating material.



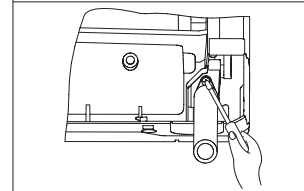
- Remove it either manually or with pliers.

3. Plug in the drain cap and heat insulating material.



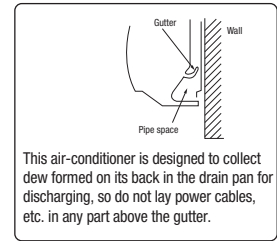
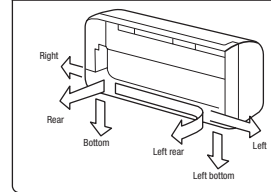
- Plug the drain cap removed in the step 2 securely into the hole with a hexagonal wrench or the like. Note: Pay attention that a drain cap not properly plugged in can cause a water leak.

4. Connect the drain hose.



- Insert the drain hose securely, making rotate. And install the screw. Note: Pay attention that a drain hose not properly plugged in can cause a water leak.

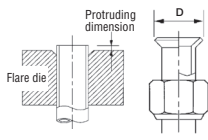
The pipe can be routed through the rear, left, left rear, right or bottom of the unit.



⑦ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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

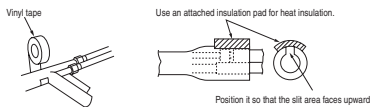
- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not 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 R410A refrigerant.

Work procedure

- 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.)
- 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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.



⑧ Drain pipe

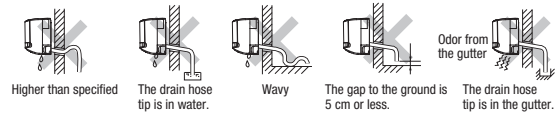
Caution

- 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.

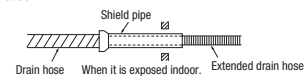
⑧ Drain pipe (continued)

- A general-purpose hard PVC pipe VP-16 can be connected to the drain hose tip as a part of drain piping.
- Drain piping must be given a descending grade so that drain water may flow smoothly and it must not have any trap or bump within the system.
(The pipe can be routed through the left, right, rear or bottom of the unit)
Hard PVC pipes (VP-16) laid indoors must be kept warm.
- Pour water into the drain pan placed underneath the heat exchanger to make sure that it is properly drained outdoors.
(For removal of the front panel, refer to ⑤ Wiring-out position and wiring connection in this manual.

- Arrange the drain hose in a downward angle
- Avoid the following drain piping.



- When the extended drain hose is indoor, always use a shield pipe (to be arranged by the user) and ensure it is thermally insulated



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.

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	

(11) Ceiling suspended type (FDE)

PFA012D628

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 444. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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 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.

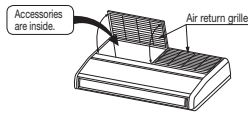
CAUTION

- **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, 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 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, chlorine 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.

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

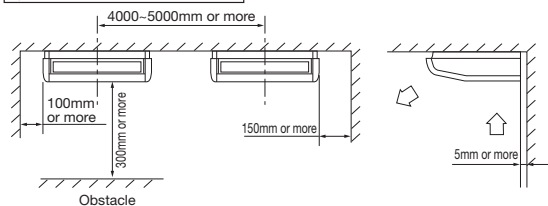
Accessory item		For unit hanging		For refrigerant pipe				For drain pipe				For air return grille
Flat washer (M10)	Paper pattern	Pipe cover (large)	Pipe cover (small)	Strap	Drain hose with clamp	Hose clamp	Fixing bracket	Screw	Heat insulation	Screw		
8	1	1	1	4	1	1	1	2	1	1	4	
For unit hanging	For heat 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 air return grille		



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 23°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.
 - 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.
- 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.
- When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

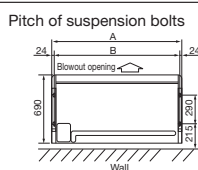
Space for installation and service



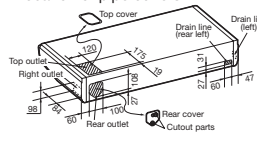
③ Preparation before installation

- 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



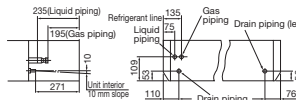
Location of pipe outlets



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

Pipe position



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.



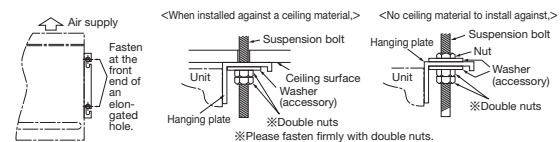
Preparation before installation

- 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
 - Indoor unit
 - Hanging plate
 - Hanging plate screw (M4)
 - Hanging plate fixing bolts (M8)
 - Hanging plate

④ Installation of indoor unit

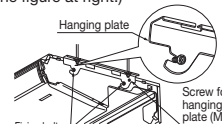
Work procedure

- Select the suspension bolt locations and the pipe hole location.
 - Use enclosed paper pattern as a reference, and drill the holes for the suspension bolts and pipe.
 - ※ Decide the locations based on direct measurements.
 - 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.



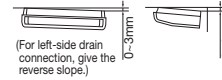
- Install the unit to the hanging plate. (See the figure at right.)

- Slide the unit in from front side to get it hanged on the hanging plate with the bolts.
- Fasten the four fixing bolts (M8: 2 each on the left and right sides) firmly.
- 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.

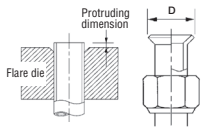


⚠ CAUTION : Do not give the reversed slope, which may cause water leaks.

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) for refrigerant 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 R410A refrigerant.

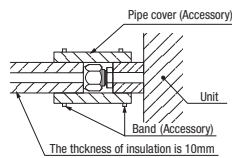
Work procedure

- 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.)
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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 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.
- 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.

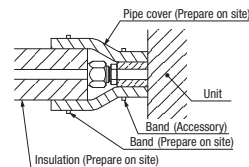
Caution:

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 case of using thickness of insulation is 10mm>

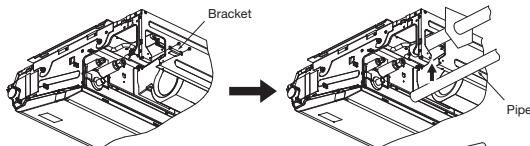


<The case of using reinforced insulation>

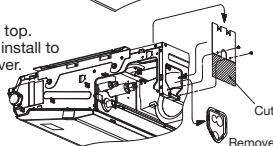


The pipe can be connected from three different directions. (back, reight, top)

- 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

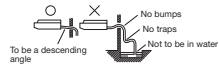
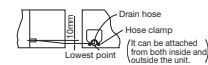
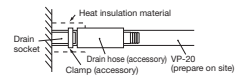
- The drain pipes may pull out either from back, right or left side.

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

- 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.
- Beware of a possible outflow of water that may occur upon removal of a drain plug.
- 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.
- A drain hose must be clamped down with a hose clamp. There is a possibility that drain water overflows.
- Connect VP-20 (prepare on site) to drain hose. (adhesive must not be used.)
 - ※ Use commercially available rigid PVC general pipe VP-20 for drain pipe.
- 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.
- 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.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

- Remove wiring from clips.
- Remove the control box (Screw ①, 2pcs).
- Pull out the control box by sliding along the groove on the bracket (Direction ④→⑤).
- Remove the lid of control box (Screw ②, 2pcs).
- Hold each wiring inside the unit and connect to the terminal block surely.
- Fix the wiring by clamp.
- Install the lid of control box (Screw ②, 2pcs).
- Return the control box to the original place by sliding along the groove on the bracket (Direction ⑤→④).
- Install the removed parts at their original places.

- ※ 1 Wiring for the signal receiving section of wireless kit (Optional) are connected to the X and Y terminals on the terminal block (the site connection side), when the indoor unit is shipped from the factory.
It is not necessary to disconnect these wiring when wired remote controller is connected. When the wired/wireless kits are used together, it becomes necessary to set the slaves and remote control.

⑦ Wiring-out position and wiring connection (continued)

1. FDE (small), FDE (medium), FDE (large) clips are shown being attached to the control box lid.
2. Screws are used to secure the control box lid.
3. Control box Sliding Method: The control box is shown being slid into the unit. A note says: "Disconnect each wiring from clips before pulling out the control box."
4. Single split (PAC) Series: Shows the control box lid with screws and the internal wiring terminal block. Labels include: Power source side terminal block, Earth terminal block, Signal side terminal block, Wireless receiver line (R-1), Remote control line, and Wiring clamp.
5. 6. VRF (KX) Series: Shows the control box lid with screws and the internal wiring terminal block. Labels include: Power source side terminal block, Earth terminal block, Signal side terminal block, Signal line (Shielded cord), Remote control line, Indoor power source line, and Wiring clamp.
7. 8. Control box hook: Shows the control box lid being attached to the unit with screws. A note says: "Install it as to fit the form of control box."

⑧ Control mode switching

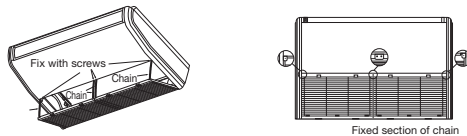
• The control content of indoor units can be switched in following way. (□ is the default setting)

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.

1. Fix the chains tied to the air return grille onto the indoor unit with screws supplied as accessories (4 pieces).
2. Close the air return grille. This completes the unit installation work.



⑩ Check list after installation

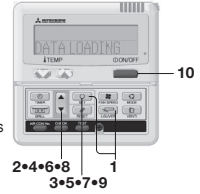
• Check the following items after all installation work completed.

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 airflow on air inlet and outlet?	Insufficient capacity	

⑪ How to set the airflow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.

1. Stop the air-conditioner and press **SET** button and **LOUVER** button simultaneously for three seconds or more.
 - The following is displayed if the number of the indoor units connected to the remote control is one. Go to step 4.
 - The following is displayed if the number of the indoor units connected to the remote control are more than one.



2. Press **▲** or **▼** button. (selection of indoor unit) • Select the indoor unit of which the louver is set.

[EXAMPLE] *1/0000 ▲ *1/0001 ▼ *1/0002 ◀ *1/0003 ▶
3. Press **□** SET button. (determination of indoor unit) • Selected indoor unit is fixed.

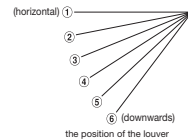
[EXAMPLE] *1/0001 (displayed for two seconds) ↓ *DATA LOADING *No.1 ▲

4. Press **▲** or **▼** button. (selection of louver No.) • Select the louver No. to be set according to the right figure.

[EXAMPLE] *No.1 ▲ *No.2 ▼ *No.3 ◀ *No.4 ▶

5. Press **□** SET button. (Determination of louver No.)
 - The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

6. Press **▲** or **▼** button. (selection of upper limit position)
 - Select the upper limit of louver movable range. "position 1" is the most horizontal, and "position 6" is the most downward. "position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

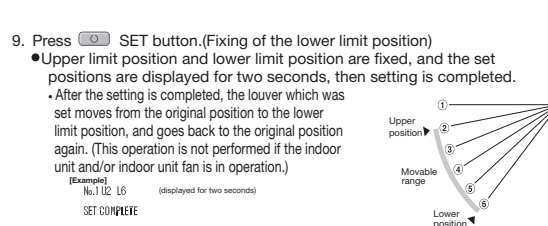


7. Press **□** SET button. (Fixing of the upper limit position)
 - The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

8. Press **▲** or **▼** button. (Selection of lower limit position)
 - Select the lower limit position of louver. "position 1" is the most horizontal, and "position 6" is the most downwards. "position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

9. Press **□** SET button. (Fixing of the lower limit position)
 - Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed. After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)

10. Press **ON/OFF** button.
 - Louver adjusting mode ends and returns to the original display.

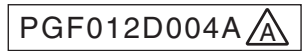


Caution
If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not function.

ATTENTION
If you press **RESET** button during settings, the display will return to previous display. If you press **ON/OFF** button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controls are connected, louver setting operation cannot be set by slave remote control.

(12) Floor standing-2 way type (FDFW)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 448. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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 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, chlorine 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.

① Before installation

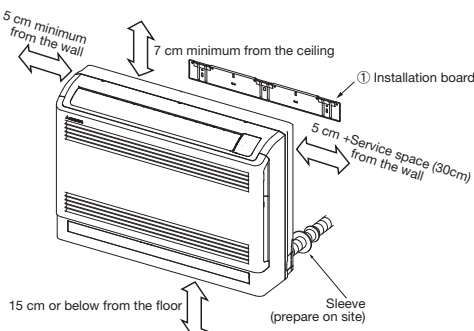
- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items

Standard accessories (Installation kit)		Q'ty	Prepare on site (if necessary)		Q'ty
①	Installation board (Attached to the rear of the indoor unit)	1	a	Sealing plate	1
②	Tapping screws (for installation board φ4mm by 25mm)	9	b	Sleeve	1
③	Pipe cover (200mm)	1	c	Inclination plate	1
④	Band	2	d	Putty	1
			e	Drain hose (extension hose)	1
			f	Piping cover (for insulation of connection piping)	1

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 23°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.)
 - 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.)
 - Areas where the unit or the wall will not vibrate.
 - Install the indoor unit in front of flat wall.
- 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.

Space for installation and service

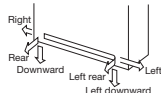


NOTE
In case the particular installation has relative humidity of 73% or higher, the operation mode may alternate between fan operation and cooling operation automatically in order to avoid dew formation on the indoor unit air supply port.

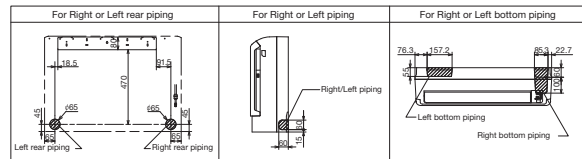
③ Preparation before installation

Indoor unit piping direction

Piping is possible in the rear, left, left rear, left downward, right or downward direction.



③ Preparation before installation (continued)



Installing the support of piping

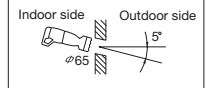
In case of piping in the right rear direction, tape the round of pipe and wiring.



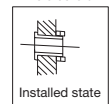
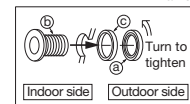
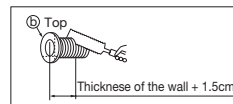
- Tape only the portion that goes through the wall.
- Always tape the wiring with the piping.

Drilling of holes and fixture of sleeve (Option parts)

When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately.



○ Drill a hole with whole core drill.



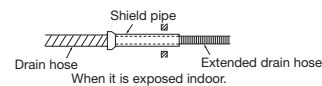
○ In case of rear piping draw out, cut off the lower and the right side portions of the sleeve collar.

④ Drain pipe

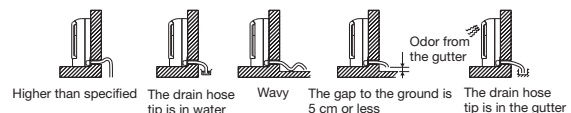
Caution

- 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.

- A general-purpose hard PVC pipe VP-16 can be connected to the drain hose tip as a part of drain piping.
- Drain piping must be given a descending grade so that drain water may flow smoothly and it must not have any trap or bump within the system. (The pipe can be routed through the left, right, rear or bottom of the unit) Hard PVC pipes (VP-16) laid indoors must be kept warm.
- Pour water into the drain pan placed under the heat exchanger to make sure that it is properly drained outdoors. (For removal of the front panel, refer to ⑤ installation of indoor unit.)
- When the extended drain hose is through indoor, always use a shielded pipe (prepare on site) and ensure it is thermally insulated.



○ Avoid the following drain piping.

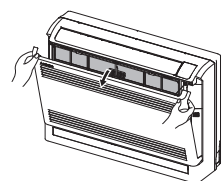


⑤ Installation of indoor unit

Open and detachment of the air inlet panel

○ To open, pull the panel at both ends of upper part and release latches, and undo the strings. Then remove the panel.

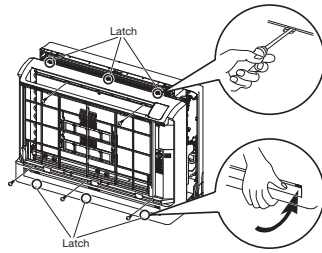
CAUTION:
When removing the air-inlet panel, be careful not to drop it on your feet.



5 Installation of indoor unit (continued)

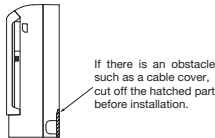
How to remove the front panel

- 1 Remove the air inlet panel.
- 2 Remove the 5 set screws.
- 3 Remove the 3 latches in the upper section.
If the latches are difficult to remove, push the latch portion out using a screw driver, for example.
- 4 Move the lower part of the panel forward and remove the 6 latches in the under section.



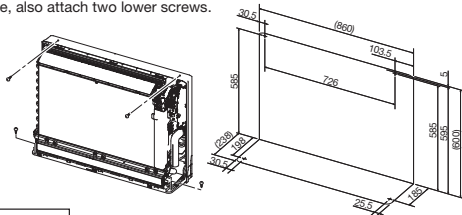
Fixing of indoor unit

CAUTION:
During the installation, do not lean on the control box or the display, as they may be damaged. (Distortion on the wall shall be no larger than 3mm.)



Floor installation

Secure using upper 2 screws for floor installations. If possible, also attach two lower screws.

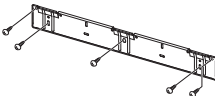


Wall installation

At first secure the installation board using 5 screws and the indoor unit using 2 screws.

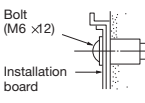
1. Installation of installation board.

Look for the inside wall structures (Intersediats support or pillar and finally install the unit after level surface has been checked.)

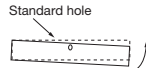


Fixing on concrete wall

Use of nut anchor

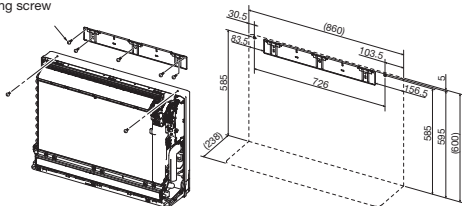


- Adjustment of the installation board in the horizontal direction is to be conducted with five screws in a temporary tightened state.
- Adjust so the board will be level by turning the board with the standard hole as the center.



2. Fixing of indoor unit

- 2 Tapping screw



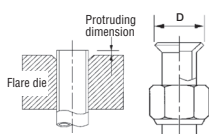
6 Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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

6 Refrigerant pipe (continued)

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) 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 R410A refrigerant.

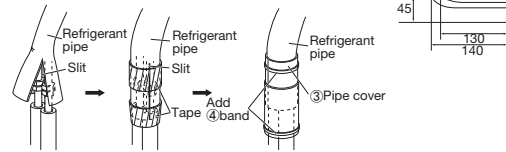
Work procedure

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.
※ Do a flare connection as follows:
● 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.
● 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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:

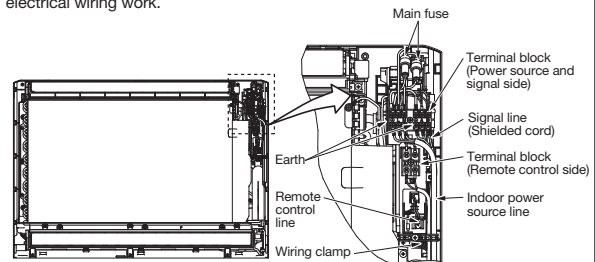
Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack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

- Pass the refrigerant pipe through the piping hole to indoor side. Arrange the pipes according to the direction of piping.
- Cover the coupling with insulator and then cover it with tapes. Use an attached ③ pipe cover for heat insulation.



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.



Main fuse specification

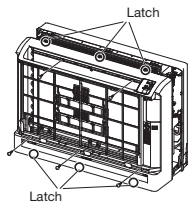
Specification	Part No.
T3.15A L250V	SSA564A116G

⑧ How to fit the front panel

How to fit the front panel

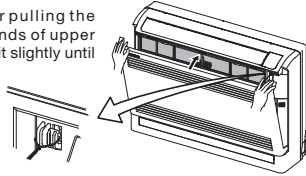
○ Fitting

- ① Do remove the air filter.
- ② Cover the body with the front panel.
- ③ Fit the 6 latches in the lower section. then 3 latches in the upper section.
- ④ Tighten the 5 set screws.
- ⑤ Fit the air filter.
- ⑥ Fit the air inlet panel.



Close and attachment of the air inlet panel

- To close, attach the panel after pulling the strings, hold the panel at both ends of upper part to lower downward and push it slightly until the latch works.



⑨ How to set the airflow direction

It is possible to change the movable range of the upper and lower louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen.

1. Stop the air-conditioner and press **SET** button and **LOUVER** button simultaneously for three seconds or more.

●The following is displayed if the number of the indoor units connected to the remote control is one. Go to step 4.

"DATA LOADING"
No.1

●The following is displayed if the number of the indoor units connected to the remote control are more than one.

"SELECT 1/0"
1/0000

2. Press **▲** or **▼** button. (selection of indoor unit) ●Select the indoor unit of which the louver is set.

[EXAMPLE] 1/0000 ▲=1/0001 ◀=1/0002 ◀=1/0003

3. Press **SET** button. (determination of indoor unit) ●Selected indoor unit is fixed.

[EXAMPLE] 1/0001 (displayed for two seconds)
"DATA LOADING"
No.1

4. Press **▲** or **▼** button. (selection of louver No.) ●Select the louver No. to be set according to the below figure.

[EXAMPLE] No.1 ▲=No.2 ◀=No.3 ◀=No.4

5. Press **SET** button. (Determination of louver No.) ●The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

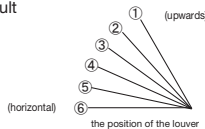
[EXAMPLE] If No.2 louver is selected, No.2UPPER2 (current upper limit position)

For FDFW type, set louver No.2 (upper louver)

6. Press **▲** or **▼** button. (selection of upper limit position)

●Select the upper limit of louver movable range. "position 1" is the most upwards, and "position 6" is the most horizontal. "position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

No.2UPPER1 (the most upwards)
No.2UPPER2
No.2UPPER3
No.2UPPER4
No.2UPPER5
No.2UPPER6 (the most horizontal)
No.2UPPER-- (return to the default setting)



7. Press **SET** button. (Fixing of the upper limit position) ●The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

[EXAMPLE] No.2UPPER2 (displayed for two seconds)
No.2LOWER5 (shows current setting)

8. Press **▲** or **▼** button. (Selection of lower limit position)

●Select the lower limit position of louver. "position 1" is the most upwards, and "position 6" is the most horizontal. "position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

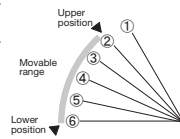
No.2LOWER1 (the most upwards)
No.2LOWER2
No.2LOWER3
No.2LOWER4
No.2LOWER5
No.2LOWER6 (the most horizontal)
No.2LOWER-- (return to the default setting)

⑨ How to set the airflow direction (continued)

9. Press **SET** button. (Fixing of the lower limit position)

●Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.

●After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)



[EXAMPLE] No.2L6 (displayed for two seconds)
SET COMPLETE
No.2

10. Press **ON/OFF** button.

●Louver adjusting mode ends and returns to the original display.

CAUTION

If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not function.

ATTENTION

If you press **RESET** button during settings, the display will return to previous display. If you press **ON/OFF** button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controls are connected, louver setting operation cannot be set by slave remote control.

⑩ Airflow selection

It is possible to choose the combination of air flow from both upper and lower port or upper port only.

1. Stop the air-conditioner.
2. Set the upper and lower limit position of the **louver No.1** (lower louver) from the wired remote control. For the method of changing the setting, refer to **⑨ How to set the airflow direction**.

set the airflow direction

- ① In case of selecting upper airflow
Set the upper and lower limit position to UPPER 2 and LOWER 2. (No.1 UPPER 2 / LOWER 2)



- ② In case of selecting upper and lower airflow **Default setting**
Set the upper and lower limit position to UPPER 5 and LOWER 5. (No.1 UPPER 5 / LOWER 5)



ATTENTION

Other combinations of lower louver position are invalid.

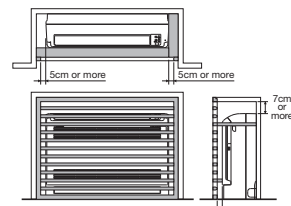
⑪ Concealed installation

Install the indoor unit according to the following instructions.

1. Be sure to keep the upper, right and left spaces according to the below figure.
2. Do not apply fine pitched lattice to conceal the unit.
3. The lattice should have the open rate of 70% or greater.
4. For changing the airflow direction to horizontal, set the upper limit position of the **louver No.2** (upper louver) as below from the wired remote control. For the method of changing the setting, refer to **⑨ How to set the airflow direction**.

Setting of louver No. 2

	Default setting	Concealed installation
Upper limit	Position 1	Position 3
Lower limit	Position 5	Position 5



CAUTION

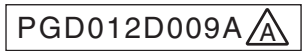
Incorrect installation may cause problems such as non-cooling, non-warming, and condensation water leaking into the room.

⑫ 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	

(13) Floor standing (with casing) type (FDL)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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 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 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

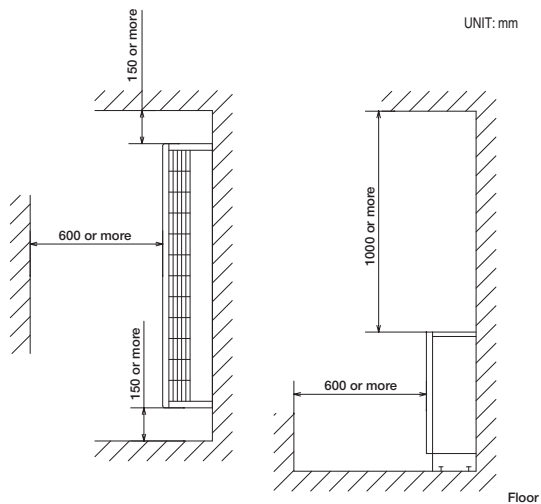
For installation		For refrigerant pipe				For drain pipe	
Floor bracket	Tapping screw	Pipe cover	Pipe cover	Strap	Joint pipe	Drain hose	Drain pipe
2	2	2	1	1	8	1	1
	For installing remote controller (M4 x 1.2)	For heat insulation of gas pipe	For on site side of liquid pipe (150 mm length)	For liquid pipe between Heat exchanger/ expansion valve box (70 mm length)	For pipe cover fixing	For connecting gas pipe	For drain pipe connecting

2 Selection of installation location for the indoor unit

This indoor unit can be installed either to the floor or to the wall. Select a location with the following suitable conditions.

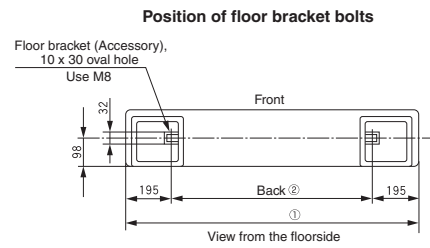
- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be 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 23°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.
 - 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 the unit falling down and injury.
- When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

Space for installation and service

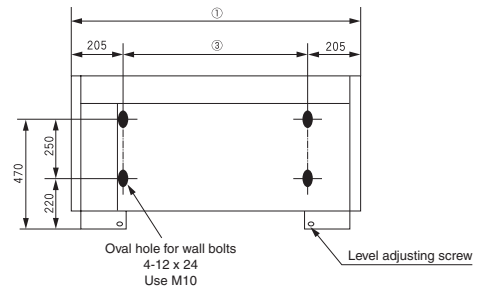


3 Preparation before installation

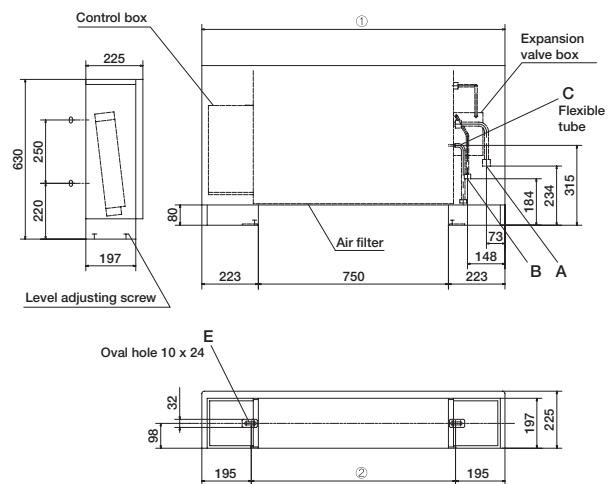
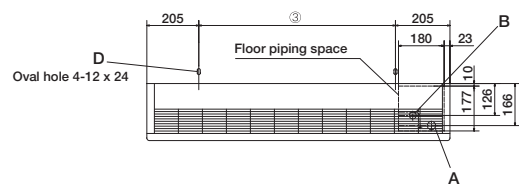
Position of bolts for floor bracket and for wall installation bolts



Position of wall installation bolts



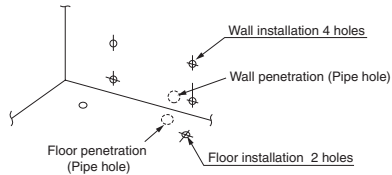
		UNIT:mm		
Model No.	Item	①	②	③
Type 28,45,56		1,196	806	786
Type 71		1,481	1,091	1,071



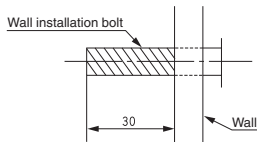
Symbol	Contents
A	Refrigerant gas side piping (provided)
B	Refrigerant liquid side piping
C	Drain piping (provided)
D	Wall installation hole
E	Floor bracket (provided)

4 Installation of indoor unit

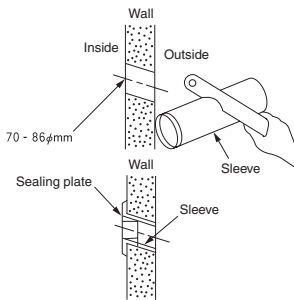
Choose the floor bracket bolt location or the wall installation bolt location, and the location of the pipe hole. Open the holes for the bolts and the pipe. Choose the positions by the measured values.



Strictly adhere to the following measurements for the wall installation bolts.

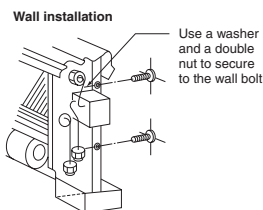
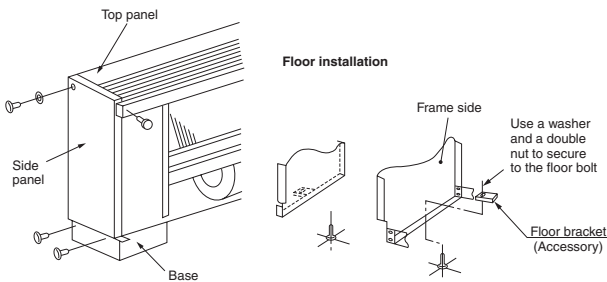
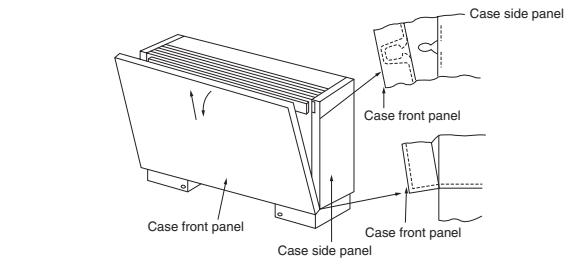


Here is the method to drill the holes on the wall.



- (1) Remove the front panel and the side panel.
- (2) Eliminate looseness with a level adjusting screw.
- (3) Firmly secure as instructed below.

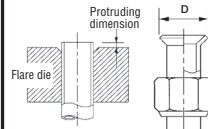
The side panel and the front panel have been installed.



5 Refrigerant piping

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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 or compatible with JIS B 8607, Class 2.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) 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.
- Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.) 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 R410A refrigerant.

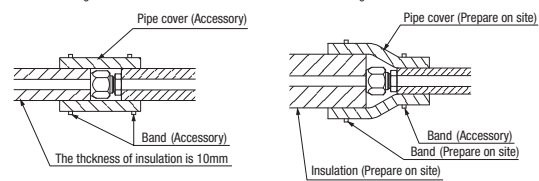
Work procedure

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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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.

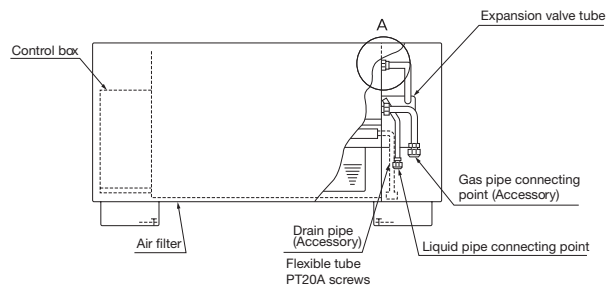
Caution:

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>



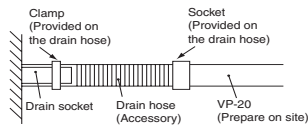
- There are "System name" and "Refrigerant amount" columns on the name plate of the outdoor unit. Write the system name and the amount of the refrigerant in the columns.



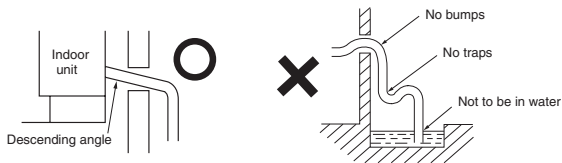
⑥ Drain pipe

Caution

Insert the attached drain hose to the indoor unit completely, tighten the drain hose with the attached clamp and secure it well. (Disapprove of the adhesive joint)



- 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.
- Insert the attached drain hose completely to the base.
- Tighten the drain hose with the strap and secure it well.



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.

⑧ Check list after installation

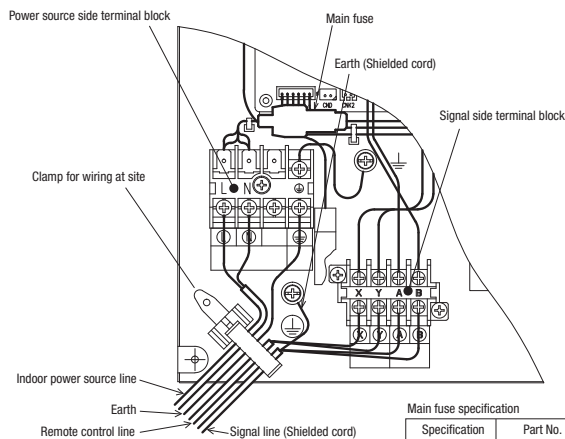
- Check the following items after all installation work completed.

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	

⑦ Wiring-out position and wiring connection

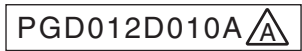
- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country. 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 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.



Main fuse specification	
Specification	Part No.
T3.15A L250V	SSA564A116G

(14) Floor standing (without casing) type (FDU)



This manual is for the installation of an indoor unit.
 For electrical wiring work (Indoor), refer to page 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor 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.
- 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.
- **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 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.
 - Places where the substances which affect the air-conditioner are generated such as sulfide gas, chlorine 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 pin.
- **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 installation	For refrigerant pipe				For drain pipe	
Floor bracket	Pipe cover	Pipe cover	Strap	Joint pipe	Drain hose	
2	2	1	8	1	1	
	For heat insulation of gas pipe	For on site side of liquid pipe (150 mm length)	For liquid pipe between Heat exchanger/ expansion valve box (70 mm length)	For pipe cover fixing	For connecting gas pipe	For drain pipe connecting

② Selection of installation location for the indoor unit

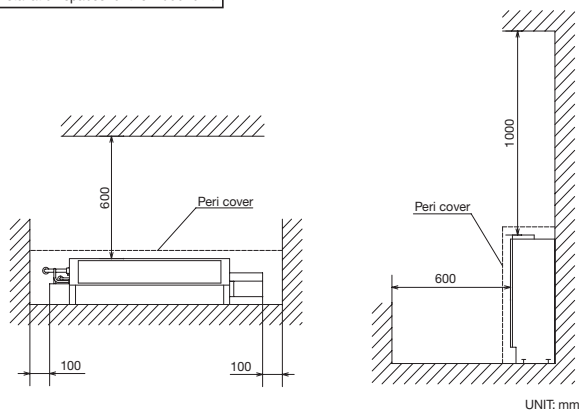
- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - Areas where there is enough 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 23°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.)

 - 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.

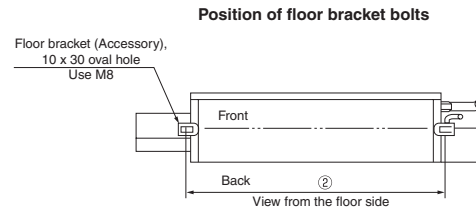
(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)

Installation spaces for the indoor unit

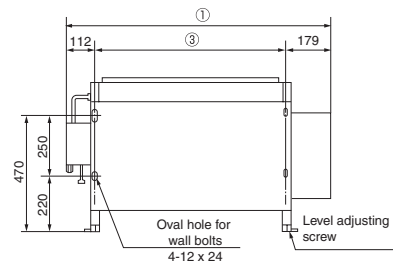


③ Preparation before installation

Position of bolts for floor bracket and for wall installation bolts

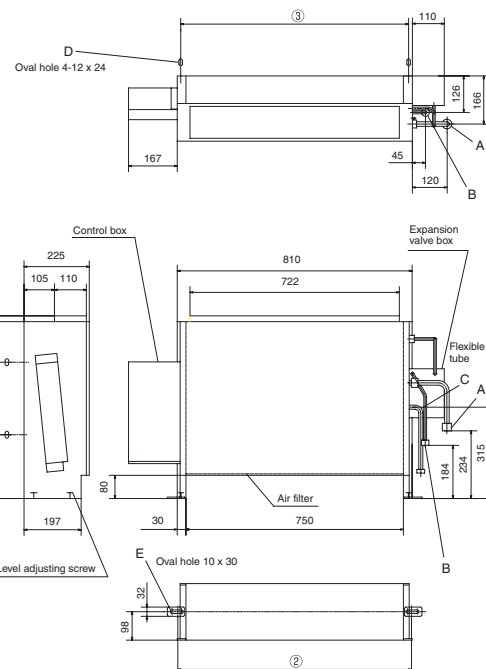


Position of wall installation bolts



UNIT:mm

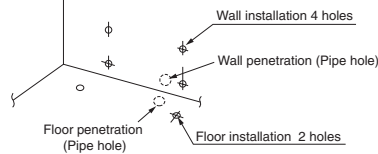
Item	①	②	③
Model No.			
Type 28,45,56	1,150	806	786
Type 71	1,435	1,091	1,071



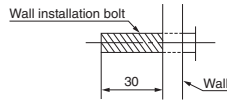
Symbol	Contents
A	Refrigerant gas side piping (provided)
B	Refrigerant liquid side piping
C	Drain piping (provided)
D	Wall installation hole
E	Floor bracket (provided)

④ Installation of indoor unit

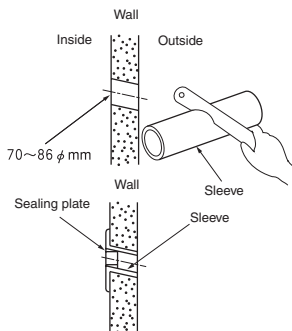
Choose the floor bracket bolt location or the wall installation bolt location, and the location of the pipe hole. Open the holes for the bolts and the pipe. Choose the positions by the measured values.



Strictly adhere to the following measurements for the wall installation bolts.

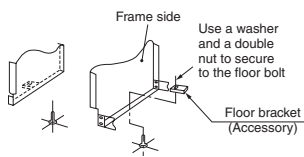


Here is the method to drill the holes on the wall.

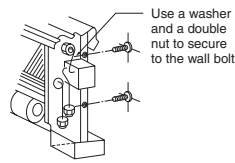


- (1) Eliminate looseness with a level adjusting screw.
- (2) Firmly secure as instructed below.

Floor installation

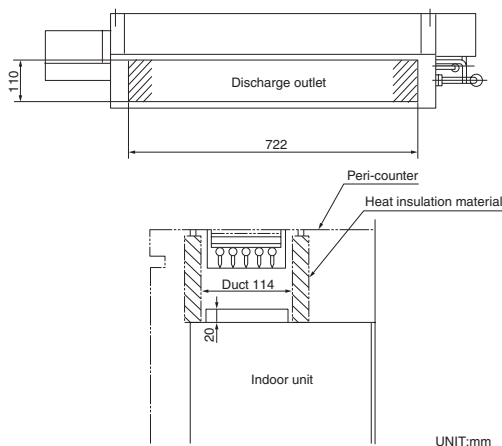


Wall installation



Example of discharge duct installation

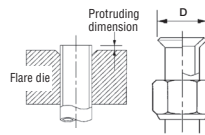
- Heat insulation materials, a discharge grille and a peri-counter are not included in the items supplied with a unit (to be prepared on site)
- A duct must be installed securely so that cooled air may not leak inside the peri-counter.



⑤ Refrigerant piping

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2. 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 or compatible with JIS B 8607, Class 2.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 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 specified in JIS H 3300) for refrigerant 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 R410A refrigerant.

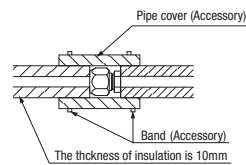
Work procedure

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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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.

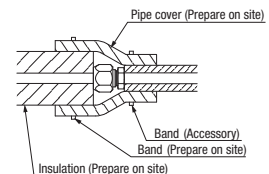
Caution:

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>

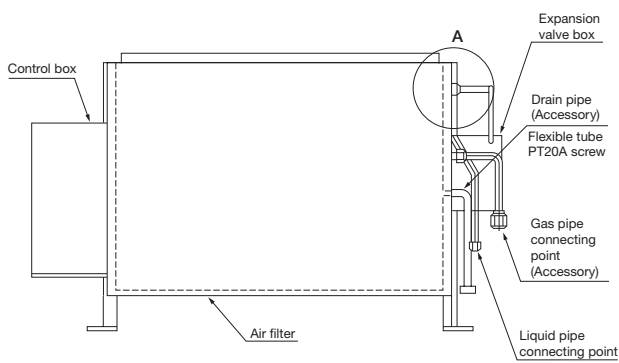


<The case of using reinforced insulation>



- There are "System name" and "Refrigerant amount" columns on the name plate of the outdoor unit. Write the system name and the amount of the refrigerant in the columns.

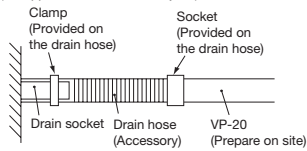
⑤ Refrigerant piping (continued)



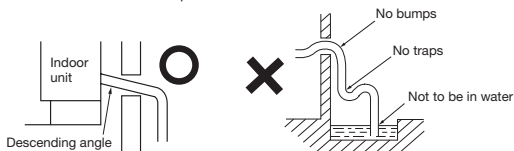
⑥ Drain pipe

Caution

Insert the attached drain hose to the indoor unit completely, tighten the drain hose with the attached clamp and secure it well. (Disapprove of the adhesive joint)



- 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.
- 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.
- Insert the attached drain hose completely to the base.
- Tighten the drain hose with the strap and secure it well.



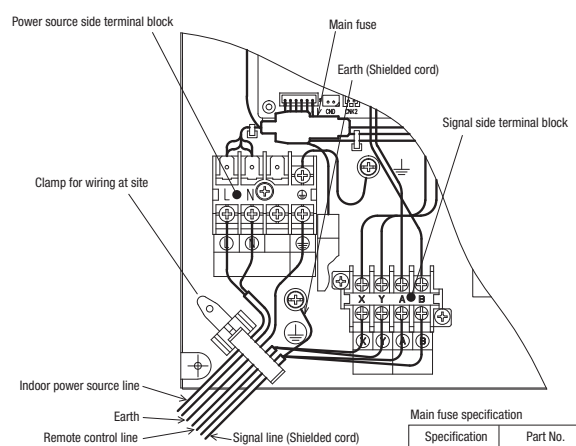
Drain test

- 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 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.

⑦ Wiring-out position and wiring connection (continued)



Main fuse specification	
Specification	Part No.
T3.15A L250V	SSA564A116G

⑧ 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	

(15) Outdoor air processing unit (FDU-F)



(a) Models FDU650, 1100FKXE1

- 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 319. For remote control installation, refer to page 323. For wireless kit installation, refer to page 452. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

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. FDU850FKXE1 = 90, FDU1100FKXE1 = 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 your 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 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 electronic 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 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 tin. (⚠)
- **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 drain 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 section side.

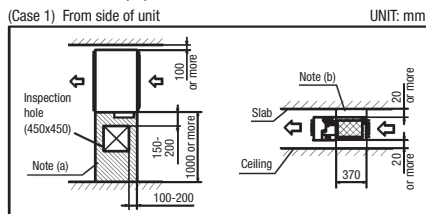
② Selection of installation location for the indoor unit

- 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 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.)
- 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.
- 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.

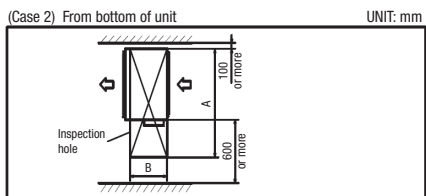
Space for installation and service

- Make installation altitude over 2.5m. (Indoor Unit)

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



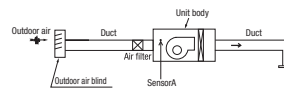
- Notes (a) There must not be obstacle to draw out fan motor. (marked area)
 (b) Install refrigerant pipe, drain pipe, and wiring so as not to cross marked area.



(Size of inspection hole)		UNIT: mm		
Single type	-	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

- 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

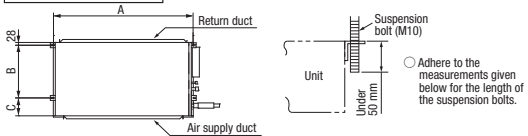
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

- 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.

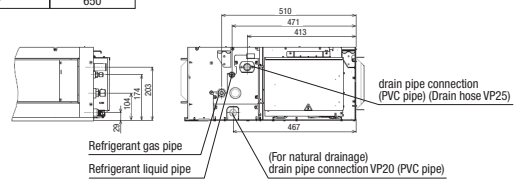
Suspension Bolt Location



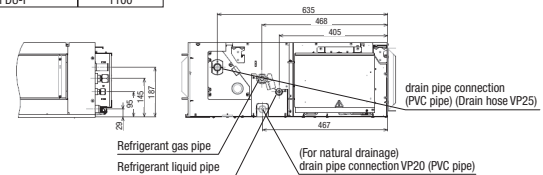
UNIT: mm			
Single type	-	71	100-140
Multi type	45, 56	71, 90	112-160
FDU-F	-	650	1100
A	786	986	1720
B	472	472	725
C	135	135	180

Pipe locations

Single type	71
Multi type	45-90
FDU-F	650



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

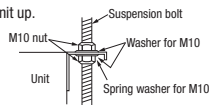


⑤ Installation of indoor unit

Installation

[Hanging]

Hang the unit up.

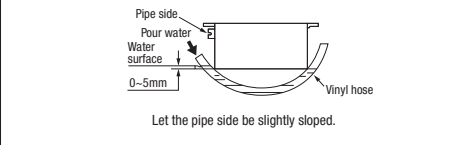


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

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

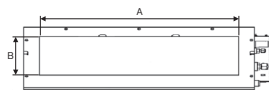
- ① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner (on the outlet port). Do not remove it until connecting the duct.

- 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

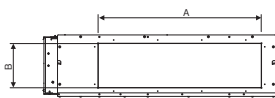


- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.

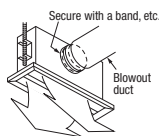
③ Inlet port

- 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

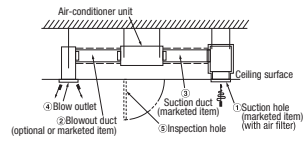


- Make sure to insulate the duct to prevent dewing on it.
- ④ Install the specific blowout duct in a location where the air will circulate to the entire room.
 - Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
 - Insulate the 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.

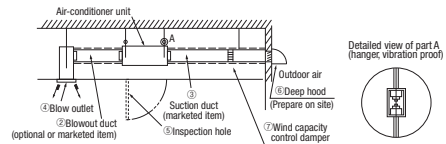


⑥ Duct Work (continued)

FDU

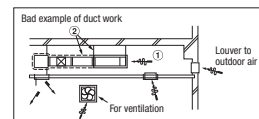


FDU-F



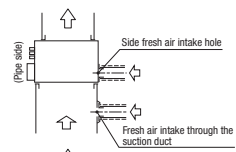
Bad example of duct work

- 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 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.



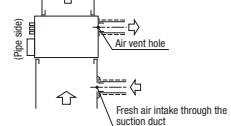
Connecting the air intake/vent ducts the case of FDU

- 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.

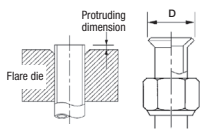
7 Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

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 or compatible with JIS B 8607, Class 2.
- 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



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 R410A	Conventional tool		
6.35	0.8			8.9 - 9.1	14 - 18
9.52	0.8			12.8 - 13.2	34 - 42
12.7	0.8	0 - 0.5	0.7 - 1.3	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 specified in JIS H 3300) 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.

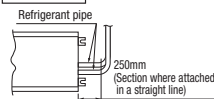
- Do not use any refrigerant other than R410A.

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 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

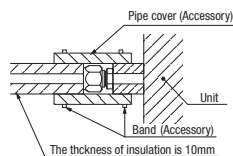
1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come 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.
 - ※ Do a flare connection as follows:
 - 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.
 - 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. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
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.

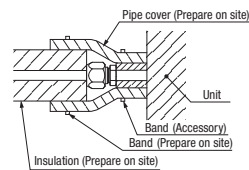
Caution:

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 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 case of using thickness of insulation is 10mm>



<The case of using reinforced insulation>



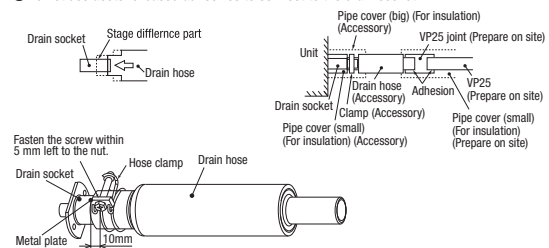
8 Drain pipe

Caution

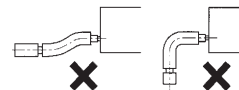
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is 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 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.

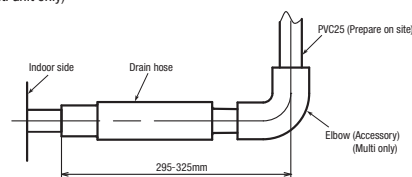


2. Prepare a joint for connecting VP-25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP-25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into 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.

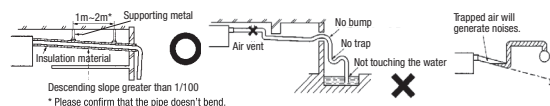


- As for drain pipe, apply VP25 (OD32).

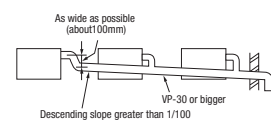
If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)



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 VP-30 or bigger size for main drain pipe.

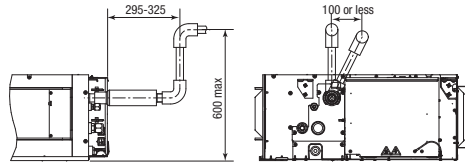


⑧ Drain pipe (continued)

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.
 - ※ 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.



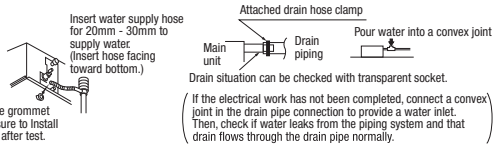
Otherwise, the construction point makes it same as drain pipe construction.

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.

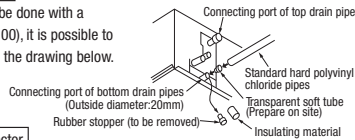
Procedures

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

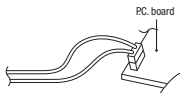
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

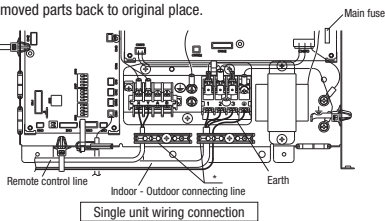
- Uncouple the connector CNR for the drain motor as illustrated in the drawing on the right.

(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.)



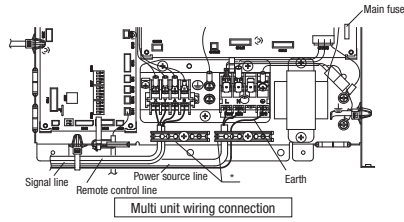
⑨ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power 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.



(b) Models FDU1800, 2400FKXZE1
Refer to page 275.

⑨ Wiring-out position and wiring connection (continued)



Main fuse specification

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



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.

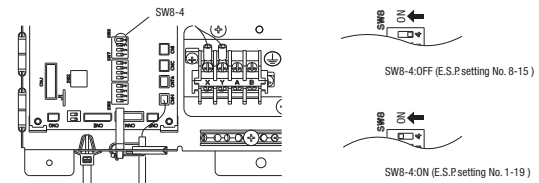
Setting No.	8	9	10	11	12	13	14	15
E.S.P. (Pa)	80	90	100	110	120	130	140	150

- ※ 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.



If SWB-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	

9.2 Electric wiring work instruction

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 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
SW1	Indoor unit address (tens place)
SW2	Indoor unit address (ones place)
SW3	Outdoor unit address (tens place)
SW4	Outdoor unit address (ones place)
SW5-1	ON Fixed previous version of Superlink protocol OFF Automatic adjustment of Superlink protocol
SW5-2	Indoor unit address (hundreds place)
SW6-1 ~ 4	Model capacity setting
SW7-1	ON Operation check, Drain motor test run OFF Normal operation

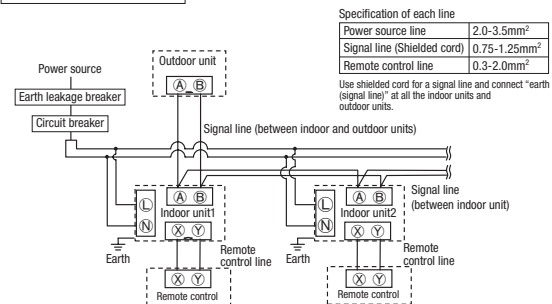
① Electrical Wiring Connection

- Electrical wiring work must be performed by an electrician an 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 supply 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);
- Provide a separate power outlet for each outdoor or indoor unit.
- All indoor units grouped in one system must have power source that can be turned on or off simultaneously.
- 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.

- Screw the line to terminal block without any looseness, certainly.
- Do not turn on the switch of power source, before all of line work is done.
- Provide a dedicated branching circuit and never share a branching circuit with other equipment. If shared, disconnection at the circuit breaker may occur, which can cause secondary damage.
- Install an over-current and earth leakage breaker (threshold current: 30mA) specified for each unit without fail.
- Set earth of D-type.
- Do not connect the power source line [AC220V/240V/380V/415V] to signal side terminal block. Otherwise, it could cause failure.
- Run the lines (power source, remote control and "between indoor and outdoor unit") upper ceiling through iron pipe or other tube protection to avoid the damage by mouse and so on.
- Connection of a cable beyond 3.5 mm² is not permitted. When cables of over 5.5 mm² are in use, provide a dedicated pull box to take a branch to an indoor unit.
- Misconnection between signal wires and power source wires could burn out all PCBs. Connect them carefully.
 - Even if AC200 V power source is connected mistakenly to signal wire A or B, PCBs are protected at the first time only.
 - If you cannot confirm a unit No. (address) from the remote control 15 minutes after turning the power on, check all signal wires and correct misconnections.
 - Cut off the jumper wire J 10SL1 on the burn-out PCB and replace connectors CnK (yellow) and CnK1 (white) with CnK2 (black).
 - If there is any anomaly in the wiring from A or B terminal block to the PCB, replace the wiring.
- Keep "remote control line" and "power source line" away from each other on constructing of unit outside.
- Do not add cord in the middle of line (of indoor power source, remote control and signal) route on outside of unit. If connecting point is flooded, it could cause problem as for electric or communication. (In the case that it is necessary to set connecting point on the signal line way, perform through waterproof measurement.)
- Connection of the line ("Between indoor and outdoor unit", Earth and Remote control)
 - Remove lid of control box before connect the above lines, and connect the lines to terminal block according to number pointed on label of terminal block.
 - In addition, pay enough attention to confirm the number to lines, because there is electrical polarity except earth line.
 - Furthermore, connect earth line to earth position of terminal block of power source.
 - Install earth leakage breaker on power source line. In addition, select the type of breaker for inverter circuit as earth leakage breaker.
 - If the function of selected earth leakage breaker is only for earth-fault protection, hand switch (switch itself and type "B" fuse) or circuit breaker is required in series with the earth leakage breaker.
 - Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be set in the box with key to prevent touching by another person when servicing.

Cabling system diagram (Outdoor/indoor unit connection procedure)



Power source line specification

Wiring specification

Unit type	Circuit breaker				Wiring size					
	Earth leakage breaker	Switch breaker	Over-current protector rated capacity	Power source line	Wire length	Signal line	Remote control line	Earth line		
22-36										
45-90	15A	30mA	0.1sec	30A	15A	2.0mm ² ×2	304m	0.75-1.25mm ² ×2	0.3mm ² ×2cores	2.0mm ²
112-160							216m			
							129m			
In case of Duct connected -High static pressure- type										
71-140							87m			
224,280	15A	30mA	0.1sec	30A	15A	2.0mm ² ×2	48m	0.75-1.25mm ² ×2	0.3mm ² ×2cores	2.0mm ²

- Note (1) The cord distances are calculated with a voltage drop of 2%. If the distance should exceed the above data, review the cord thickness to use in accordance with your extension cord regulations.
- (2) When total extension of remote control line is more than 100m, change the size of cord according to "③ Remote Control, Wiring and functions".

In case of Heat recovery 3-pipe systems

Branching control of heat recovery 3-pipe systems wiring

- When this unit is used as a "Heat Recovery 3-pipe Systems", refer to the installation manual of a branching controller (option).

② Address setting

Address setting is done by (1) Manual address setting or (2) Automatic address setting. In the case of (2) "Automatic address setting", it is possible to change address setting by wired remote control after once complete setting. As for details of setting procedure, refer to instructions attached to the outdoor unit for details.

③ Remote Control, Wiring and functions

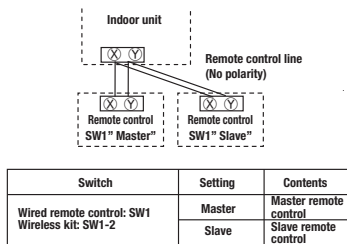
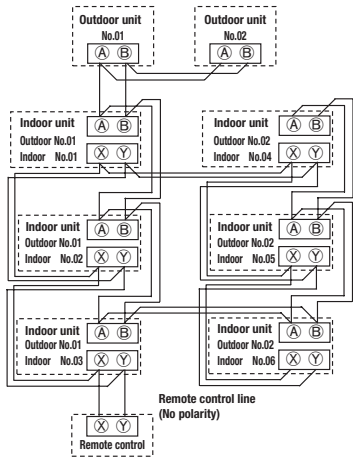
- Do not install it on the following places.
 - (1) Place exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to generate condensation
 - (5) Place exposed to oil mist or steam directly.
 - (6) Uneven surface

Installation and wiring of remote control

- Install remote control referring to the attached manual.
- Wiring of remote control should use 0.3mm² x2 core wires or cables. The insulation thickness is 1mm or more. (on-site configuration)
- 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 x2 core
 - Under 300m.....0.75mm² x 2 core
 - Under 400m.....1.25mm² x 2 core
 - Under 600m.....2.0mm² x 2 core
- Avoid using multi-core cables to prevent malfunction.
- Keep remote control line away from earth (frame or any metal of building).
- 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

- 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.
- Connect all indoor units with 2 core remote control line for group control.
- Use the function of manual address setting to set the indoor and outdoor address number.
 - Do not forget to set the number for the outdoor units.
- As shown in the following figure, the remote control can be used to control multiple outdoor units.
- One remote control is able to perform group control for multiple units (maximum 16 units).
 - Use the rotary SW1 and SW2 provided on the indoor unit PCB (Printed circuit board) to set unique remote control communication address avoiding duplication.



Switch	Setting	Contents
Wired remote control: SW1 Wireless kit: SW1-2	Master	Master remote control
	Slave	Slave remote control

③ Remote Control, Wiring and functions (continued)

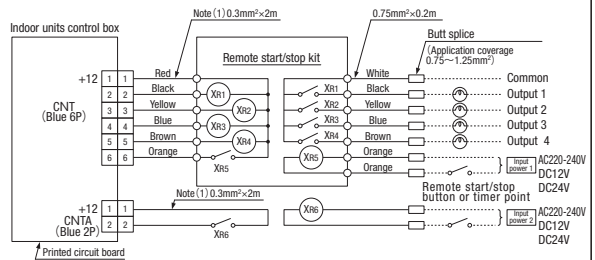
Master/slave setting when more than one remote control unit are used

A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.) Latest "function setting" is superior than previous one. 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.

④ Operation and confirmation from remote control

Operation from RC-EX1	Operation from RC-E4, RC-E5
<p>1 Check the number of units connected in the multi remote control system.</p> <p>"Menu" ⇒ "Next" ⇒ "Service & Maintenance" ⇒ "Input password" ⇒ "IU address"</p>	<p>Press [AIR CON NO] button to display the IU address. Press the [V] or [A] button and check addresses of connected indoor units one by one.</p>
<p>2 Check if each unit is connected properly in the remote control system.</p> <p>When the operation is stopped, "Menu" ⇒ "Next" ⇒ "Service & Maintenance" ⇒ "Input password" ⇒ "IU address" ⇒ "check run mode"</p>	<p>If AIR CON NO. button is pressed when the operation is stopped, the indoor unit address is displayed. If you select one of addresses for connected indoor units by pressing the [V] or [A] button and press the [MODE] button, the unit starts to blow air.</p>
<p>3 Setting master/slave remote controls</p> <p>"Menu" ⇒ "Next" ⇒ "R/C function settings" ⇒ "Input password" ⇒ "Main/Sub of R/C"</p>	<p>Set SW1 to "Slave" for the slave remote control unit.</p>
<p>4 Checking operation data</p> <p>"Menu" ⇒ "Next" ⇒ "Service & Maintenance" ⇒ "Input password" ⇒ "Operation data"</p>	<p>Press the [CHECK] button ⇒ "ERR (N/A) " is displayed. ⇒ Press the [SET] button ⇒ "WINDING" is displayed. ⇒ "S-1/S2/S1/I/O" is displayed. ⇒ Select one of addresses for connected indoor units by pressing the [A] or [V] button. ⇒ Press the [SET] button ⇒ "set (N/A) " is displayed. ⇒ Select data by pressing the [A] or [V] button.</p>
<p>5 Checking inspection display</p> <p>"Menu" ⇒ "Next" ⇒ "Service & Maintenance" ⇒ "Input password" ⇒ "Inspection display"</p>	<p>Press the [CHECK] button. ⇒ Press the [V] button. ⇒ "ERR (N/A) " is displayed. ⇒ Press the [SET] button. ⇒ "WINDING" is displayed. ⇒ Select data by pressing the [A] or [V] button.</p>
<p>6 Cooling test run from remote control</p> <p>"Menu" ⇒ "Next" ⇒ "Installation settings" ⇒ "Input password" ⇒ "Test run" ⇒ "Cooling test run" ⇒ "Start"</p>	<p>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 When the [SET] button is pressed while "TEST RUN " is indicated, a cooling test run will start. The screen display will switch to "TEST RUN ".</p>
<p>7 Trial operation of drain pump from remote control</p> <p>"Menu" ⇒ "Next" ⇒ "Installation settings" ⇒ "Input password" ⇒ "Test run" ⇒ "Drain pump test run" ⇒ "Run"</p>	<p>① Press the [TEST] button for three seconds or longer. The display will change "TEST RUN " * ② Press the [V] button once and cause "DRIP PMP " to be displayed. ③ When the [SET] button is pressed, a drain pump operation will start. Display: "TEST STOP " *</p>

⑤ Function of CNT connector of indoor printed circuit board



Note (1): Do not use the length over 2 meter
● CNT connector (local) vendor model
Connector : Made by molex 5264-06
Terminals : Made by molex 5263 T

● Refer to instruction manuals of "Branching controller", when the indoor unit is connected to "Heat recovery 3-pipe systems".

● Function

Output 1	Air-conditioner operation output (When the air-conditioner ON: XR1 = ON)
Output 2	Heating output
Output 3	Thermostat ON output (When the thermostat ON: XR3 = ON)
Output 4	Air-conditioner check ON (When checking air-conditioner: XR4 = ON)
Input	At shipping XN5 OFF ⇒ ON: Air-conditioner operates. XN5 ON ⇒ OFF: Air-conditioner stops.
	*Functions and controls may vary depending on the switching at site.
Input 2 (FDT etc.)	At shipping XN6 OFF ⇒ ON: Air-conditioner operates. XN6 ON ⇒ OFF: Air-conditioner stops.
	*Functions and controls may vary depending on the switching at site.

* Refer to I/U settings.

● CNTA connector is installed on FDT, etc. Refer to the spec. drawings.
CNTA connector (local) vendor model
Connector : Made by JST XAP02V-1-E
Terminals : Made by JST SXA-01T-P0.6

⑥ Operation and setting from remote controller


A: Refer to the instruction manual for RC-EX series.
 B: Refer to the installation manual for RC-EX series.
 C: Loading a utility software via Internet
 ○: Nearly same function setting and operations are possible.
 △: Similar function setting and operations are possible.

Setting & display item	Description	RC-EX series	RC-E4 RC-E5
1. Remote Control network			
1	Control plural indoor units by a single remote control	○	○
2	Master/slave setting of remote controls	B	○
2. TOP screen, Switch manipulation			
1	Menu	A	A
2	Operation mode	A	○
3	Set temp.	A	○
4	Air flow direction	A	○
5	Fan speed	A	○
6	Timer setting	A	○
7	ON/OFF	A	○
8	High power SW	A	
9	Energy-saving SW	A	
3. Energy-saving setting			
1	Auto OFF timer [Administrator password]	A	△
2	Peak-cut timer [Administrator password]	A	
3	Automatic temp. set back [Administrator password]	A	△
4. Individual flap control setting			
	Individual flap control setting	A	○
5. Ventilation			
1	External ventilation (In combination with ventilator)	A	○
6. Filter sign reset			
1	Filter sign reset	B	
2	Setting next cleaning date	A	
7. Initial settings			
1	Clock setting	A	△
2	Date and time display	A	
3	Summer time	A	
4	Contrast	A	
5	Backlight	A	
6	Controller sound	A	
8. Timer settings			
1	Set On timer by hour	A	△
2	Set Off timer by hour	A	△
3	Set On timer by clock	A	△
4	Set Off timer by clock	A	△
5	Confirmation of timer settings	A	
9. Weekly timer			
1	Weekly timer [Administrator password]	A	△
10. Home leave mode			
1	Home leave mode [Administrator password]	A	

⑥ Operation and setting from remote control (continued)

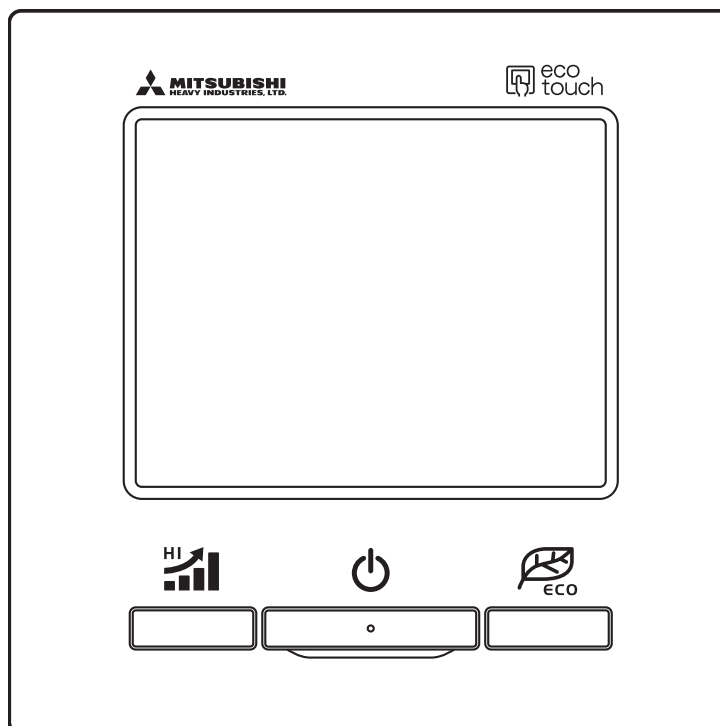
Setting & display item	Description	RC-EX series	RC-E4 RC-E5
11. Administrator settings	[Administrator password]	A	
1 Enable/Disable setting	•Enable/Disable setting of operation can be set. [On/Off] [Change set temp.] [Change operation mode] [Change air flow direction] [Individual flap control setting][Fan speed] [High power operation] [Energy-saving operation] [Timer settings] [Weekly timer setting] •Request for administrator password can be set. [Individual flap control setting][Weekly timer][Energy-saving setting][Home leave mode][Administrator settings]	A	△
2 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 minutes interval.	A	△
3 Setting temp. range	The upper/lower limit of indoor 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	△
4 Temp. increment setting	The temp increment setting can be changed by 0.5°C or 1.0°C.	A	
5 RC display setting	Register [Room name] [Name of I/U] Display [indoor temp.] or not. Display [inspection code] or not. Display [Heating stand-by] [Defrost operation] [Auto cooling/heating] or not	A	○ △ ○
6 Change administrator password	The administrator password can be changed. (Default setting is "0000") The administrator password can be reset.	A B	
12. Installer settings	[Service password]	B	
1 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	
2 Service contact	The [Service contact] can be registered and can be displayed on the RC. •The [Contact company] can be registered within 10 characters. •The [Contact phone] can be registered within 13 digits.	B	
3 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 the drain pump can be operated.		○
Compressor Hz fixed operation	The [Test run] operation can be done with fixed compressor Hz set by installer.		○
4 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.	B	
5 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	△
6 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 unit shall follow. •The Main indoor unit can domain 10 indoor units at a maximum.	B	△
13. RC function settings	[Service password]	B	
1 Main/Sub RC setting	The setting of [Main/Sub RC] can be changed.	B	○
2 RC sensor	The offset value of [RC sensor] sensing temp. can be set respectively in heating and cooling.	B	○
3 9 RC sensor adjustment	The offset value of [RC sensor] sensing temp. can be set respectively in heating and cooling. •The setting range of offset value is ±3°C both in cooling and heating.	B	△
4 12 Operation mode	The [Valid/Invalid] setting of [Auto][Cooling][Heating] and [Dry] can be done respectively.	B	○
5 13 Fan speed	The setting of [Fan speed] can be done from following patterns. •1-speed, 2-speeds (Hi-Me), 2-speeds (Hi-Lo), 3-speeds, 4-speeds.	B	○
6 14 External input	The applicable range ([Individual] or [All units]) of CnT input to the multiple indoor units connected in one control system. •[Individual] : Only the unit received CnT input signal. •[All units] : All the units connected to one control system received CnT input signal.	B	○
7 15 Ventilation setting	The setting of [Invalid] operation of ventilator, [Interlock] with AC or [Independent] of ventilator can be selected. •When setting [Interlock], the operation of external ventilator is interlocked with the operation of AC •When setting [Independent], only the operation of external ventilator is available.	B	○
8 16 Flap control	The [Flap control] method can be switched to [Stop at fixed position] or [Stop at any position] •[Stop at fixed position] : Stop the flap at a certain position among the designated 4 positions. •[Stop at any position] : Stop the flap at any arbitrary position just after the stopping command from RC was sent.	B	○
9 17 Auto-restart	The operation control method after recovery of power blackout happened during operation can be set.	B	○
10 18 Auto temp. setting	[Valid] or [Invalid] of [Auto temp. setting] can be selected.	B	
11 19 Auto fan speed setting	[Valid] or [Invalid] of [Auto fan speed setting] can be selected.	B	
14. I/U settings	[Service password]	B	
1 High ceiling	The fan tap of indoor fan can be changed. •[Standard] [High ceiling 1] [High ceiling 2] can be selected.	B	○
2 Filter sign	The setting of filter sign display timer can be done from following patterns.	B	○
3 External input 1	The content of control by external input can be changed. •The selectable contents of control are [On/Off] [Permission/Prohibition] [Cooling/heating] [Emergency stop]	B	○
4 External input 1 signal	The type of external input signal ([Level input]/[Pulse input]) can be changed.	B	○
5 External input 2	•The selectable contents of control are [On/Off] [Permission/Prohibition] [Cooling/heating] [Emergency stop]	B	
6 External input 2 signal	The type of external input signal ([Level input]/[Pulse input]) can be changed.	B	
7 Heating thermo-off temp. adjust	The judgment temp. of heating thermo-off can be adjusted within the range from 0 to +3°C (1°C interval)	B	△
8 Return air sensor adjust.	The sensing temp. of return air temp. sensor built in the indoor unit can be adjusted within the range of ±2°C.	B	△
9 Fan control in heating thermo OFF	The fan control method at heating thermo-off can be changed. •The selectable fan control methods are [Low] [Set fan speed] [Intermittent] [Stop].	B	○
10 Anti-frost temp.	The judgment temp. of anti-frost control for the indoor unit in cooling can be changed to [Temp. High] or [Temp. Low].	B	○
11 Anti-frost control	When the anti-frost control of indoor unit in cooling is activated, the fan speed can be changed.	B	○
12 Drain pump operation	In any operation mode in addition to cooling and dry mode, the setting of drain pump operation can be done.	B	○
13 Residual fan operation in cooling	The time period of residual fan operation after stopping or thermo-off in cooling mode can be set.	B	○
14 Residual fan operation in heating	The time period of residual fan operation after stopping or thermo-off in heating mode can be set.	B	○
15 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	○
16 Fan circulator operation	In case that the fan is operated as the circulator, the fan control rule can be set.	B	
17 Control pressure adjust. (For OA processing unit only)	When only the OA processing units are operated, control pressure value can be changed.	B	○
18 Auto operation mode	The [Auto rule selection] for switching the operation mode automatically can be selected from 3 patterns.	B	
19 Thermo. rule setting	When selecting [Outdoor air temp. control], the judgment temp can be offset by outdoor temp..	B	
20 Auto fan speed control	Under the [Auto fan speed control] mode, the switching range of fan speed can be selected from following 2 patterns [Auto 1] [Auto 2]. •[Auto 1] : Hi ⇄ Me ⇄ Lo •[Auto 2] : P-hi ⇄ Hi ⇄ Me ⇄ Lo	B	
15. Service & Maintenance	[Service password]	B	
1 IU address No.	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	○
2 Next service date	The [Next service date] can be registered. •The [Next service date] and [Service contact] is displayed on the [Periodical check] message screen.	AB	
3 Operation data	Total 39 items of [Operation data] for indoor unit and outdoor unit can be displayed.	B	○
4 Error history	[Date and time of error occurred] [IU address] [Error code] for Max. 16 latest cases of error history can be displayed.	B	△
Display anomaly data	The operation data just before the latest error stop can be displayed.	B	
Reset periodical check	The timer for the periodical check can be reset.	B	○
5 Saving I/U settings	The I/U settings memorized in the indoor PCB connected to the remote control can be saved in the memory of the remote control.	B	
6 Special settings	[Erase I/U address] [CPU reset] [Initializing] [Touch panel calibration]	B	△
16. Inspection		A	△
Confirmation of Inspection	The address No. of anomalous indoor/outdoor unit and error code are displayed.		
17. PC connection			
USB connection	Weekly timer setting and etc., can be set from PC.	C	

9.3 Installation of wired remote control (Option parts)

PJZ012D077 

(1) Model RC-EX1A

eco touch REMOTE CONTROL RC-EX1A INSTALLATION MANUAL





1 . Safety precautions

This installation manual describes the installation methods and precautions related to the remote control. Use this manual together with the user's manuals for the indoor unit, outdoor unit and other option equipment. Please read this manual carefully before starting the installation work to install the unit properly.

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, the "Installation Manual" should be given to a new owner.

WARNING

Ask a professional contractor to carry out installation work according to the installation manual.
Improper installation work may result in electric shocks, fire or break-down.



Shut OFF the main power source before starting electrical work.
Otherwise, it could result in electric shocks, break-down or malfunction.



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.



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.



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.



 CAUTION**Do not install the remote control at following places.**

It could cause break-down or deformation of remote control.

- (1) Where it is exposed to direct sunlight
- (2) Near the equipment to generate heat
- (3) Where the surface is not flat



Do not leave the remote control with its upper case removed.

When the upper case is removed, put it in a packing box or packing bag to protect internal PCBs or other parts from dust, moisture, etc.



2 . Accessories & prepare on site

Accessories	R/C main unit, wood screw (ø3.5 x 16) 2 pcs User's Manual, Installation Manual
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Parts procured at site

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 (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-core
< 300 m	0.75 mm ² x 2-core
< 400 m	1.25 mm ² x 2-core
< 600 m	2.0 mm ² x 2-core

3. Remote control installation procedure

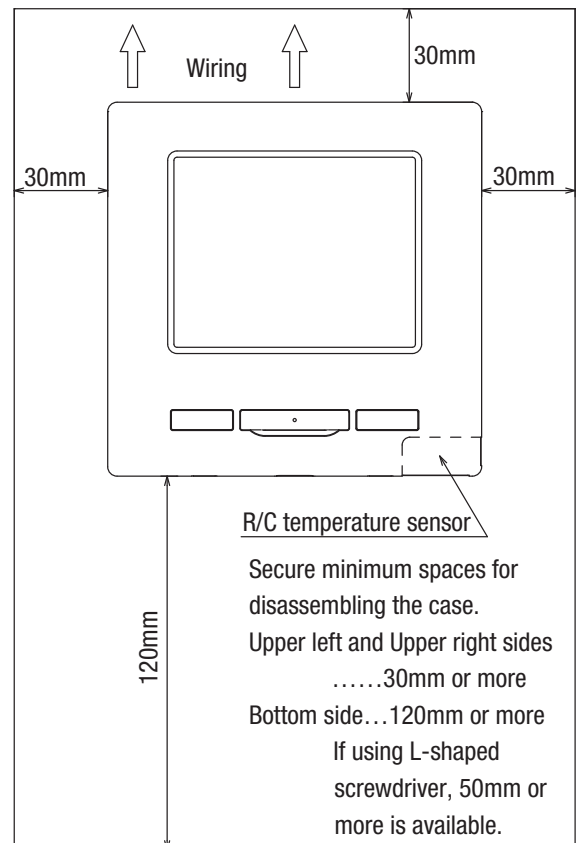
Determine where to install the remote control

Installation	“Using a switch box” “Installed directly on a wall”
Wiring direction	“Backward” “Upper center”, “Upper left”

Cautions for selecting installation place

- Installation surface must be flat and sufficiently strong.
R/C case must not be deformed.
- Where the R/C can detect room temperatures accurately.
This is a must when detecting room temperatures with the temperature sensor of R/C.
 - Install the R/C where it can detect the average temperature in the room.
 - Install the R/C separated from a heat source sufficiently.
 - Install the R/C where it will not be influenced by the turbulence of air when the door is opened or closed.
 Select a place where the R/C is not exposed to direct sunlight or blown by winds from the air-conditioner or temperatures on the wall surface will not deviate largely from actual room temperature.

Installation space



Request

Be sure not to install R/C at a place where temperatures around the installation surface of R/C may differ largely from actual room temperature.

Difference between detected temperature and actual room temperature could cause troubles.

The correction for detected temperature by the R/C cannot offset such temperature difference because it corrects the detected temperatures itself.



Request

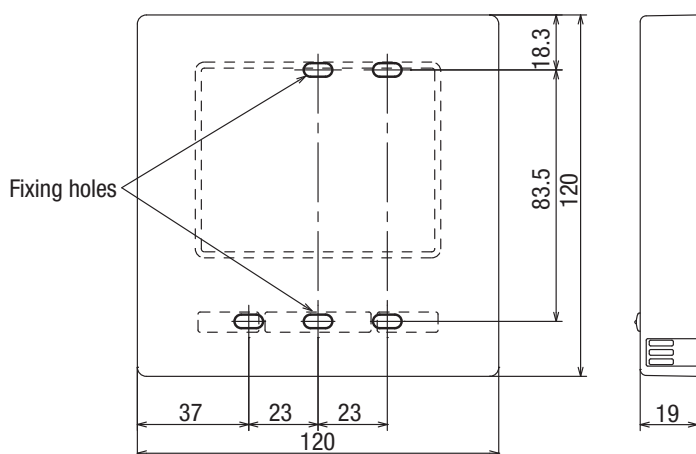
Do not install the R/C at a place where it is exposed to direct sunlight or where surrounding air temperature exceeds 40°C or drops below 0°C.

It could cause discoloration, deformation, malfunction or breakdown.

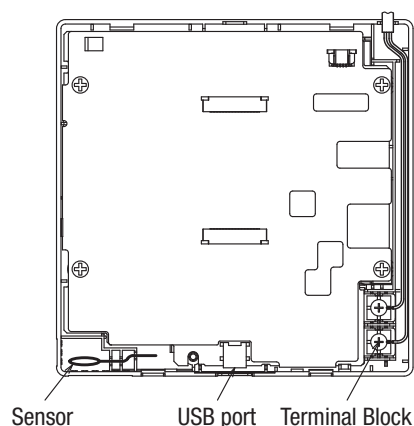


Installation procedure

Dimensions (Viewed from front)



PCB side (Viewed from rear)



- ① To remove the upper case from the bottom cases of R/C
 - 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.

Take care to protect the removed upper case from moisture or dust.



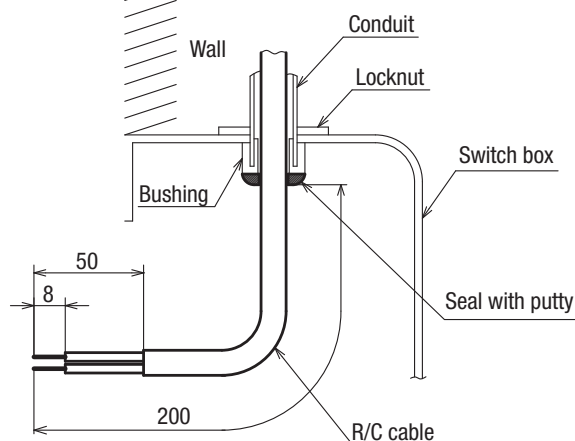
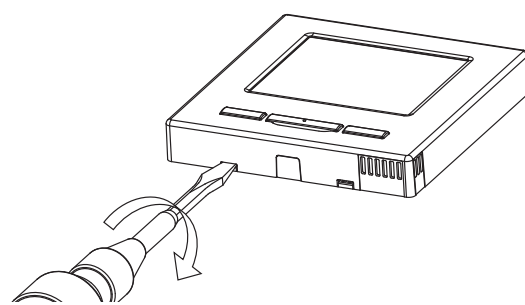
- ② Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit.
R/C wires (X, Y) have no polarity.

In case of embedding wiring (When the wiring is retrieved "Backward")

- ③ Embed the switch box and the R/C wires beforehand.

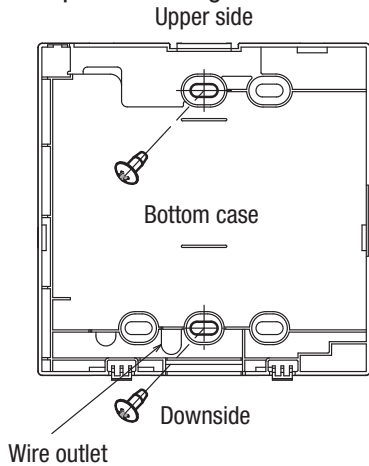
Seal the inlet hole for the R/C wiring with putty.

- If dust or insect enters, it could cause electric shocks, fire or breakdown.

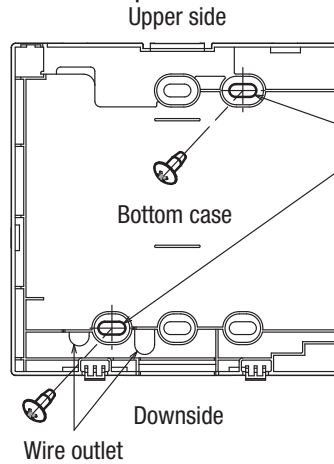


- ④ When wires are passed through the bottom case, fix the bottom case at 2 places on the switch box.

Switch box
for 1 pc



Switch box
for 2 pcs



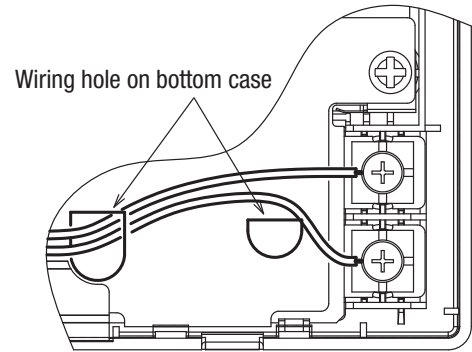
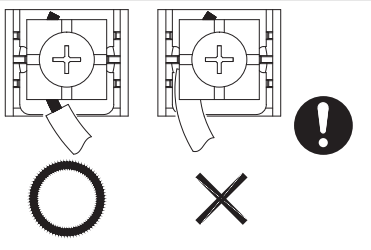
Cut out the thin wall part at the screw mounting section with a knife or the like before tightening the screw.

- ⑤ When fixing the bottom case diagonally at 2 places, cut out the thin wall section on the case.
⑥ Fix wires such that the wires will run around the terminal screws on the top case 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.

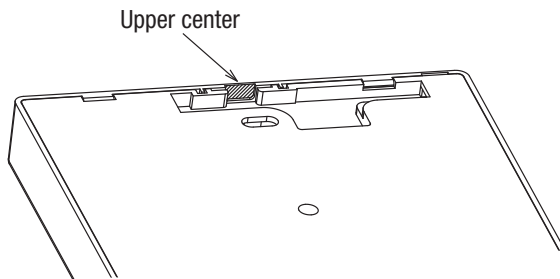
Tighten by hand (0.7 N·m or less) the wire connection. If the wire is connected using an electric driver, it may cause failure or deformation.



- ⑦ Install the upper case with care not to pinch wires of R/C.

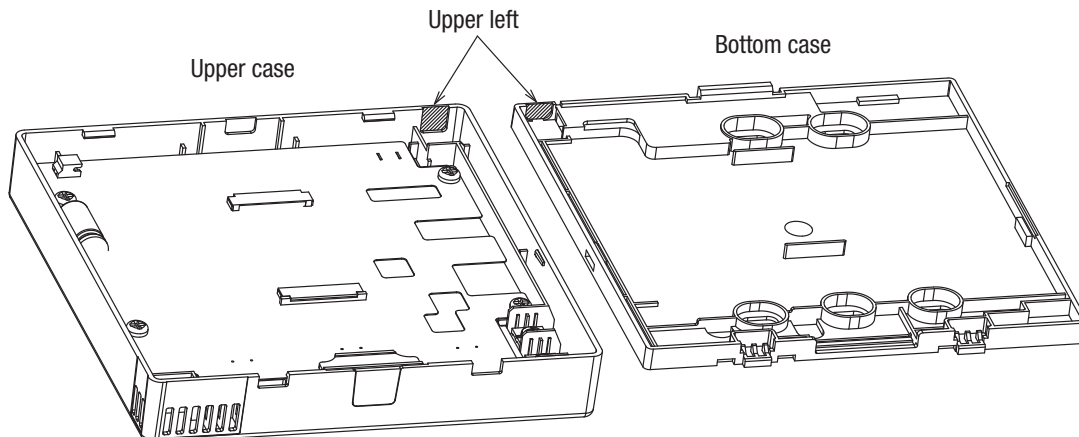
In case of exposing wiring (When the wiring is taken out from the “upper center” or “upper left” of R/C)

- ③ 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.

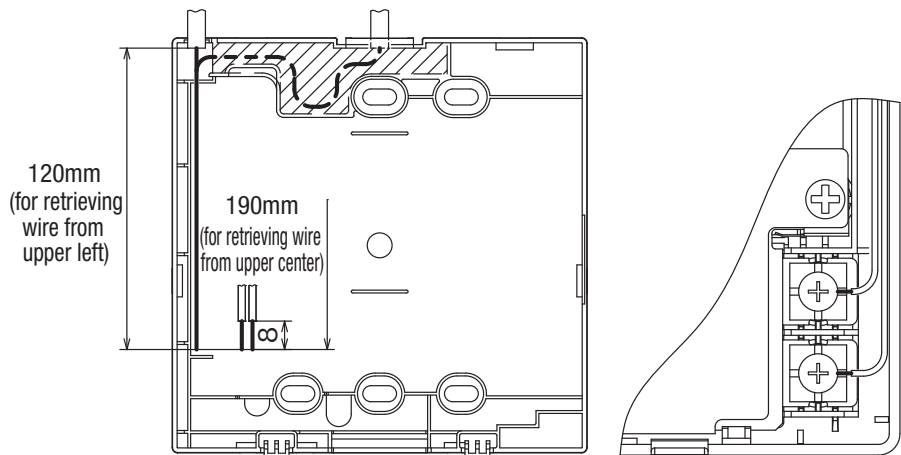
When taking the wiring out from the upper left, take care not to damage the PCB and not to leave any chips of cut thin wall inside.



If the hole is cut too large, moisture, dust or insects may enter.
Seal gaps with putty or the like.



- ④ Fix the bottom R/C case on a flat surface with wood screws.
- ⑤ In case of the upper center, pass the wiring behind the bottom case. (Hatched section)
- ⑥ Fix wires such that the wires will run around the terminal screw of the top case of R/C.
- ⑦ Install the top case with care not to pinch wires of R/C.



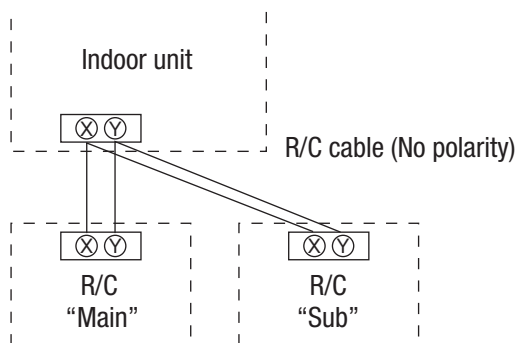
Main/Sub setting when more than one remote control are used

Main-Sub setting for use of two or more R/C

Up to two units of R/C can be used at the maximum for 1 indoor unit or 1 group.

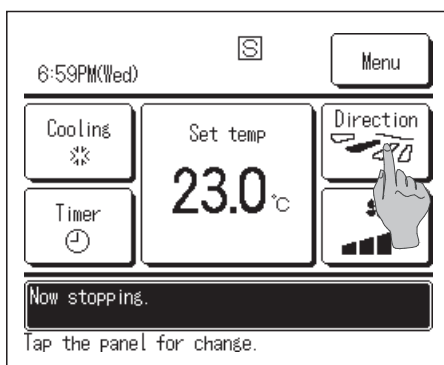
One is main R/C and the other is sub R/C.

Operating range is different depending on the main or sub R/C.



Set the "Main" and "Sub" as described at Section 7 of installation manual attached to the remote control.

R/C function	Main	Sub
Run/Stop, setting temperature, fan speed and flap direction operations	<input type="radio"/>	<input type="radio"/>
High power and energy-saving operations	<input type="radio"/>	<input type="radio"/>
Energy-saving setting	<input type="radio"/>	—
R/C sensor	<input type="radio"/>	—
Test run menu operation	<input type="radio"/>	—
Room temperature range setting	<input type="radio"/>	—
Indoor unit settings	<input type="radio"/>	—
Individual flap control	<input type="radio"/>	—
Operation data display	<input type="radio"/>	—
Error history display	<input type="radio"/>	<input type="radio"/>



Note: 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.

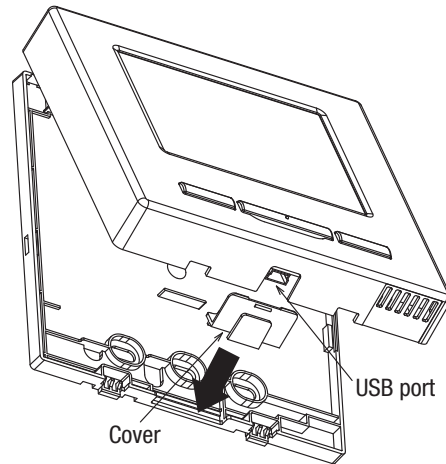
If dust, insect, etc. enters, it could cause electric shocks or breakdown.



Special software is necessary for the connection.
For details, view the web site or refer to the engineering data.

Do not connect to a personal computer without using the special software.

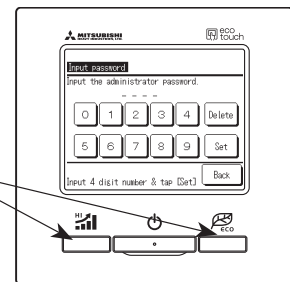
Do not connect the personal computer to the USB simultaneously with other USB devices.
It could cause malfunction or breakdown of R/C or personal computer.




Note: 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). When the administrator password is forgotten, it can be initialized, if the [High power] and the [Energy-saving] buttons are pushed simultaneously for 5 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.





PJA012D730 

(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.

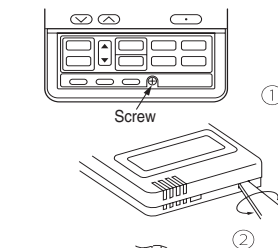
(1) Places exposed to direct sunlight	(4) Hot surface or cold surface enough to generate condensation
(2) Places near heat devices	(5) Places exposed to oil mist or steam directly
(3) High humidity places	(6) Uneven surface


- 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)

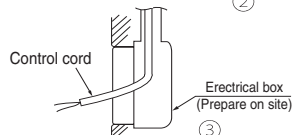
Installation procedure

- 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.

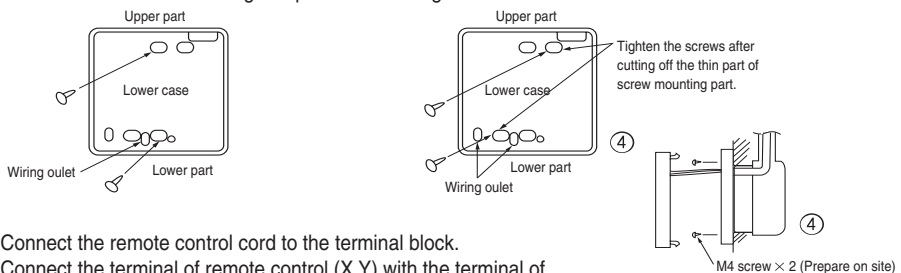


[In case of embedding cord]

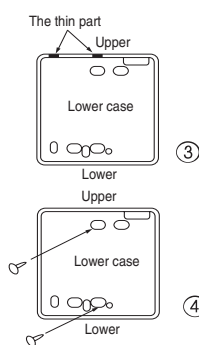
- ③ Embed the electrical box and remote control cord beforehand.



- 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.



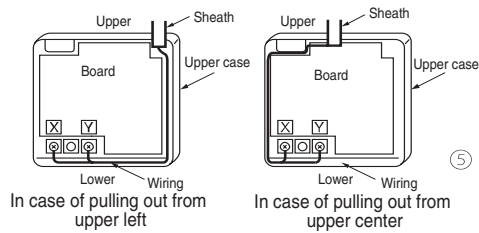
- ⑤ Connect the remote control cord to the terminal block.
Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)
- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.



[In case of exposing cord]

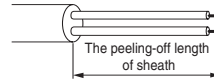
- ③ You can pull out the remote control cord from left upper part or center upper part.
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.
- ④ Install the lower case to the flat wall with attached two wooden screws.

- 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 0.3mm^2 (recommended) to 0.5mm^2 .
 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



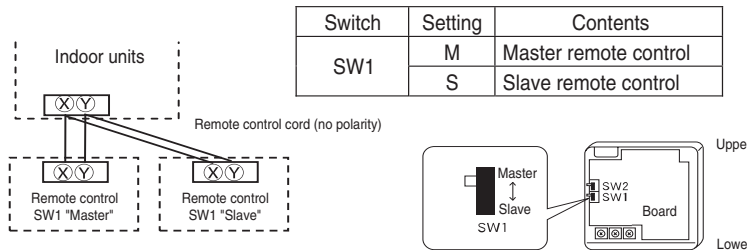
- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.
 ⑦ In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote control

- ① Wiring of remote control should use $0.3\text{mm}^2 \times 2$ core 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 0.5mm^2 . 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 | $0.5\text{mm}^2 \times 2$ cores |
| Under 300m | $0.75\text{mm}^2 \times 2$ cores |
| Under 400m | $1.25\text{mm}^2 \times 2$ cores |
| Under 600m | $2.0\text{mm}^2 \times 2$ 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 thermistor 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

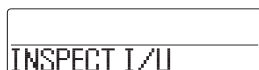
When power source is turned on, the following is displayed on the remote control until the communication between the remote control and indoor unit settled.

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.

- 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.

- 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

- Stop the air-conditioner, and press (SET) and (MODE) button at the same time for over three seconds .

The indication changes to "FUNCTION SET ▼".

- Press button once, and change to the "TEMP RANGE ▲" indication.
- Press (SET) button, and enter the temperature range setting mode.
- Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using button.
- Press (SET) button to fix.

- 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 ▼".

- When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)

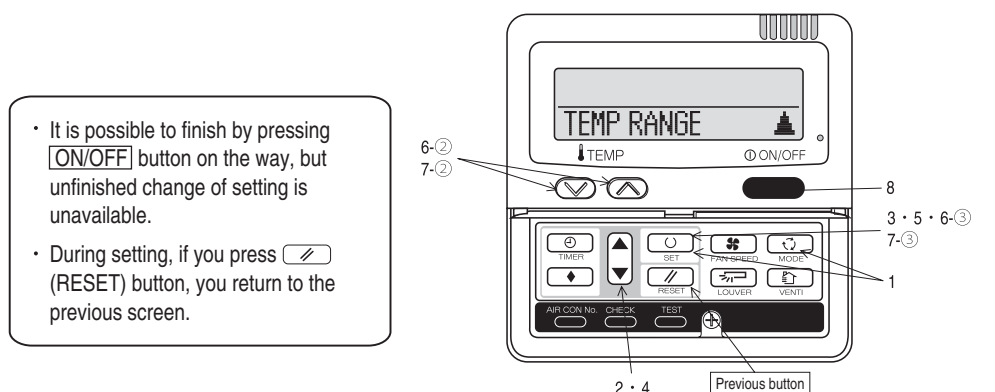
① Indication: " ▼ ^ SET UP" → "LOWER 18°C ^"

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 ▼".

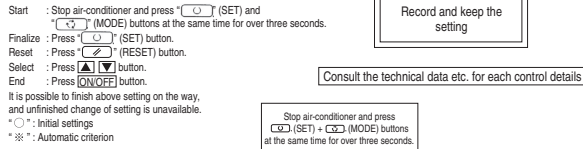
- Press button to finish.



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]



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	VALID	Indoor unit with two or three step of air flow setting
	INVALID	INVALID	Indoor unit with only one of air flow setting
Remote control function07	LOUVER SW	VALID	Indoor unit with automatically swing louver
	INVALID	INVALID	Indoor unit without automatically swing louver
Remote control function13	L/U FAN	HI-MID-LO	Indoor unit with three step of air flow setting
		HI-LO	Indoor unit with two step of air flow setting
		HI-MID	Indoor unit with only one of air flow setting
Remote control function15	MODEL TYPE	HEAT PUMP	Heat pump unit
	COOLING ONLY	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	setting	Function	setting
01 ESP SET	VALID ○ INVALID ※	02 FAN SPEED SET	STANDARD ※ HIGH SPEED 1 ※ HIGH SPEED 2 ※
02 AUTO RUN SET	AUTO RUN ON ※ AUTO RUN OFF ※	03 FILTER SIGN SET	INDICATION OFF ○ TYPE 1 ○ TYPE 2 ○ TYPE 3 ○ TYPE 4 ○
03 TEMP SW	VALID ○ INVALID ※	04 POSITION	POSITION STOP ○ FREE STOP ○
04 MODE SW	VALID ○ INVALID ※	05 EXTERNAL INPUT	LEVEL INPUT ○ PULSE INPUT ○
05 ON/OFF SW	VALID ○ INVALID ※	06 PERMISSION/PROHIBITION	INVALID ○ VALID ○
06 FAN SPEED SW	VALID ※ INVALID ※	07 EMERGENCY STOP	INVALID ○ VALID ○
07 LOUVER SW	VALID ○ INVALID ※	08 SP OFFSET	OFFSET +3.0℃ ○ OFFSET +2.0℃ ○ OFFSET +1.0℃ ○ NO OFFSET ○
08 TIMER SW	VALID ○ INVALID ※	09 RETURN AIR TEMP	OFFSET +2.0℃ ○ OFFSET +1.5℃ ○ NO OFFSET ○ OFFSET -1.0℃ ○ OFFSET -1.5℃ ○ OFFSET -2.0℃ ○
09 SENSOR SET	SENSOR OFF ○ SENSOR ON ○ SENSOR +3.0℃ ○ SENSOR +2.0℃ ○ SENSOR +1.0℃ ○ SENSOR -1.0℃ ○ SENSOR -2.0℃ ○ SENSOR -3.0℃ ○	10 FAN CONTROL	LOW FAN SPEED ○ SET FAN SPEED ○ INTERMITTENCE ○ FAN OFF ○
10 AUTO RESTART	INVALID ○ VALID ○	11 FROST PREVENTION TEMP	TEMP HIGH ○ TEMP LOW ○
11 VENT LINK SET	NO VENT ○ VENT LINK ○ NO VENT LINK ○	12 FROST PREVENTION CONTROL	FAN CONTROL ON ○ FAN CONTROL OFF ○
12 TEMP RANGE SET	INDEN CHANGE ○ NO INDEN CHANGE ○	13 DRAIN PUMP LINK	○ ○ ○ AND ○ ○ AND ○ AND ○
13 L/U FAN	HI-MID-LO ※ HI-LO ※ HI-MID ※ I FAN SPEED ※	14 SP FAN REMAINING	NO REMAINING ○ 0.5 HOUR ○ 1 HOUR ○ 2 HOUR ○ 6 HOUR ○
14 POSITION	POSITION STOP ○ FREE STOP ○	15 FAN REMAINING	NO REMAINING ○ 0.5 HOUR ○ 1 HOUR ○ 2 HOUR ○ 6 HOUR ○
15 MODEL TYPE	HEAT PUMP ※ COOLING ONLY ※	16 SP FAN INTERMITTENCE	NO REMAINING ○ 5min/5 OFF 5min/ON ○ 5min/5 OFF 5min/ON ○
16 EXTERNAL CONTROL SET	INDIVIDUAL ○ FOR ALL UNITS ○	17 PRESSURE CONTROL	STANDARD ※ INVERT ※
17 ROOM TEMP INDICATION SET	INDICATION OFF ○ INDICATION ON ○		
18 SHOWN INDICATION	INDICATION ON ○ INDICATION OFF ○		
19 SET SET	℃ ○ ℉ ○		

Note2: Fan setting of "HIGH SPEED"

Fan tap	Standard	High Speed 1	High Speed 2
FAN SPEED SET	UH - HI - Me - Lo	HI - Me - Lo	HI - Lo
HIGH SPEED 1	UH - UH - HI - Me	UH - HI - Me	UH - Me
HIGH SPEED 2	UH - UH - HI - Me	UH - Me	UH - HI

Initial function setting of some indoor unit is "HIGH SPEED".

Validate setting of ESP: External Static Pressure
Invalidate setting of ESP

Automatic operation is impossible

Temperature setting button is not working

Mode button is not working

On/Off button is not working

Fan speed button is not working

Louver button is not working

Timer button is not working

Remote thermostat is not working.
Remote thermostat is working.
Remote thermostat is working, and to be set for producing +3.0°C increase in temperature.
Remote thermostat is working, and to be set for producing +2.0°C increase in temperature.
Remote thermostat is working, and to be set for producing +1.0°C increase in temperature.
Remote thermostat is working, and to be set for producing -1.0°C increase in temperature.
Remote thermostat is working, and to be set for producing -2.0°C increase in temperature.
Remote thermostat is working, and to be set for producing -3.0°C increase in temperature.

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.
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.

If you change the range of set temperature, the indication of set temperature will vary following the control.
If you change the range of set temperature, the indication of set temperature will not vary following the control, and keep the set temperature.

Airflow of fan becomes the three speed of $R_{set} - R_{set} - R_{set}$ or $R_{set} - R_{set} - R_{set}$.
Airflow of fan becomes the two speed of $R_{set} - R_{set}$.
Airflow of fan becomes the two speed of $R_{set} - R_{set}$.
Airflow of fan is fixed at one speed.

If you change the remote controller function "14 POSITION", you must change the indoor function "04 POSITION" accordingly.
You can select the lower stop position in the four.
The louver can stop at any position.

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.
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.

In normal working indication, indoor unit temperature is indicated instead of airflow. (Only the master remote control can be indicated.)

Heating preparation indication should not be indicated.

Temperature indication is by degree C
Temperature indication is by degree F

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 two hours.
After cooling is stopped 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.

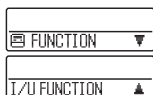
Connected "OA Processing" type indoor unit, and is automatically defined.

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).

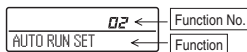


5. Press (SET) button.

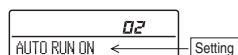
6. 【On the occasion of remote control function selection】

- ① "DATA LOADING" (Indication with blinking)
↓
Display is changed to "01 EXP SET".

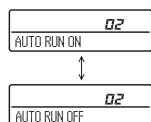
- ② Press ▲ or ▼ button. "No. and function" are indicated by turns on the remote control function table, then you can select from them. (For example)



- ③ Press (SET) button. The current setting of selected function is indicated. (for example) "AUTO RUN ON" ← If "02 AUTO RUN SET" is selected



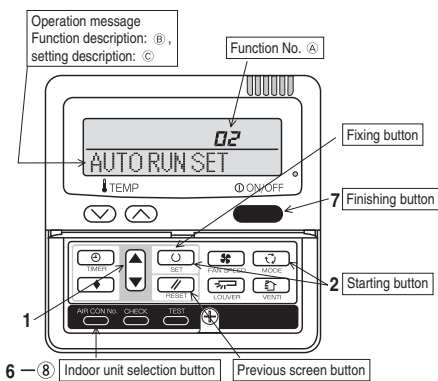
- ④ Press ▲ or ▼ button. Select the setting.



- ⑤ Press (SET) 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.



7. Press (ON/OFF) button. Setting is finished.

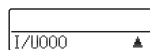


【On the occasion of indoor unit function selection】

- 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]

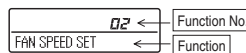
- (1) If plural indoor units are connected to a remote control, the indication is "I/U 000" (blinking) ← The lowest number of the indoor unit connected is indicated.



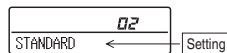
- (2) Press ▲ or ▼ button. Select the number of the indoor unit you are to set. If you select "ALL UNIT ▼", you can set the same setting with all unites.

- (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 (AIRCON 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.)

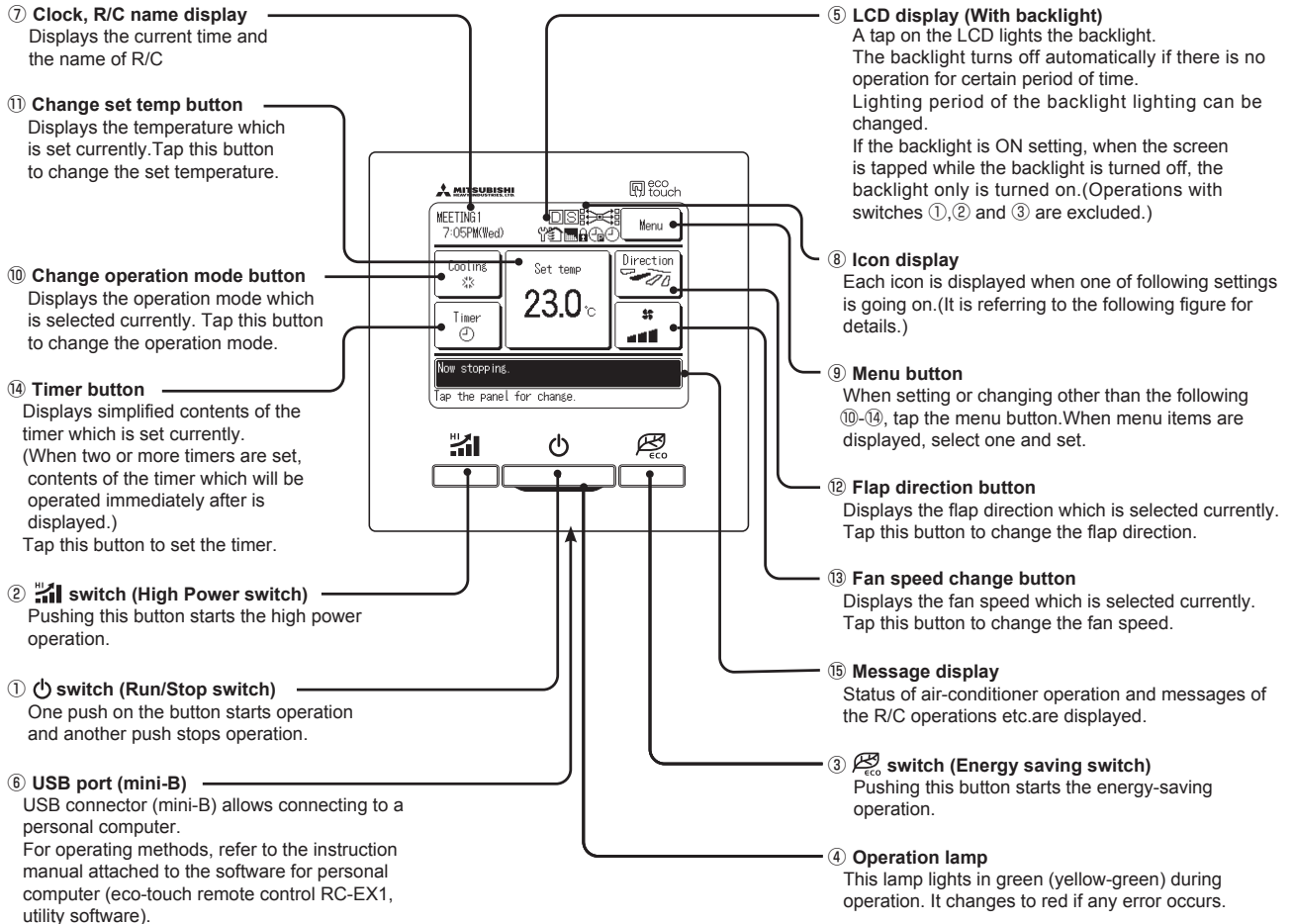
10. OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

10.1 Remote control (Option parts)

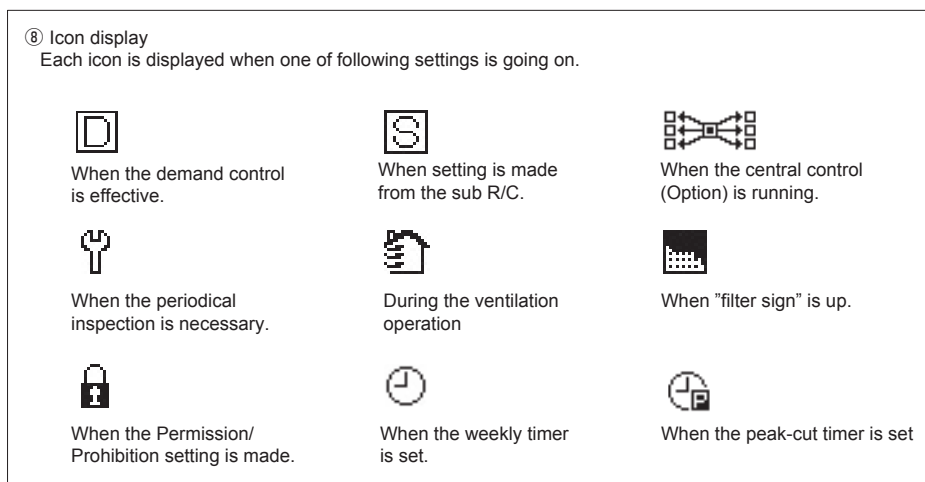
(1) Wired remote control

Model RC-EX1A

All icons are shown for the sake of explanation.



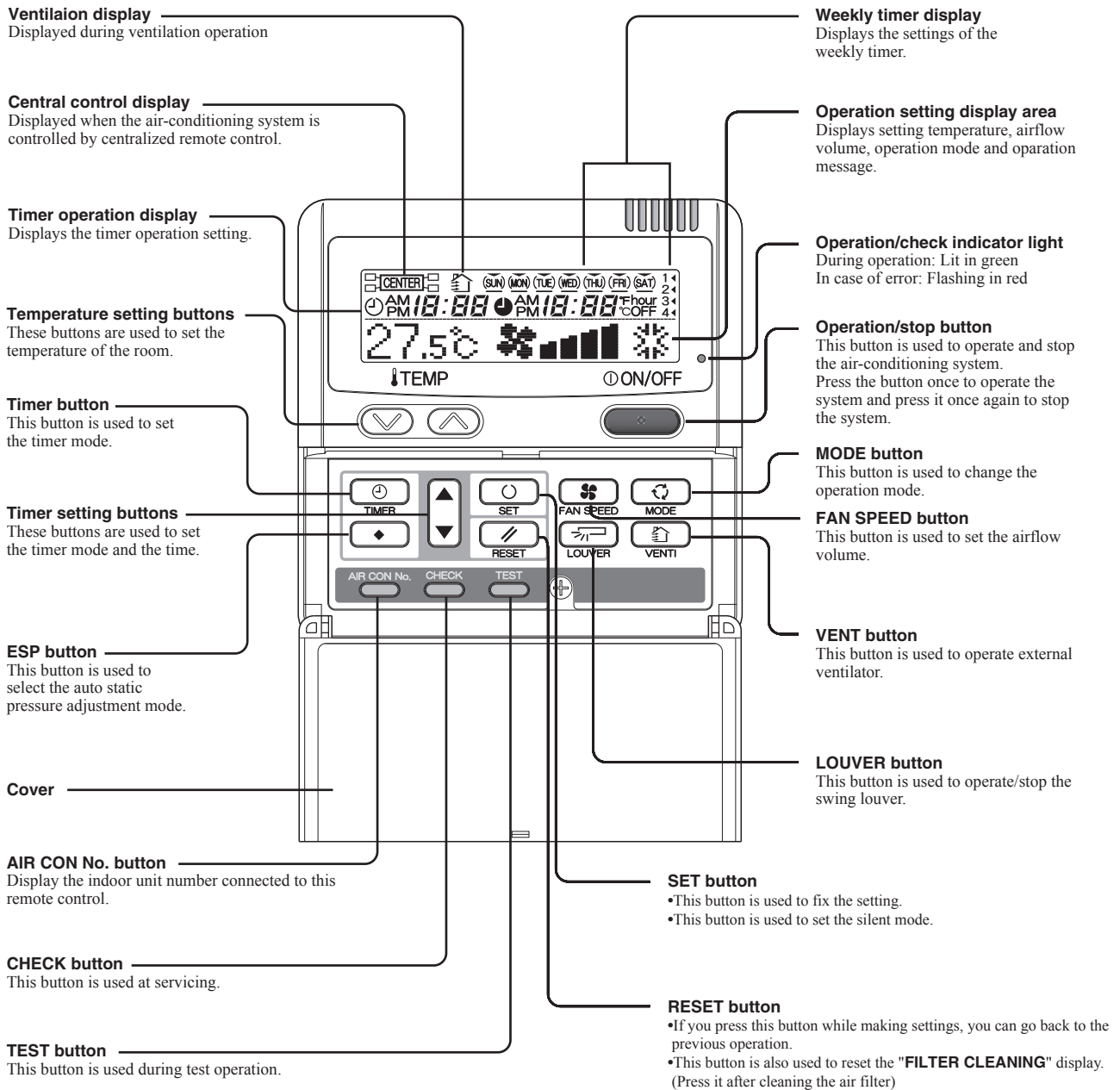
Touch panel system, which is operated by tapping the LCD screen with a finger, is employed for any operations other than the ① Run/Stop, ② High power and ③ Energy-saving switches.



Model RC-E5

The figure below shows the remote control with the cover opened. Note that all the items that may be displayed in the liquid crystal display area are shown in the figure for the sake of explanation. Characters displayed with dots in the liquid crystal display area are abbreviated.

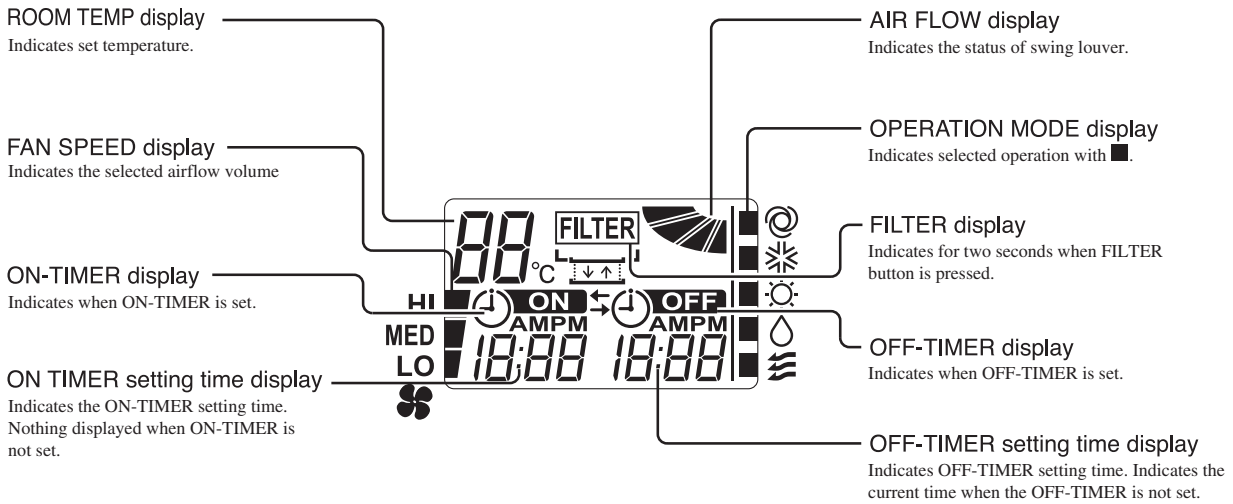
The figure below shows the remote control with the cover opened.



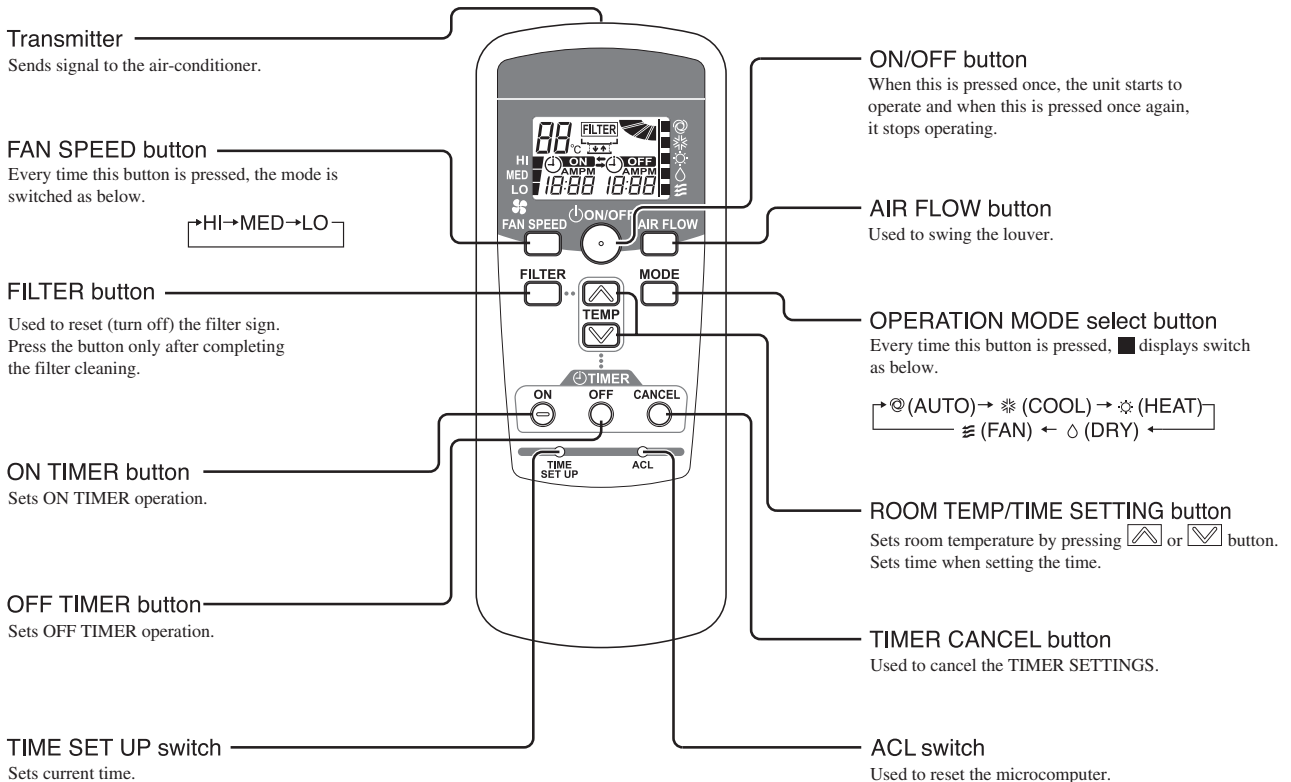
* All displays are described in the liquid crystal display for explanation.

(2) Wireless remote control

Indication section



Operation section



* All displays are described in the liquid crystal display for explanation

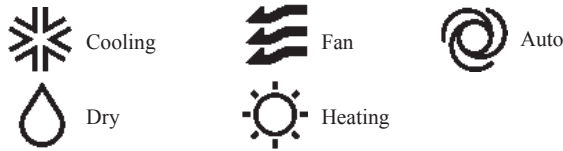
10.2 Operation control function by the wired remote control

Model RC-EX1A

(1) Switching sequence of the operation mode switches of remote control

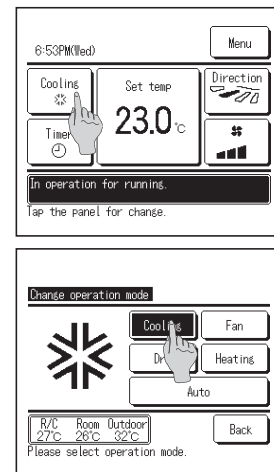
- Tap the change operation mode button on the TOP screen.
- When the change operation mode screen is displayed, tap the button of desired mode.
- When the operation mode is selected, the display returns to the TOP screen.

Icons displayed have the following meanings.



Notes(1) Operation modes which cannot be selected depending on combinations of IU and OU are not displayed.

- When the Auto is selected, the cooling and heating switching operation is performed automatically according to indoor and outdoor temperatures.



(2) CPU reset

Reset CPU from the remote control as follows.

- Tap the **[Menu]** button on the TOP screen.
- 3 Main menu screen is displayed. Tap the "Service & Maintenance" on the menu screen.
- 4 Display the service password input screen. Enter the service password (4-digit number).
- 5,6 Service & maintenance menus are displayed.
- 7 Special settings
CPU reset : Microcomputers of IU and OU connected are reset (State of restoration after power failure).
- 8 CPU reset
All microcomputers on the R/C operated, other R/Cs, IUs and OUs are reset (State of restoration after power failure). Tap [Yes] to reset CPU

(3) Power failure compensation function (Electric power source failure)

Enable the Auto-restart function from the remote control as follows.

- Tap the **[Menu]** button on the TOP screen.
- 3 Main menu screen is displayed. Tap the "Service & Maintenance" on the menu screen.
- 4 Display the service password input screen. Enter the service password (4-digit number).
- 5,6,7 Display the R/C setting menu screens.
- 8 Auto-restart
Enable : It returns to the previous state of power source failure as soon as the power is restored (After the end of the primary control at the power on).
Disable : It stops after the restoration of power source, regardless the state of operation before the power failure.

- Since it memorizes always the condition of remote control, it starts operation according to the contents of memory no sooner than normal state is recovered after the power failure. Although the auto swing stop position and the timer mode are cancelled, the weekly timer setting is restored with the holiday setting for all weekdays. After recovering from the power failure, it readjusts the clock and resets the holiday setting for each weekday so that the setting of weekly timer becomes effective.

- Content memorized with the power failure compensation are as follows.

Note (1) Items (f), (g) and (h) are memorized regardless whether the power failure compensation is effective or not while the setting of silent mode is cancelled regardless whether the power failure compensation is effective or not.

- (a) At power failure – Operating/stopped

If it had been operating under the off timer mode, sleep timer mode, the state of stop is memorized. (Although the timer mode is cancelled at the recovery from power failure, the setting of weekly timer is changed to the holiday setting for all weekdays.)

- (b) Operation mode

- (c) Airflow volume mode

- (d) Room temperature setting

- (e) Louver auto swing/stop

However, the stop position (4-position) is cancelled so that it returns to Position (1).

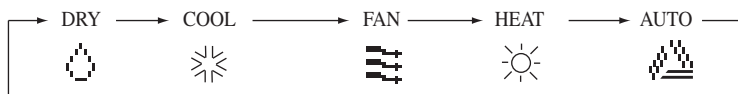
- (f) “Remote control function items” which have been set with the remote control function setting (“Indoor function items” are saved in the memory of indoor unit.)

- (g) Upper limit value and lower limit value which have been set with the temperature setting control

- (h) Sleep timer and weekly timer settings (Other timer settings are not memorized.)

Model RC-E5

(1) Switching sequence of the operation mode switches of remote control



(2) CPU reset

This functions when “CHECK” and “ESP” buttons on the remote control are pressed simultaneously. Operation is same as that of the power source reset.

(3) Power failure compensation function (Electric power source failure)

- This becomes effective if “Power failure compensation effective” is selected with the setting of remote control function.
- Since it memorizes always the condition of remote control, it starts operation according to the contents of memory no sooner than normal state is recovered after the power failure. Although the auto swing stop position and the timer mode are cancelled, the weekly timer setting is restored with the holiday setting for all weekdays.

After recovering from the power failure, it readjusts the clock and resets the holiday setting for each weekday so that the setting of weekly timer becomes effective.

- Content memorized with the power failure compensation are as follows.

Note (1) Items (f), (g) and (h) are memorized regardless whether the power failure compensation is effective or not while the setting of silent mode is cancelled regardless whether the power failure compensation is effective or not.

(a) At power failure – Operating/stopped

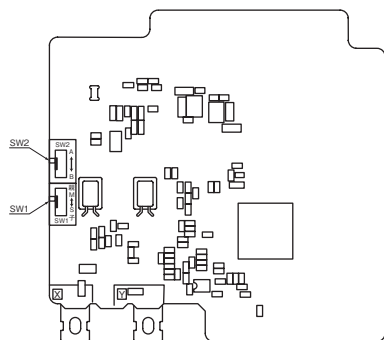
If it had been operating under the off timer mode, sleep timer mode, the state of stop is memorized. (Although the timer mode is cancelled at the recovery from power failure, the setting of weekly timer is changed to the holiday setting for all weekdays.)

- (b) Operation mode
- (c) Airflow volume mode
- (d) Room temperature setting
- (e) Louver auto swing/stop

However, the stop position (4-position) is cancelled so that it returns to position (1).

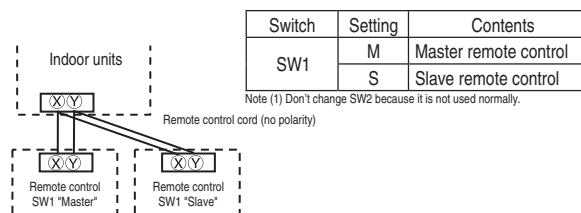
- (f) “Remote control function items” which have been set with the remote control function setting (“Indoor function items” are saved in the memory of indoor unit.)
- (g) Upper limit value and lower limit value which have been set with the temperature setting control.
- (h) Sleep timer and weekly timer settings (Other timer settings are not memorized.)

[Parts layout on remote control PCB]



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.)



Note (1) Don't change SW2 because it is not used normally.

Caution

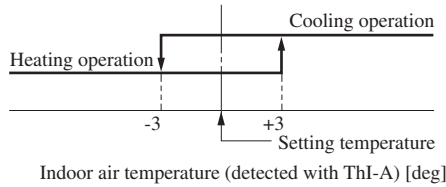
When using multiple remote controls, the following displays or settings cannot be done with the slave remote control. It is available only with the master remote control.

- ① Louver position setting (set upper or lower limit of swinging range)
- ② Setting indoor unit functions
- ③ Setting temperature range
- ④ Operation data display
- ⑤ Error data display
- ⑥ Silent mode setting
- ⑦ Test operation of drain pump
- ⑧ Remote control sensor setting

10.3 Operation control function by the indoor control

(1) Auto operation (Heat recovery 3-pipe combination systems only)

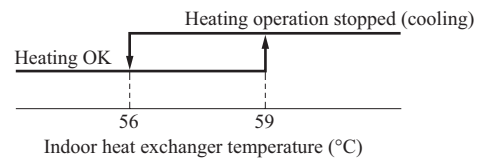
(a) If "Auto" mode is selected by the remote control, the heating and the cooling are automatically switched according to the difference between outdoor air temperature and setting temperature and the difference between setting temperature and indoor air temperature. (When the switching of cooling mode ↔ heating mode takes place within 3 minutes, the compressor does not operate for 3 minutes by the control of 3-minute timer.) This will facilitate the cooling/heating switching operation in intermediate seasons and the adaptation to unmanned operation at stores, etc (ATM corner of bank).



Notes (1) Temperature range of switching cooling/heating mode can be changed by RC-EX1A from ±1.0 - ±4.0.

(2) Indoor air temperature control during auto cooling/auto heating is performed according to the setting temperature. (DIFF: ±1 deg)

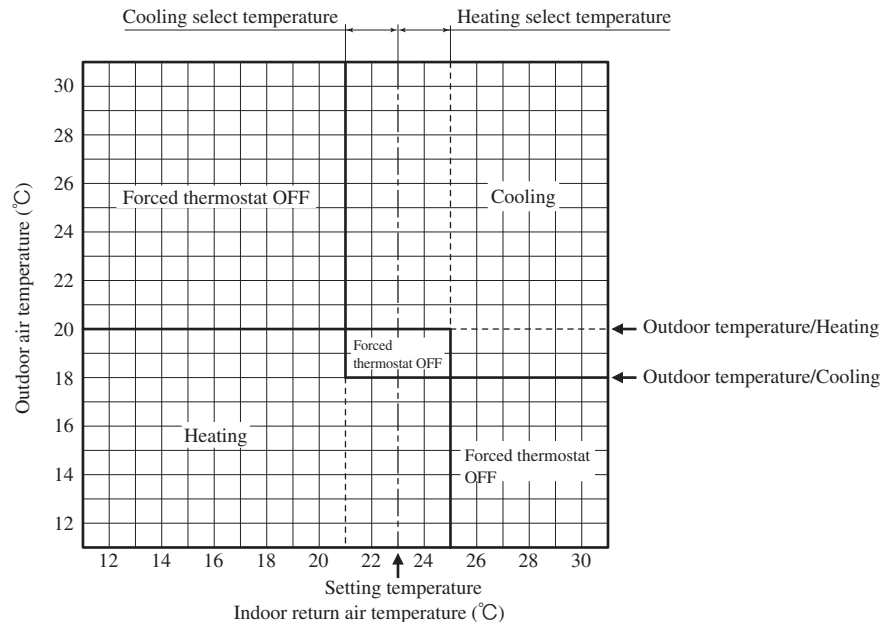
(3) If the indoor heat exchanger temperature rises to 59°C or higher during heating operation, it is switched automatically to cooling operation. In addition, for 1 hour after this switching, the heating operation is not performed, regardless of the temperature shown at right.



(b) The following automatic controls are performed other than (a) above. (Except FDTQ, FDUH, FDK, FDFW, FDFL, FDFU)

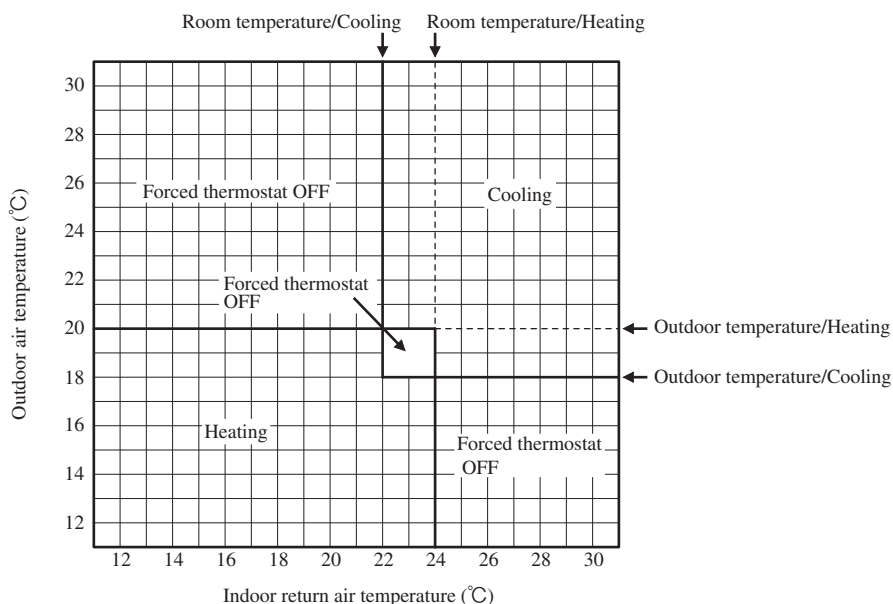
(i) Cooling or heating operation mode is judged according to the conditions of the "Judgment based on Setting temperature + Cooling select temperature and Indoor return air temperature" and the "Judgment based on Outdoor temperature".

- 1) In "Setting temperature - Cooling select temperature < Indoor return air temperature" and "Outdoor temperature/Cooling < Outdoor air temperature" ⇒ Operation mode: Cooling
- 2) "Setting temperature + Heating select temperature > Indoor return air temperature" and "Outdoor temperature/Heating > Outdoor air temperature" ⇒ Operation mode: Heating
- 3) The outdoor air temperature of the above judgment conditions is sampled at every 10 minutes.
- 4) In the range where the above cooling and heating zones are overlapped ⇒ Forced thermostat OFF



(ii) Regardless of the setting temperature, the cooling or heating operation mode is judged according to the "Judgment based on Room temperature/Cooling or Heating and Outdoor temperature/Cooling or Heating".

- 1) In case of "Room temperature/Cooling < Indoor return air temperature" and "Outdoor temperature/Cooling < Outdoor air temperature" ⇒ Operation mode: Cooling
- 2) In case of "Room temperature/Heating > Indoor return air temperature" and "Outdoor temperature /Heating > Outdoor air temperature" ⇒ Operation mode: Heating
- 3) The outdoor air temperature of the above judgment conditions is sampled at every 10 minutes.
- 4) In the range where the above cooling and heating zones are overlapped ⇒ Forced thermostat OFF



(2) Operations of functional items during cooling/heating

Functional item \ Operation	Cooling		Fan	Heating			Dehumidifying
	Thermostat ON	Thermostat OFF		Thermostat ON	Thermostat OFF	Hot start (Defrost)	
Compressor	○	×	×	○	×	○	○/×
4-way valve	×	×	×	○	○	○(×)	×
Outdoor unit fan	○	×	×	○	×	○(×)	○/×
Indoor unit fan	○	○	○	○/×	○/×	○/×	○/×
Drain pump ⁽³⁾	○	× ⁽²⁾	× ⁽²⁾	○/× ⁽²⁾			Thermostat ON:○ Thermostat OFF:× ⁽²⁾

Notes (1) ○: Operation ×: Stop ○/×: Turned ON/OFF by the control other than the room temperature control.
 (2) ON during the drain motor delay control.
 (3) Drain pump ON setting may be selected with the indoor unit function setting of the wired remote control.

(3) Dehumidifying operation

Return air temperature thermistor [ThI-A (by the remote control when the remote control thermistor is enabled)] controls the indoor temperature environment simultaneously.

- (a) Operation is started in the cooling mode. When the difference between the return air temperature and the setting temperature is 2°C or less, the indoor unit fan tap is brought down by one tap. That tap is retained for 3 minutes after changing the indoor unit fan tap.
- (b) If the return air temperature exceeds the setting temperature by 3°C during dehumidifying operation, the indoor unit fan tap is raised. That tap is retained for 3 minutes after changing the indoor unit fan tap.
- (c) If the thermostat OFF is established during the above control, the indoor unit fan tap at the thermostat ON is retained so far as the thermostat is turned OFF.

(4) Timer operation

(a) RC-EX1A

- (i) **Sleep timer**
Set the time from the start to stop of operation. The time can be selected in the range from 30 to 240 minutes (in the unit of 10-minute).
Note (1) Enable the "Sleep timer" setting from the remote control. If the setting is enabled, the timer operates at every time.
- (ii) **Set OFF timer by hour**
Set the time to stop the unit after operation, in the range from 1 to 12 hours (in the unit of hour).
- (iii) **Set ON timer by hour**
Set the time to start the unit after the stop of operation, in the range from 1 to 12 hours (in the unit of hour). It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.
- (iv) **Set ON timer by clock**
Set the time to start operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time. It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.
Note (1) It is necessary to set the clock to use this timer.
- (v) **Set OFF timer by clock**
Set the time to stop operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time.
Note (1) It is necessary to set the clock to use this timer.
- (vi) **Weekly timer**
Set the ON or OFF timer for a week. Up to 8 patterns can be set for a day. The day-off setting is provided for holidays and non-business days.
Note (1) It is necessary to set the clock to use the weekly timer.

(vii) Combination of patterns which can be set for the timer operations

	Sleep time	Set OFF timer by hour	Set ON timer by hour	Set OFF timer by clock	Set ON timer by clock	Weekly timer
Sleep time		×	×	○	○	○
Set OFF timer by hour	×		×	×	×	×
Set ON timer by hour	×	×		×	×	×
Set OFF timer by clock	○	×	×		○	×
Set ON timer by clock	○	×	×	○		×
Weekly timer	○	×	×	×	×	

Note (1) ○: Allowed ×: Not

(b) RC-E5

- (i) **Sleep timer**
Set the duration of time from the present to the time to turn off the air-conditioner.
It can be selected from 10 steps in the range from "OFF 1 hour later" to "OFF 10 hours later". After the sleep timer setting, the remaining time is displayed with progress of time in the unit of hour.
- (ii) **OFF timer**
Time to turn OFF the air-conditioner can be set in the unit of 10 minutes.
- (iii) **ON timer**
Time to turn ON the air-conditioner can be set. Indoor temperature can be set simultaneously.
- (iv) **Weekly timer**
Timer operation (ON timer, OFF timer) can be set up to 4 times a day for each weekday.
- (v) **Timer operations which can be set in combination**

Item	Timer	OFF timer	ON timer	Weekly timer
Timer		×	○	×
OFF timer	×		○	×
ON timer	○	○		×
Weekly timer	×	×	×	

Notes (1) ○: Allowed ×: Not

(2) Since the ON timer, sleep timer and OFF timer are set in parallel, when the times to turn ON and OFF the air-conditioner are duplicated, the setting of the OFF timer has priority.

(5) Remote control display during the operation stop

When the operation is stopped (the power source is turned ON), it displays preferentially the “Room temperature”, “Center/Remote”, “Filter sign”, “Inspection” and “Timer operation”.

(6) Hot start (Cold draft prevention at heating)**(a) Operating conditions**

When either one of following conditions either of (i) to (iv), the hot start control is performed.

- (i) From stop to heating operation
- (ii) From cooling to heating operation
- (iii) From heating thermostat OFF to ON
- (iv) After completing the defrost control (only on units with thermostat ON)

(b) Contents of operation

- (i) Indoor fan motor control at hot start
 - 1) Within 7 minutes after starting heating operation, the fan mode is determined depending on the condition of thermostat (fan control with heating thermostat OFF).
 - a) Thermostat OFF
 - i) Operates according to the fan control setting at heating thermostat OFF.
 - ii) Even if it changes from thermostat OFF to ON, the fan continues to operate with the fan control at thermostat OFF till the heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 35°C or higher.
 - iii) When the heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 35°C or higher, the fan operates with the set airflow volume.
 - b) Thermostat ON
 - i) When the heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 25°C or lower, the fan is turned OFF and does not operate.
 - ii) When the heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 25°C or higher, the fan operates with the fan control at heating thermostat OFF.
 - iii) When the heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 35°C or higher, the fan operates with the set airflow volume.
 - c) If the fan control at heating thermostat OFF is set at the “Set airflow volume” (from the remote control), the fan operates with the set airflow volume regardless of the thermostat ON/OFF.
 - 2) Once the fan motor is changed from OFF to ON during the thermostat ON, the indoor fan motor is not turned OFF even if the heat exchanger thermistor detects lower than 25°C.

Note (1) When the defrost control signal is received, it complies with the fan control during defrosting.
 - 3) Once the hot start is completed, it will not restart even if the temperature on the heat exchanger thermistor drops.
- (ii) During the hot start, the louver is kept at the horizontal position.
- (iii) When the fan motor is turned OFF for 7 minutes continuously after defrosting, the fan motor is turned ON regardless of the temperatures detected with the indoor heat exchanger thermistors (ThI-R1, R2).

(c) Ending condition

- (i) If one of following conditions is met during the hot start control, this control is terminated, and the fan is operated with the set airflow volume.
 - 1) Heat exchanger thermistor (ThI-R1 or R2, whichever higher) detects 35°C or higher.
 - 2) It has elapsed 7 minutes after starting the hot start control.

(7) Hot keep

Hot keep control is performed at the start of the defrost control.

(a) Control

- (i) When the indoor heat exchanger temperature (detected with ThI-R1 or R2) drops to 35°C or lower, the speed of indoor fan is changed to the lower tap at each setting.
- (ii) During the hot keep, the louver is kept at the horizontal position.

(b) Ending condition

When the indoor fan is at the lower tap at each setting, it returns to the set airflow volume as the indoor heat exchanger temperature rises to 45°C or higher.

(8) Auto swing control**(a) RC-EX1A****(i) Louver control**

- 1) To operate the swing louver when the air-conditioner is operating, press the “Direction” button on the TOP screen of remote control. The wind direction select screen will be displayed.
- 2) To swing the louver, touch the “Auto swing” button. The lover will move up and down. To fix the swing louver at a position, touch one of [1] - [4] buttons. The swing lover will stop at the selected position.
- 3) Louver operation at the power on with a unit having the louver 4-position control function
The louver swings one time automatically (without operating the remote control) at the power on.
This allows the microcomputer recognizing and inputting the louver motor (LM) position.


(ii) Automatic louver level setting during heating


At the hot start and the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (in order to prevent blowing of cool wind). The louver position display LCD continues to show the display which has been shown before entering this control.

(iii) Louver free stop control

If you touch the “Menu” → “Next” → “R/C settings” buttons one after another on the TOP screen of remote control, the “Flap control” screen is displayed. If the free stop is selected on this screen, the louver motor stops upon receipt of the stop signal from the remote control. If the auto swing signal is received from the remote control, the auto swing will start from the position before the stop.


(b) RC-E5**(i) Louver control**


- 1) Press the “LOUVER” button to operate the swing louver when the air-conditioner is operating.
“SWING 

Note (1) If you press the “LOUVER” button, the swing motion is displayed on the louver position LCD for 10 second. The display changes to the “SWING **(ii) Automatic louver level setting during heating**

At the hot start with the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (In order to prevent the cold start). The louver position display LCD continues to show the display which has been shown before entering this control.

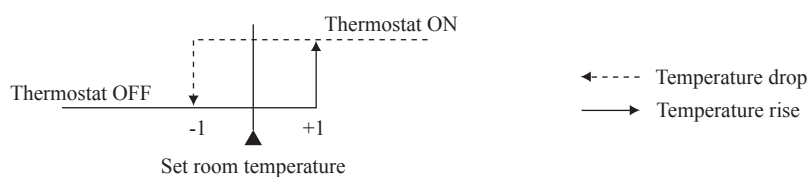
(iii) Louver-free stop control

When the louver-free stop has been selected with the indoor function of wired remote control “

Note (1) When the indoor function of wired remote control “- 346 -

(9) Thermostat operation**(a) Cooling**

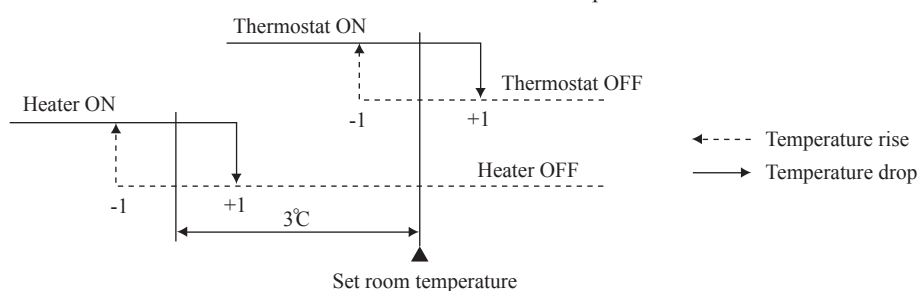
- (i) Thermostat is operated with the room temperature control.
 (ii) Thermostat is turned ON or OFF relative to the set room temperature as shown below.



- (iii) Thermostat is turned ON when the room temperature is in the range of $-1 < \text{Set temperature} < +1$ at the start of cooling operation (including from heating to cooling).

(b) Heating

- (i) Thermostat is operated with the room temperature control.
 (ii) Thermostat is turned ON or OFF relative to the set room temperature as shown below.



- (iii) Thermostat is turned ON when the room temperature is in the range of $-1 < \text{Set point} < +1$ at the start of cooling operation (including from cooling to heating).

(c) Fan control during heating thermostat OFF

- (i) Following fan controls during the heating thermostat OFF can be selected with the indoor function setting of the wired remote control.
 ① Low fan speed (Factory default), ② Set fan speed, ③ Intermittence, ④ Fan OFF
- (ii) When the “Low fan speed (Factory default)” is selected, the following taps are used for the indoor fans.
 · For DC motor : ULo tap · For AC moter : Lo tap
- (iii) When the “Set fan speed” is selected, it is operated with the set fan speed also in the thermostat OFF condition.
- (iv) If the “Intermittence” is selected, following controls are performed:
- 1) If the thermostat is turned OFF during the heating operation, the indoor unit fan motor stops.
 - 2) Indoor fan OFF is fixed for 5 minutes. After the 5 minutes, the indoor fan is operated at ULo or Lo for 2 minutes. In the meantime the louver is controlled at level.
 - 3) After operating at ULo or Lo for 2 minutes, the indoor fan moves to the state of 1) above.
 - 4) If the thermostat is turned ON, it moves to the hot start control.
 - 5) When the heating thermostat is turned OFF, the remote control displays the temperature detected at the fan stop and revises the temperature later when the indoor fan changes from ULo or Lo to stop. The remote control uses the operation data display function to display temperatures and updates values of temperature even when the indoor fan is turned OFF.
 - 6) When the defrosting starts while the heating thermostat is turned OFF or the thermostat is turned OFF during defrosting, the indoor fan is turned OFF. (Hot keep or hot start control takes priority.) However, the suction temperature is updated at every 7-minute.
 - 7) When the heating thermostat is turned ON or the operation is changed to another mode (including stop), this control is stopped immediately, and the operating condition is restored.
- (v) When the “Fan OFF” is selected, the fan on the indoor unit of which the thermostat has been turned OFF, is turned OFF. The same occurs also when the remote control sensor is effective.

(d) Fan control during cooling thermostat OFF (Except FDTC, FDTQ, FDUT15-56, FDUH, FDK, FDFW, FDFL, FDFU)

- (i) Following fan controls during the cooling thermostat OFF can be selected with the indoor function setting of the wired remote control.
 - ① Low fan speed, ② Set fan speed (Factory default), ③ Intermittence, ④ Fan OFF
- (ii) When the “Low fan speed” is selected, the following taps are used for the indoor fans.
 - For DC motor : ULo tap
- (iii) When the “Set fan speed” is selected, it is operated with the set fan speed also in the thermostat OFF condition.
- (iv) If the “Intermittence” is selected, following controls are performed:
 - 1) If the thermostat is turned OFF during the cooling operation, the indoor unit fan motor stops.
 - 2) Indoor fan OFF is fixed for 5 minutes. After the 5 minutes, the indoor fan is operated at ULo for 2 minutes.
 - 3) After operating at ULo for 2 minutes, the indoor fan moves to the state of 1) above.
 - 4) If the thermostat is turned ON, the fan starts operation at set fan speed.
 - 5) When the cooling thermostat is turned OFF, the remote control displays the temperature detected at the fan stop and revises the temperature later when the indoor fan changes from ULo to stop.

By using operation data display function at wireless remote control, the temperature as displayad and the value is updated including the fan stops.

 - 6) When the cooling thermostat is turned ON or the operation is changed to another mode (including stop), this control is stopped immediately, and the operating condition is restored.
- (v) When the “Fan OFF” is selected, the fan on the indoor unit of which the thermostat has been turned OFF, is turned OFF. The same occurs also when the remote control sensor is effective.

(10) Filter sign

As the operation time (Total ON time of ON/OFF switch) accumulates to 180 hours (1), “FILTER CLEANING” is displayed on the remote control. (This is displayed when the unit is in trouble and under the centralized control, regardless of ON/OFF)

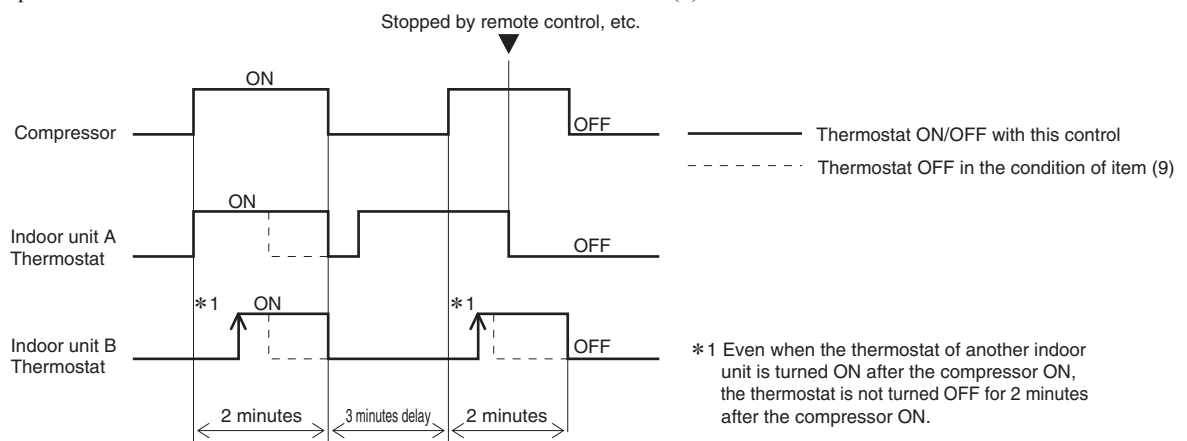
Notes (1) Time setting for the filter sign can be made as shown below using the indoor function of wired remote control “FILTER SIGN SET”. (It is set at TYPE 1 at the shipping from factory.)

Filter sign setting	Function
TYPE 1	Setting time: 180 hrs (Factory default)
TYPE 2	Setting time: 600 hrs
TYPE 3	Setting time: 1,000 hrs
TYPE 4	Setting time: 1,000 hrs (Unit stop) ⁽²⁾

(2) After the setting time has elapsed, the “FILTER CLEANING” is displayed and, after operating for 24 hours further (counted also during the stop), the unit stops.

(11) Compressor inching prevention control

- (a) Once the indoor unit thermostat has been turned ON, the thermostat is not turned OFF for 2 minutes (*1) after the compressor ON even if the thermostat is turned OFF at the state of item (9).



- (b) When the oil return control has started while the thermostat is turned ON, the thermostat is not turned OFF even if the thermostat OFF condition is met during the oil return control.

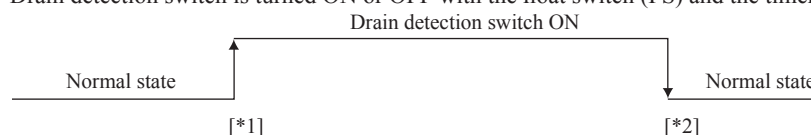
(12) Drain pump control

- (a) This control is operated when the inverter frequency is other than 0 rps during the cooling operation and automatic cooling and dehumidifying operations.
- (b) Drain pump ON condition continues for 5 (Models FDU224, 280 · FDU1800, 2400F:20) minutes even when it enters the OFF range according to (i) above after turning the drain pump ON, and then stops. The 5 (Models FDU224, 280 · FDU1800, 2400F:20) minute delay continues also in the event of anomalous stop.
- (c) The drain pump is operated with the 5 (Models FDU224, 280 · FDU1800, 2400F:20) minute delay operation when the compressor is changed from ON to OFF.
- (d) Even in conditions other than the above (such as heating, fan, stop, cooling thermostat OFF), the drain pump control is performed by the drain detection.
- (e) Following settings can be made using the indoor function setting of the wired remote control.
 - (i) ☼☼ [Standard (in cooling & dry)] : Drain pump is run during cooling and dry.
 - (ii) ☼☼ AND ☼ [Operate in standard & heating] : Drain pump is run during cooling, dry and heating.
 - (iii) ☼☼ AND ☼ AND ☼ [Operate in heating & fan] : Drain pump is run during cooling, dry, heating and fan.
 - (iv) ☼☼ AND ☼ [Operate in standard & fan] : Drain pump is run during cooling, dry and fan.

Note (1) Values in [] are for the RC-EX1A model.

(13) Drain pump abnormalities detection

- (a) Drain detection switch is turned ON or OFF with the float switch (FS) and the timer.



[*1] Drain detection switch is turned “ON” when the float switch “Open” is detected for 3 seconds continuously in the drain detectable space.

[*2] Drain detection switch is turned “OFF” when the float switch “Close” is detected for 10 seconds continuously.

- (i) It detects always from 30 seconds after turning the power ON.
 - 1) There is no detection of anomalous draining for 10 seconds after turning the drain pump OFF.
 - 2) Turning the drain detection switch “ON” causes to turn ON the drain pump forcibly.
 - 3) Turning the drain detection switch “OFF” releases the forced drain pump ON condition.

- (b) Indoor unit performs the control A or B depending on each operating condition.

	Indoor unit operation mode				
	Stop ⁽¹⁾	Cooling	Dry	Fan ⁽²⁾	Heating
Compressor ON		Control A			
Compressor OFF		Control B			

Notes (1) Including the stop from the cooling, dehumidifying, fan and heating, and the anomalous stop
 (2) Including the “Fan” operation according to the mismatch of operation modes

- (i) Control A
 - 1) If the float switch detects any anomalous draining condition, the unit stops with the anomalous stop (displays E9) and the drain pump starts. After detecting the anomalous condition, the drain motor continues to be ON.
 - 2) It keeps operating while the float switch is detecting the anomalous condition.
- (ii) Control B

If the float switch detects any anomalous drain condition, the drain motor is turned ON for 5 (Models FDU224, 280 · FDU1800, 2400F:20) minutes, and at 10 seconds after the drain motor OFF it checks the float switch. If it is normal, the unit is stopped under the normal mode or, if there is any anomalous condition, E9 is displayed and the drain motor is turned ON. (The ON condition is maintained during the drain detection.)

(14) Operation check/drain pump test run operation mode

- (a) If the power is turned on by the dip switch (SW7-1) on the indoor PCB when electric power source is supplied, it enters the mode of operation check/drain pump test run. It is ineffective (prohibited) to change the switch after turning power on.
- (b) When the communication with the remote control has been established within 60 seconds after turning power on by the dip switch (SW7-1) ON, it enters the operation check mode. Unless the remote control communication is established, it enters the drain pump test run mode.

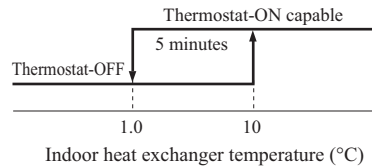
Note (1) To select the drain pump test run mode, disconnect the remote control connector (CNB) on the indoor PCB to shut down the remote control communication.

- (c) Operation check mode
There is no communication with the heat source unit but it allows performing operation in respective modes by operating the remote control.
- (d) Drain pump test run mode
As the drain pump test run is established, the drain pump only operates and during the operation protective functions by the microcomputer of indoor unit become ineffective.

(15) Cooling, dehumidifying frost protection

To prevent frosting during cooling mode or dehumidifying mode operation, the of thermostat-OFF if the indoor heat exchanger temperature (detected with ThI-R) drops to 1.0 °C or lower at 4 minutes after the thermostat-ON. If the indoor unit heat exchanger temperature is 1.0 °C or lower after 5 minutes, the indoor unit is controlled thermostat-OFF. If it becomes 10°C or higher, the control terminates. When the indoor heat exchanger temperature has become as show, the indoor unit send heat source unit the “Anti-frost” signal.

- Frost prevention temperature setting can be selected with the indoor unit function setting of the wired remote control.



Item	Symbol	A
Temperature - Low (Factory default)		1.0
Temperature - High		2.5

(16) Anomalous fan motor

- (a) After starting the fan motor, if the fan motor speed is 200min⁻¹ or less is detected for 30 seconds continuously and 4 times within 60 minutes, then fan motor stops with the anomalous stop (E16).
- (b) If the fan motor fails to reach at -50 (FDU:-500) min⁻¹ less than the required speed, it stops with the anomalous stop (E20).

(17) High ceiling control

When sufficient air flow rate cannot be obtained from the indoor unit which is installed at a room with high ceiling, the air flow rate can be increased by changing the fan tap. To change the fan tap, use the indoor unit function “FAN SPEED SET” on the wired remote control.

Fan tap		Indoor unit airflow setting				Series
		PHi1 - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me	
FAN SPEED SET	STANDARD	PHi1 - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me	Except FDT, FDE
		PHi2 - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me	Only FDT, FDE
	HIGH SPEED1	PHi1 - PHi1 - Hi - Me	PHi1 - Hi - Me	PHi1 - Me	PHi1 - Hi	Except FDT, FDTW, FDTS, FDE
		PHi2 - PHi1 - Hi - Me	PHi1 - Hi - Me	PHi1 - Me	PHi1 - Hi	Only FDT, FDTW, FDTS
		PHi1 - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me	Only FDE
	HIGH SPEED2	PHi2 - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me	Only FDT, FDTW, FDTS, FDE

Notes (1) Factory default is STANDARD.

(2) At the hot-start and heating thermostat OFF, or other, the indoor unit fan is operated at the low speed tap of each setting.

(3) This function is not able to be set with wireless remote controls or simple remote control (RCH-E3)

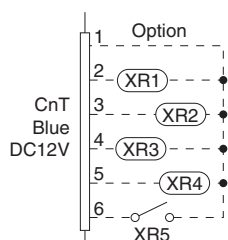
(18) Abnormal temperature thermistor (return air/indoor heat exchanger) wire/short-circuit detection

- (a) Broken wire detection
When the return air temperature thermistor detects -20°C or lower or the heat exchanger temperature thermistor detect -40°C or lower for 5 seconds continuously, the compressor stops. After a 3-minute delay, the compressor restarts but, if it is detected again within 60 minutes after the initial detection for 6 minutes continuously, stops again (the return air temperature thermistor: E7, the heat exchanger temperature thermistor: E6).
- (b) Short-circuit detection
If the heat exchanger temperature thermistor detects 70°C or higher for 5 seconds continuously at 2 minutes and 20 seconds after the compressor ON during cooling operation, the compressor stops (E6).

(19) External input/output control (CnT or CnTA)

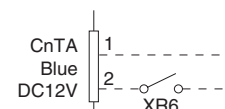
Be sure to connect the wired remote control to the indoor unit. Without wired remote control remote operation by CnT is not possible to perform.

• CnT



- ① Operation output (CnT-2: XR1)
- ② Heating output (CnT-3: XR2)
- ③ Thermostat ON output (CnT-4: XR3)
- ④ Error output (CnT-5: XR4)
- ⑤ Remote operation input (CnT-6: Volt-free contact)

• CnTA



Note (1) CnTA function can be changed by RC-EX1A.

■ Priority order for combinations of CnT and CnTA input.

		CnTA						
		① Operation stop level	② Operation stop pulse	③ Operation permission/prohibition	④ Operation permission/prohibition pulse	⑤ Cooling/heating selection level	⑥ Cooling/heating selection pulse	⑦ Emergency stop
CnT	① Operation stop level	CnT ①	CnT ①	CnT ① + CnTA ②	CnT ①	CnT ① / CnTA ⑤	CnT ① / CnTA ⑥	CnT ① < CnTA ⑦
	② Operation stop pulse	CnT ②	CnT ②	CnT ② + CnTA ③	CnT ②	CnT ② / CnTA ⑤	CnT ② / CnTA ⑥	CnT ② < CnTA ⑦
	③ Operation permission/prohibition level	CnT ③ > CnTA ①	CnT ③ > CnTA ②	CnT ③ + CnTA ③	CnT ③	CnT ③ / CnTA ⑤	CnT ③ / CnTA ⑥	CnT ③ < CnTA ⑦
	④ Operation permission/prohibition pulse	CnT ④	CnT ④	CnT ④ + CnTA ③※	CnT ④	CnT ④ / CnTA ⑤	CnT ④ / CnTA ⑥	CnT ④ < CnTA ⑦
	⑤ Cooling/heating selection level	CnT ⑤ / CnTA ①	CnT ⑤ / CnTA ②	CnT ⑤ / CnTA ③※	CnT ⑤ / CnTA ④	CnT ⑤	CnT ⑤	CnT ⑤ / CnTA ⑦
	⑥ Cooling/heating selection pulse	CnT ⑥ / CnTA ①	CnT ⑥ / CnTA ②	CnT ⑥ / CnTA ③	CnT ⑥ / CnTA ④	CnT ⑥	CnT ⑥	CnT ⑥ / CnTA ⑦
	⑦ Emergency stop	CnT ⑦ > CnTA ①	CnT ⑦ > CnTA ②	CnT ⑦ > CnTA ③	CnT ⑦ > CnTA ④	CnT ⑦ / CnTA ⑤	CnT ⑦ / CnTA ⑥	CnT ⑦ + CnTA ⑦

Note (1) Following operation commands are accepted when the operation prohibition is set with CnTA as indicated with *.

Individual operation command from remote control, test run command from outdoor unit and operation command from option device, CNT input.

Reference: Explanation on the codes and the combinations of codes in the table above

1. In case of CnT “Number”, the CnT “Number” is adopted and CnTA is invalidated.
 2. In case of CnTA “Number”, the CnTA “Number” is adopted and CnT is invalidated.
 3. In case of CnT “Number”/CnTA “Number”, the CnT “Number” and the CnTA “Number” become independent functions each other.
 4. In case of CnT “Number” + CnTA “Number”, the CnT “Number” and the CnTA “Number” become competing functions each other.
 5. In case of CnT “Number” > CnTA “Number”, the function of CnT “Number” supersedes that of CnTA “Number”.
 6. In case of CnT “Number” < CnTA “Number”, the function of CnTA “Number” supersedes that of CnT “Number”.
- (The “Number” above means ① - ⑦ in the table.)

(a) Output for external control (Remote display)

Following output connectors (CnT) are provided on the indoor control PCB for monitoring operation status.

- ① **Operation output:** Outputs DC12V signal for driving relay during operation
- ② **Heating output:** Outputs DC12V signal for driving relay during heating operation
- ③ **Thermostat ON output:** Outputs DC12V signal for driving relay when compressor is operating.
- ④ **Error output:** Outputs DC12V signal for driving relay when anomalous condition occurs.

(b) Remote operation input

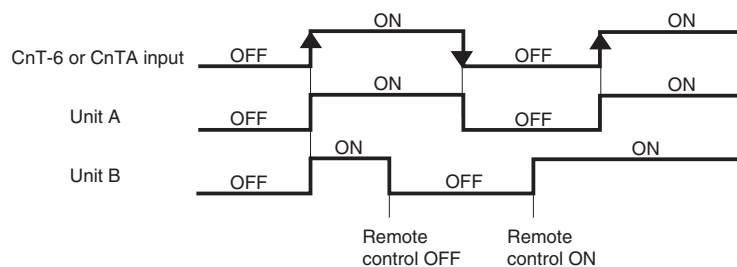
Remote operation input connector (CnT-6 or CnTA) is provided on the indoor control PCB.

However remote operation by CnT-6 or CnTA is not effective, when “Center mode” is selected by central control.

Only the “LEVEL INPUT” is acceptable for external input, however when the indoor function setting of “Level input (Factory default)” or “Pulse input” is selected by the function for “External input” of the wired remote control, operation status will be changed as follows.

(i) In case of “Level input” setting (Factory default)

Input signal to CnT-6 or CnTA is OFF→ON unit ON
 Input signal to CnT-6 or CnTA is ON→OFF unit OFF
 Operation is not inverted.

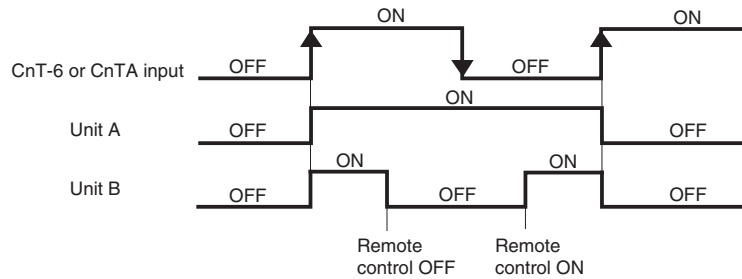


Note: The latest operation has priority

It is available to operate/stop by remote control or central control

(ii) In case of “Pulse input” setting (Local setting)

It is effective only when the input signal to CnT-6 or CnTA is changed OFF→ON, and at that time unit operation [ON/OFF] is inverted.



(c) Emergency stop signal processing

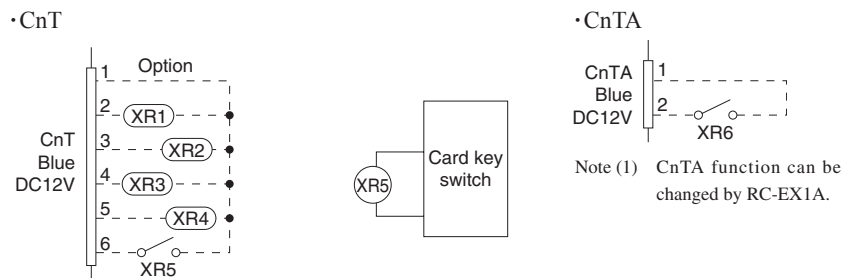
When the external signal input is used to stop operation, the remote stop signal is input at CnT or CnTA. This input is effective only on indoor units which can receive it. Where two or more indoor units are controlled with a wired remote control on the system, on which the external input is set at the “Same operation on all units”, if the stop signal is input at CnT on an indoor unit, all units connected to the wired remote control can be controlled collectively. This emergency stop signal is used to stop in emergencies all indoor units connected to the same outdoor unit.

- (i) The emergency stop control is enabled by selecting the “Valid” for the emergency stop control on the wired remote control.
- (ii) If the emergency stop [E-63] is received from the outdoor unit, it is transmitted to the wired remote control so that all indoor units are stopped.

(20) Operation permission/prohibition

(In case of adopting card key switches or commercially available timers)

When the indoor function setting of wired remote control for “Operation permission/prohibition” is changed from “Invalid (Factory default)” to “Valid”, following control becomes effective.



	Normal operation (Factory default)		Operation permission/prohibition mode “Valid” (Local setting)	
	ON	OFF	ON	OFF
CnT-6 or CnTA	Operation	Stop	Operation permission*1	Operation prohibition (Unit stops)

*1 **Only the “LEVEL INPUT” is acceptable for external input**, however when the indoor function setting of “Level input (Factory default)” or “Pulse input” is selected by the function for “External input” of the wired remote control, operation status will be changed as follows.

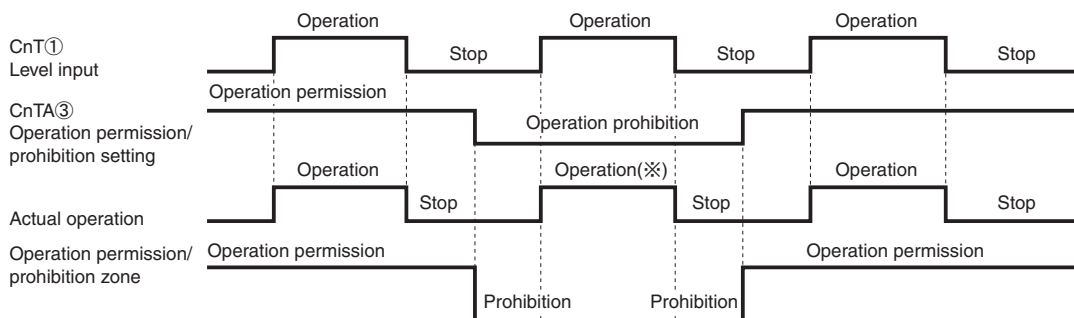
In case of “Level input” setting	In case of “Pulse input” setting
Unit operation from the wired remote control becomes available*(1)	Unit starts operation *(2)

*(1) In case that “Operation permission/prohibition mode” setting is “Valid” and “External input” setting is “Level input (Factory default)”;

- ① When card key switch is ON (CnT-6 or CnTA ON: Operation permission), start/stop operation of the unit from the wired remote control becomes available.
- ② When card key switch is OFF (CnT-6 or CnTA OFF: Operation prohibition), the unit stops operation in conjunction with OFF signal, and start/stop operation of the unit from the wired remote control becomes not available.

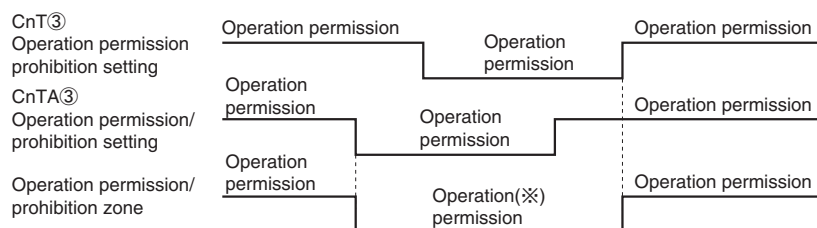
- * (2) In case that “Operation permission/prohibition mode” setting is “Valid” and “External input” setting is “Pulse input (Local setting)”;
- ① When card key switch is ON (Operation permission), the unit starts operation in conjunction with ON signal, and also start/stop operation of the unit from the wired remote control becomes available.
 - ② When card key switch is OFF (Operation prohibition), the unit stops operation in conjunction with OFF signal, and start/stop operation of the unit from the wired remote control becomes not available.
- (3) This function is invalid only at “Center mode” setting done by central control.

(a) In case of CnT ① Operation stop level > CnTA ③ Operation permission/prohibition level



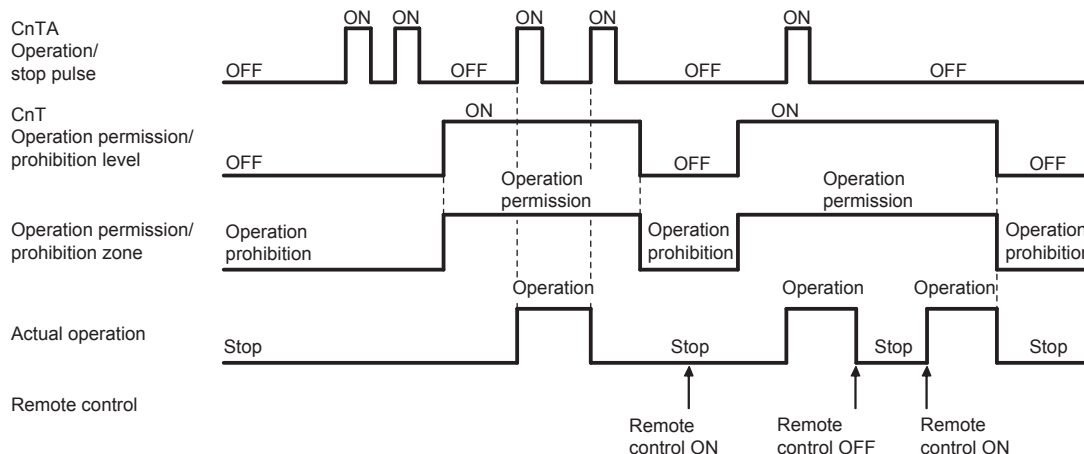
(※) CnT level input supersedes CnTA operation prohibition.

(b) In case of CnT ③ Operation permission/prohibition level + CnTA ③ Operation permission/prohibition level



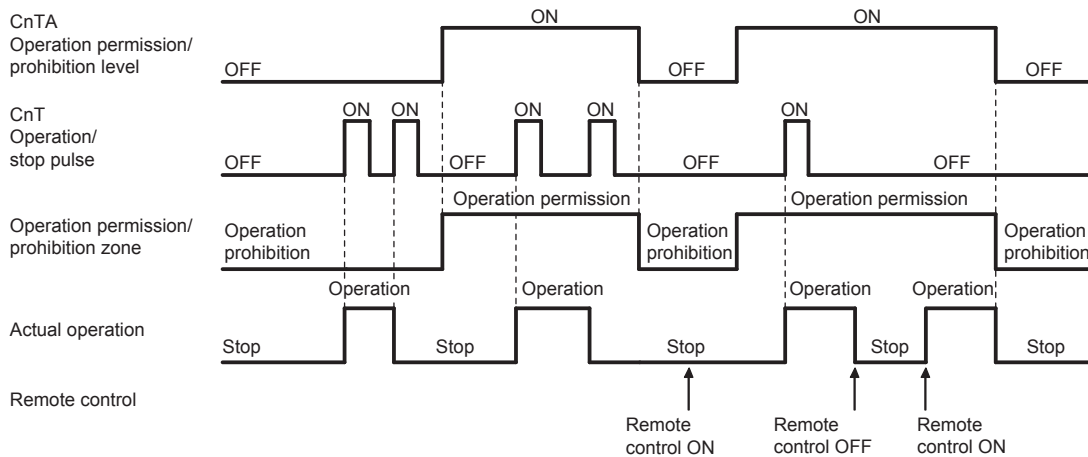
(※) Operation prohibition zone is determined by the OR judgment between CnT Operation prohibition zone and CnTA Operation prohibition zone.

(c) In case of CnT ③ Operation permission/prohibition level > CnTA ② Operation/stop pulse



Note (1) If it is prohibited by CnT, all “Operation” and “Stop” commands are not accepted.

(d) In case of CnT ② Operation/stop pulse + CnTA ③ Operation permission/prohibition level



(21) Selection of cooling/heating external input function

- (a) When "External input 1 setting: Cooling/heating" is set for the indoor unit function from remote control, the cooling or heating is selected with CnT-6 or CnTA.
- (b) When the External input 1 method selection: Level input is set for the indoor unit function:
 - CnT-6 or CnTA: OPEN → Cooling operation mode
 - CnT-6 or CnTA: CLOSE → Heating operation mode
- (c) When the External input 1 method selection: Pulse input is set for the indoor unit function:

If the external input is changed OPEN → CLOSE, operation modes are inverted (Cooling → Heating or Heating → Cooling).
- (d) If the cooling/heating selection signal is given by the external input, the operation mode is transmitted to the remote control.

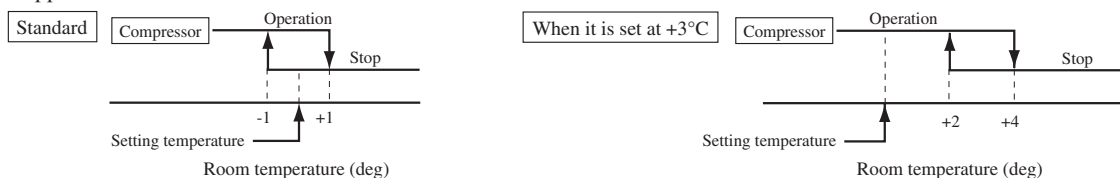
■ Selection of cooling/heating external input function

External input selection	External input method	Operation	
External input selection Cooling/heating selection	⑤ Level	External terminal input (CnT or CnTA)	
		Cooling/heating	
		Cooling/heating (Competitive)	
	⑥ Pulse	External terminal input (CnT or CnTA)	
		Cooling/heating	
		Cooling/heating (Competitive)	

Notes (1) Regarding the priority order for combinations of CnT and CnTA, refer to Page 351.

(22) Room temperature detection temperature compensation during heating

With the standard specification, the compressor is turned ON/OFF with the thermostat setting temperature. When the thermostat is likely to turn OFF earlier because the unit is installed at the ceiling where warm air tends to accumulate, the setting can be changed with the wired remote control indoor unit function “※ SP OFFSET”. The compressor and the heater are turned ON/OFF at one of the setting temperature +3, +2 or +1°C in order to improve the feeling of heating. The setting temperature, however, has the upper limit of 30°C.



(23) Return air temperature compensation

This is the function to compensate the deviation between the detection temperature by the return air temperature thermistor and the measured temperature after installing the unit.

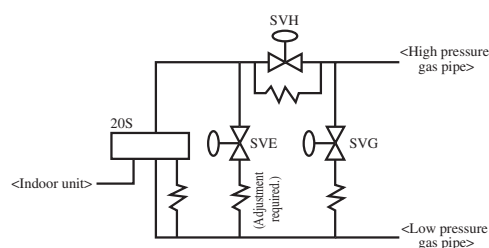
- (a) It is adjustable in the unit of 0.5°C with the wired remote control indoor unit function “RETURN AIR TEMP”.
 - +1.0°C, +1.5°C, +2.0°C • -1.0°C, -1.5°C, -2.0°C
- (b) Compensated temperature is transmitted to the remote control and the compressor to control them.

Note (1) The detection temperature compensation is effective on the indoor unit thermistor only.

(24) Branching control (Heat recovery 3-pipe combination systems only)

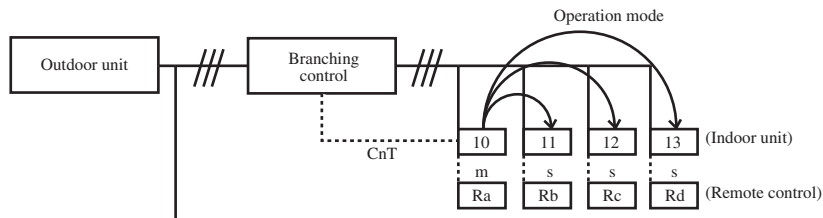
- (a) New control with new branching control (New Superlink control)
Control by means of CnT2 (The compressor does not stop at the switching of heating/cooling.)
CnT outputs – XR2: Heating output, XR3: Compressor ON thermostat output
 - (b) Old control with new branching control (Old Superlink control)
Control by means of CnT2 (The compressor stops at the switching of heating/cooling.)
 - (c) Control of the branching control when the heating/cooling is switched with the CnT2 output
 - ① 20S control (CnT2-2: XB1)
 - ② SVH control (CnT2-3: XB2)
 - ③ SVG control (CnT2-4: XB3)
 - ④ SVE control (CnT2-5: XB4)
- Combination of XB1 – XB4 outputs (The branching control is controlled in the state of operations (I) – (V).)

State of operation	XB1	XB2	XB3	XB4
(I) Cooling (Full stop, defrosting)	×	×	×	×
(II) Heating	○	○	×	×
(III) Oil return	×	○	○	×
(IV) Equalizing 1 (Cooling→Heating, etc.)	○	×	×	×
(V) Equalizing 2 (Heating→Cooling)	○	×	×	○



(25) Multiple indoor units control (Heat recovery 3-pipe combination systems only)

- (a) The indoor unit that controls the branching control directly is named as the master unit.
 - (i) Other indoor units that are connected to the same branching control are named as the slave unit.
 - (ii) Specify the “Master” or “Slave” for the indoor units from the remote control.
- (b) Change of operation modes from the remote control, option control or other external device can be made for the master unit only. It cannot be made for slave units.
- (c) Operation mode of slave units is always same as that of the master unit.
- (d) Any setting other than the operation mode can be made individually for the master and slave units.



- (i) Set the indoor unit 10 as the “Master” from the remote control Ra.
- (ii) Set each of indoor units 11 – 13 as the “Slave” from the remote controls Rb – Rd.
- (iii) Set the operation mode at cooling for the indoor unit 10 from the remote control Ra.
 - ⇒ The indoor unit 10 commands the cooling for the operation mode of “Slave” indoor units. It commands the cooling in the same way also for the operation mode of “Slave” indoor units which are stopped.
 - When an operation mode change command for the indoor unit 10 is received from the central control device, the command is released to the “Slave” indoor units in the same way.
- (iv) Even if an operation mode change is commanded to the “Slave” indoor units 11, 12 and 13 from the remote control Rd, Rc, Rd or the central control device, the operation mode is not changed.

(26) High power operation (RC-EX1A only)

It operates at with the setting temperature fixed at 16°C for cooling, 30°C for heating and maximum indoor fan speed for 15 minutes maximum.

(27) Energy-saving operation (RC-EX1A only)

It operates with the setting temperature fixed at 28°C for cooling, 22°C for heating or 25°C for auto. (Maximum capacity is restricted at 80%.)

(28) Warm-up control (RC-EX1A only)

Operation will be started 5 to 60 minutes before use according to the forecast made by the microcomputer which calculates when the operation should be started in order to warm up the indoor temperature near the setting temperature at the setting time of operation start.

(29) Home leave mode (RC-EX1A only)

When the unit is not used for a long period of time, the room temperature is maintained at a moderate level, avoiding extremely hot or cool temperature.

- (a) Cooling or heating is operated according to the outdoor temperature (factory setting 35°C for cooling, 0°C for heating) and the set temperature. (Factory setting 33°C for cooling, 10°C for heating)
- (b) Set temp and indoor fan speed can be set by RC-EX1A.

(30) Auto temp. setting (RC-EX1A only)

Setting temperature is adjusted automatically at the adequate temperature the center set temperature is 24°C by correcting the outdoor air temperature.

(31) Fan circulator operation (RC-EX1A only)

When the fan is used for circulation, the unit is operated as follows depending on the setting with the remote control.

- (a) If the invalid is selected with the remote control, the fan is operated continuously during the fan operation. (normal fan mode)
- (b) If the valid is selected with the remote control, the fan is operated or stopped when on the difference of the remote control temperature sensor and the indoor unit return air temperature sensor becomes bigger than 3°C.

(32) The operation judgment is executed every 5 minutes (RC-EX1A only)

Setting temperature T_s is changed according to outdoor temperature

This control is valid with cooling and heating mode. (NOT auto mode)

- (a) Operate 5 minutes forcedly.
- (b) Setting temperature is adjusted every 10 minutes.
 - (i) Cooling mode.
 $T_s = \text{Outdoor temperature} - \text{Offset value}$
 - (ii) Heating mode.
 $T_s = \text{Outdoor temperature} - \text{Offset value}$
- (c) If the return air temperature lower than 18°C or return air temperature becomes lower than 25°C, unit goes thermo OFF.

(33) Auto fan speed control (RC-EX1A only)

In order to reach the room temperature to the set temperature as quickly as possible, the airflow rate is increased when the set temperature of thermostat differs largely from the return air temperature. According to temperature difference between set temperature and return air temperature, indoor fan tap are controlled automatically.

- Auto 1: Changes the indoor unit fan tap within the range of Hi ↔ Me ↔ Lo.
- Auto 2: Changes the indoor unit fan tap within the range of PHi ↔ Hi ↔ Me ↔ Lo.

(34) Indoor unit overload alarm (RC-EX1A only)

If the following condition is satisfied at 30 minutes after starting operation, RC-EX1A shows maintenance code "M07" and the signal is transmitted to the external output (CnT-5).

- (a) Receipt of the signal by the external output is indicated by lighting an LED or other prepared on site.
 - Cooling, Dry, Auto(Cooling) : Indoor air temperature = Set room temperature by remote control + Alarm temperature difference
 - Heating, Auto(Heating) : Indoor air temperature = Set room temperature by remote control - Alarm temperature difference

Alarm temperature difference is selectable between 5 to 10°C.
- (b) If the following condition is satisfied or unit is stopped, the signal is disappeared.
 - Cooling, Dry, Auto(Cooling) : Indoor air temperature = Set room temperature + Alarm temperature difference - 2°C
 - Heating, Auto(Heating) : Indoor air temperature = Set room temperature - Alarm temperature difference + 2°C

(35) Peak-cut time (RC-EX1A only)

Power consumption can be reduced by restricting 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-minutes interval.
- The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval).
- Holiday setting is available.

11. SYSTEM TROUBLESHOOTING PROCEDURE

11.1 Basics of troubleshooting

Basic troubleshooting is to check/analyze/save data by connecting the Mente PC.

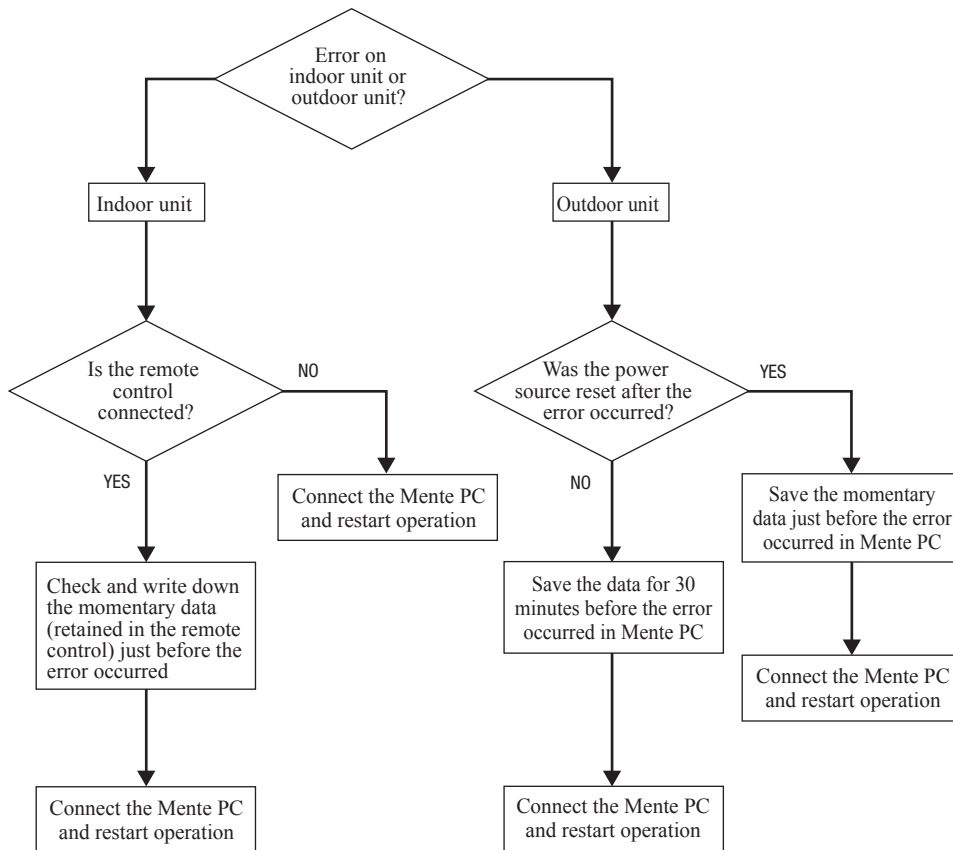
Whenever arriving at the site, always connect the Mente PC before starting work.

Method of error data analysis (Basic procedure)

- Identify whether particular error occurred during operation or stopping.
- Is it caused by the installation conditions of outdoor/indoor unit? (Refrigerant quantity, pipe length, short-circuit, clogged filter, etc.)
- Isn't there any beginner's mistake at the installation? (Wrong address, mistake in piping or wiring, etc.)
- Is the failure related to any hardware (parts)? (Service valve main body, coil, capillary, check valve, thermistor, etc.)
- Is it a major component?

Compressor, inverter PCB and outdoor DC fan motor

- Is it a failure of electrical component



(Refer to outdoor unit service manual.)

11.2 Contents of troubleshooting

(1) List of inspection displays (indoor units)

Remote control error code	Name of inspection	Classification	Page
None	Operates but does not cool	System error	360
None	Operates but does not heat	System error	361
None	Excessive noise/vibration	System error	362-364
None	Louver motor failure	System error	365
None	Power source system anomaly (Power source to indoor unit PCB)	System error	366
None	Power source system error (Power source to remote control)	System error	367
🔊 WAIT 🔊	🔊 WAIT 🔊 (1)	System error	368
🔊 WAIT 🔊	🔊 WAIT 🔊 (2)	System error	369
🔊 WAIT 🔊	🔊 WAIT 🔊 (3)	System error	370
🔊 WAIT 🔊	🔊 WAIT 🔊 (4)	System error	371
🔊 WAIT 🔊	🔊 WAIT 🔊 (5)	System error	372
🔊 WAIT 🔊	🔊 WAIT 🔊 (6)	System error	373
[No display]	[No display]	System error	374
E1	Remote control communication error	Communication error	375
E2	Duplicated indoor unit address	Address setting error	376
E3	Outdoor unit signal line error	Address pairing setting error	377
E5	Communication error during operation	Communication error	378
E6	Indoor heat exchanger temperature thermistor anomaly (ThI-R)	Thermistor wire breakage	379
E7	Indoor return air temperature thermistor anomaly (ThI-A)	Thermistor wire breakage	380
E9	Drain trouble	System error	381
E10	Excessive number of indoor units (more than 17 units) by controlling one remote control	Communication error	382
E11	Address setting error of indoor units	Address setting error	383
E12	Address setting error by mixed setting method	Address setting error	384
E16	Indoor DC fan motor anomaly	DC fan motor error	385
E18	Address setting error of master and slave indoor units	Address setting error	386
E19	Indoor unit operation check, drain motor check mode anomaly	Setting error	387
E20	Indoor DC fan motor speed anomaly	DC fan motor error	388
E21	Defective panel switch operation (FDT)	Panel switch error	389
E28	Remote control temperature thermistor anomaly (Thc)	Thermistor wire breakage	390
E63	Emergency stop	Site setting error	391

(2) Troubleshooting

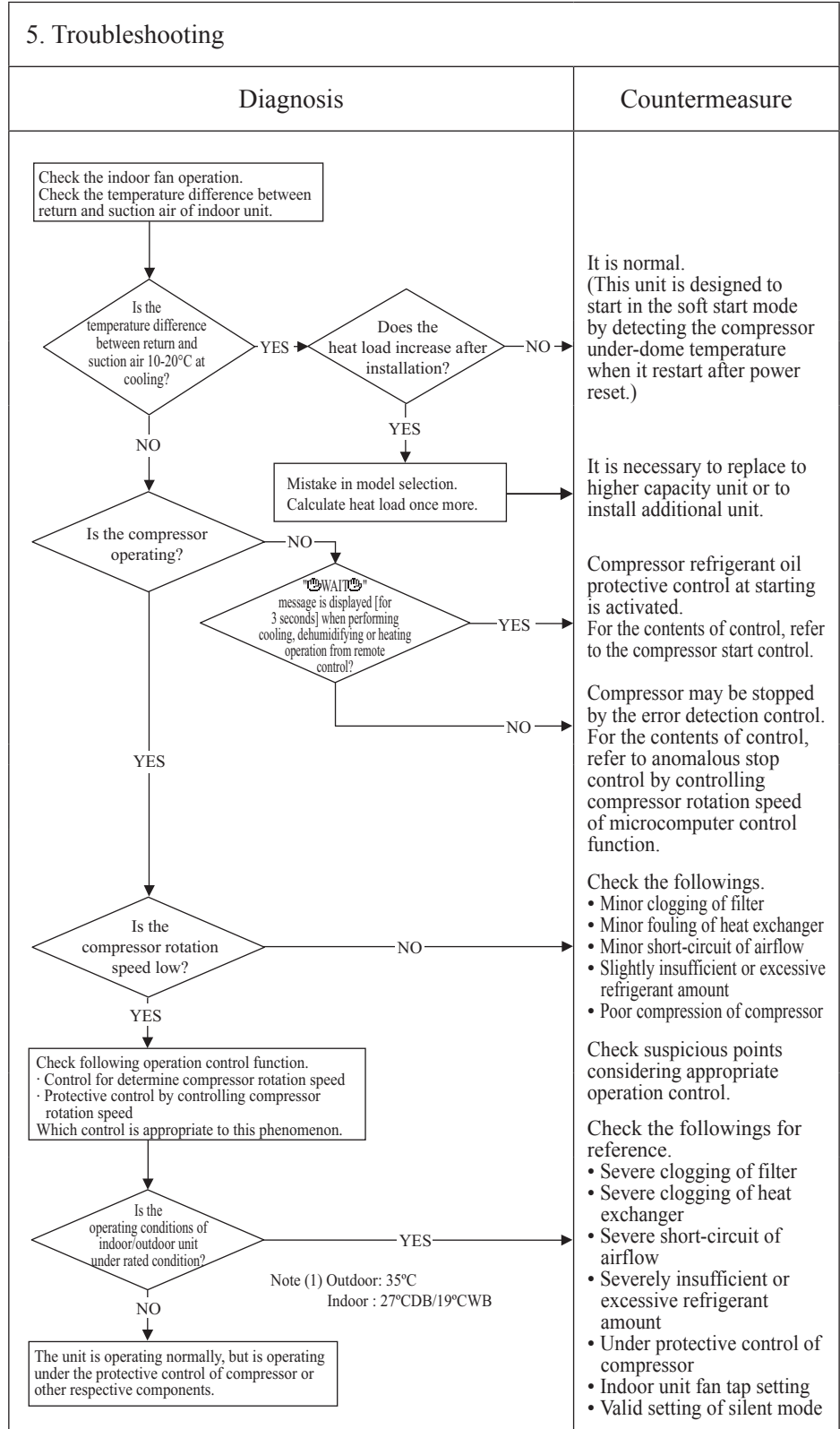
Error code Remote control:None	LED	Green	Red	Content Operates but does not cool
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause
<ul style="list-style-type: none"> • Poor compression of compressor • Expansion valve operation anomaly



Note:

Error code Remote control:None	LED	Green	Red	Content Operates but does not heat
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models
2. Error detection method
3. Condition of error displayed
4. Presumable cause
<ul style="list-style-type: none"> • 4-way valve anomaly • Poor compression of compressor • Expansion valve anomaly operation

5. Troubleshooting	
Diagnosis	
<p>Check the indoor fan operation. Check the temperature difference between return and suction air of indoor unit.</p> <p>Is the temperature difference between return and suction air 10-30°C at heating?</p> <p>NO</p> <p>Is the compressor operating?</p> <p>NO</p> <p>Is the compressor rotation speed low?</p> <p>NO</p> <p>Check following operation control function. · Control for determine compressor rotation speed · Protective control by controlling compressor rotation speed Which control is appropriate to this phenomenon.</p> <p>Is the operating conditions of indoor/outdoor unit under rated condition?</p> <p>NO</p> <p>The unit is operating normally, but is operating under the protective control of compressor or other respective components.</p> <p>Note (1) Outdoor: 7°C Indoor : 20°CDB</p>	<p>Countermeasure</p> <p>It is normal. (This unit is designed to start in the soft start mode by detecting the compressor under-dome temperature when it restart after power reset.)</p> <p>It is necessary to replace to higher capacity unit or to install additional unit.</p> <p>Compressor refrigerant oil protective control at starting is activated. For the contents of control, refer to the compressor start control.</p> <p>Compressor may be stopped by the error detection control. For the contents of control, refer to anomalous stop control by controlling compressor rotation speed of microcomputer control function.</p> <p>Check the followings.</p> <ul style="list-style-type: none"> • Minor clogging of filter • Minor fouling of heat exchanger • Minor short-circuit of airflow • Slightly insufficient or excessive refrigerant amount • Poor compression of compressor <p>Check suspicious points considering appropriate operation control.</p> <p>Check the followings for reference.</p> <ul style="list-style-type: none"> • Severe clogging of filter • Severe clogging of heat exchanger • Severe short-circuit of airflow • Severely insufficient or excessive refrigerant amount • Under protective control of compressor • Indoor unit fan tap setting • Valid setting of silent mode

Note:

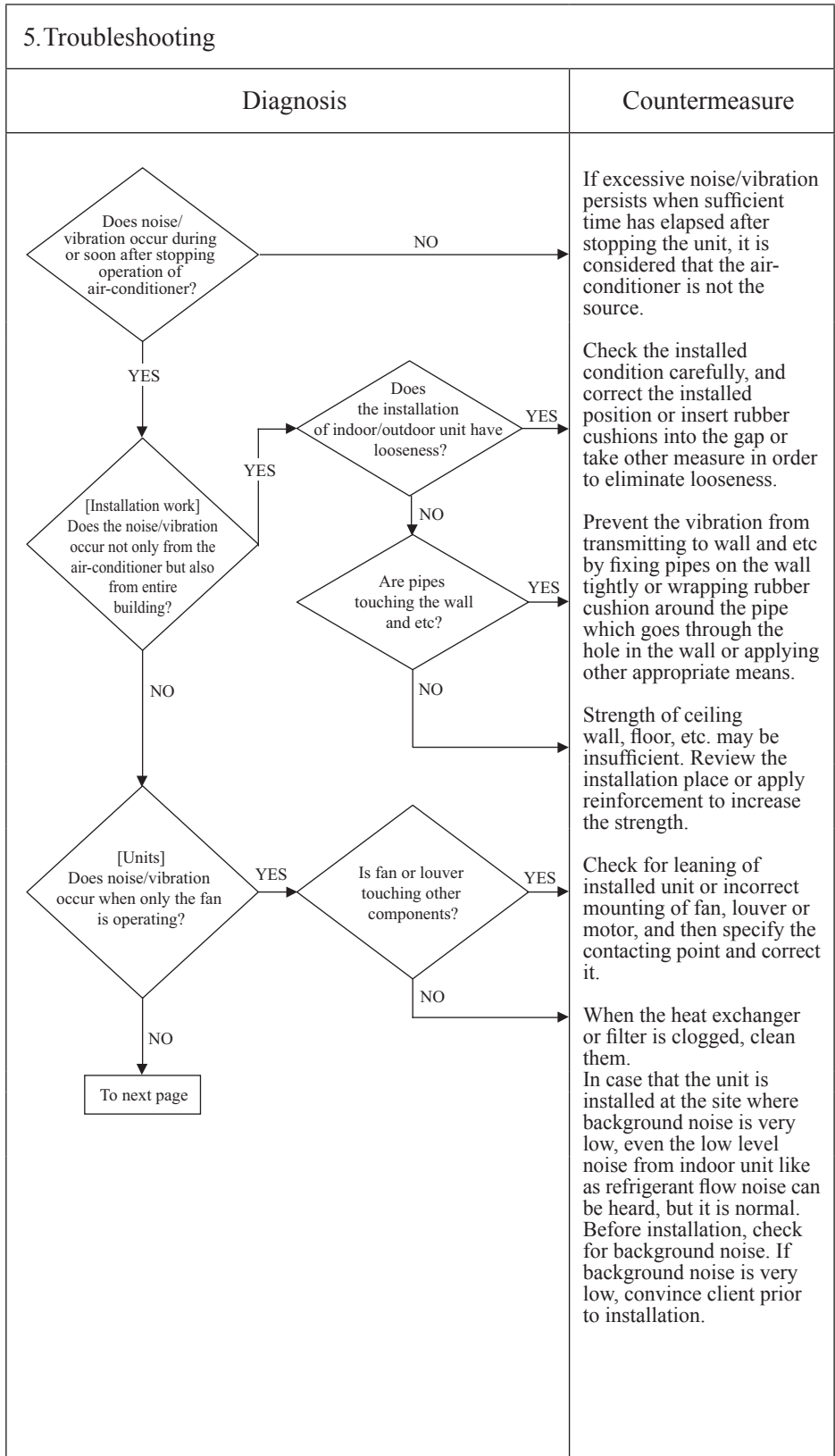
Error code Remote control:None	LED	Green	Red	Content Excessive noise/vibration (1/3)
	Indoor	-	-	
	Outdoor	-	-	

1. Applicable model
All models

2. Error detection method

3. Condition of error displayed

- 4. Presumable cause**
- ① Improper installation work
 - Improper vibration-proof work at installation
 - Insufficient strength of mounting surface
 - ② Anomaly of product
 - Before/after shipment from factory
 - ③ Improper adjustment during commissioning
 - Excessive/insufficient refrigerant.



Note:

Error code Remote control:None	LED	Green	Red	Content Excessive noise/vibration (2/3)
	Indoor	-	-	
	Outdoor	-	-	

1. Applicable model	5. Troubleshooting		
All models	Diagnosis		Countermeasure
2. Error detection method			<p>Rearrange the piping to avoid contact with the casing.</p> <p>Noise/vibration is generated when the refrigerant gas or liquid flows through inside of piping of air-conditioner. It is likely to occur particularly during cooling or defrosting in the heating mode. It is normal.</p> <p>The noise/vibration occurs when the refrigerant starts or stops flowing. It is normal.</p> <p>When the defrosting starts or stops during heating mode, the refrigerant flow is reversed due to switching 4-way valve. This causes a large change in pressure which produces a blowing sound. It may also accompany the hissing sound as mentioned above. This is normal.</p> <p>After the start or stop of heating operation or during defrosting, abrupt changes in temperature cause resin parts to shrink or expand. This is normal.</p> <p>It is the sound produced by the drain pump that discharges drain from indoor unit. The pump continues to run for 5 (Models FDU224, 280 • FDU1800, 2400F:20) minutes after stopping the cooling operation. This is normal.</p> <p>Apply the damper sealant at the place considered to be the sources such as the pressure reducing mechanism. (Expansion valve, capillary tube, etc.)</p>
3. Condition of error displayed			
4. Presumable cause			

Note:

Error code Remote control:None	LED	Green	Red	Content Excessive noise/vibration (3/3)
	Indoor	–	–	
	Outdoor	–	–	

1. Applicable model	5. Troubleshooting		
All models	Diagnosis	Countermeasure	
2. Error detection method	<pre> graph TD A[From previous page] --> B{[Adjustment during commissioning] Does noise/vibration occur when the cooling/heating operation is performed under anomalous condition?} B -- YES --> C[Countermeasure] </pre>		
3. Condition of error displayed			
4. Presumable cause			
	<p>If insufficient cooling/heating problem happens due to anomalous operating conditions at cooling/heating, followings are suspicious.</p> <ul style="list-style-type: none"> • Excessive charged amount of refrigerant • Insufficient charge amount of refrigerant • Intrusion of air, nitrogen, etc. <p>In such case, it is necessary to recover refrigerant, vacuum-dry and recharge refrigerant.</p> <p>* Since there could be many causes of noise/vibration, the above may not cover all. In such case, check the conditions when, where, how the noise/vibration occurs according to following check points and ask our consultation.</p> <ul style="list-style-type: none"> • Indoor/outdoor unit • Cooling/heating/fan mode • Startup/stop/during operation • Operating condition (Indoor/outdoor temperatures and pressures) • Time it occurred • Operation data retained by remote control or Mente PC such as compressor rotation speed, heat exchanger temperature, EEV opening degree and etc. • Tone (If available, record the noise) • Any other anomalies. 		

Note:

Error code Remote control: None	LED	Green	Red	Content <h2>Louver motor failure</h2>
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause
<ul style="list-style-type: none"> • Defective LM • LM wire breakage • Indoor control PCB anomaly

5. Troubleshooting	
Diagnosis	Countermeasure
<p>▲ Check at the indoor unit side.</p> <pre> graph TD Start[Operate after waiting for more than 1 minute.] --> Q1{Does the louver operate at the power on?} Q1 -- NO --> Q2{Is LM wiring broken?} Q2 -- YES --> C1[Repair wiring.] Q2 -- NO --> Q3{Is LM locked?} Q3 -- YES --> C2[Replace LM.] Q3 -- NO --> C3[Indoor control PCB anomaly → Replace it.] Q1 -- YES --> Q4{Is the louver operable with the remote control?} Q4 -- YES --> C4[Normal] Q4 -- NO --> C5[Adjust LM lever and then check again.] </pre> <p>LM: louver motor</p>	

Note:

Error code Remote control:None	LED	Green	Red	Content Power source system anomaly (Power source to indoor unit PCB)
	Indoor	Stays OFF	Stays OFF	
	Outdoor	Stays OFF	2-time flash	

1. Applicable model
All models
2. Error detection method
3. Condition of error displayed
4. Presumable cause
<ul style="list-style-type: none"> • Wrong connection or breakage of connecting wires • Blown fuse • Transformer anomaly • Indoor power PCB anomaly • Broken harness • Indoor control PCB anomaly

5. Troubleshooting	
Diagnosis	Countermeasure

Note:

Error code Remote control:None	LED	Green	Red	Content Power source system error (Power source to remote control)
	Indoor	Stays OFF	Keeps lighting	
	Outdoor	Stays OFF	Keeps lighting	

<p>1.Applicable model</p> <p>All models</p>	<p>5.Troubleshooting</p>	
<p>2.Error detection method</p>	<p>Diagnosis</p>	<p>Countermeasure</p>
<p>3. Condition of error displayed</p>		
<p>4.Presumable cause</p> <ul style="list-style-type: none"> • Remote control wire breakage/short-circuit • Remote control anomaly • Malfunction by noise • Indoor power PCB anomaly • Broken harness • Indoor control PCB anomaly 		

Note:

Error code Remote control: 🏠WAIT🏠	LED	Green	Red	Content 🏠WAIT🏠 (1)
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Keeps flashing	

1. Applicable model

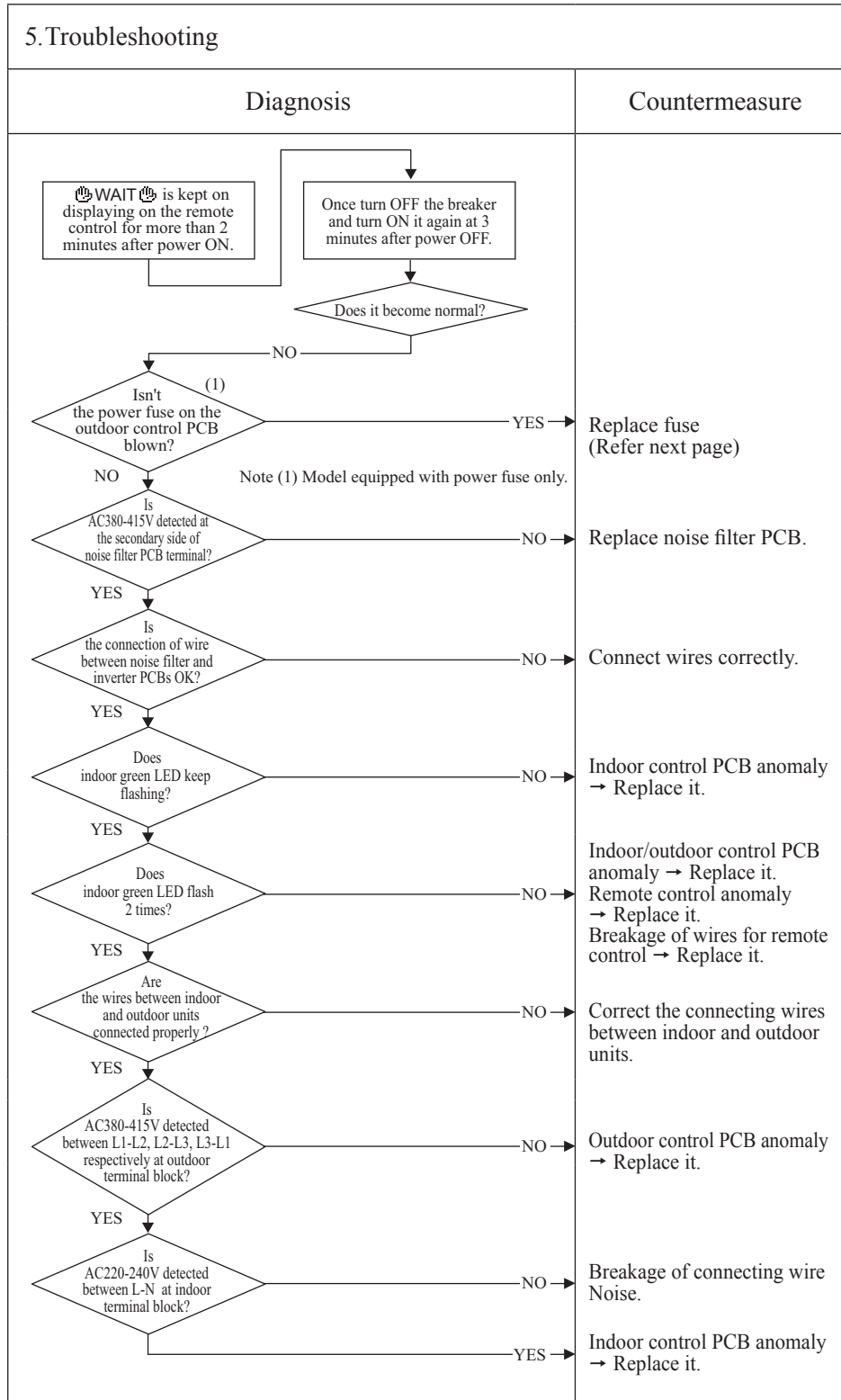
All models

(In case that 🏠WAIT🏠 is kept on displaying on the remote control for more than 2 minutes after power ON.)

2. Error detection method

3. Condition of error displayed

- 4. Presumable cause**
- Fuse blown
 - Noise filter anomaly
 - Anomalous connection of wire between PCBs
 - Indoor control PCB anomaly
 - Remote control anomaly
 - Breakage of connecting wires of remote control
 - Outdoor control PCB anomaly



Note: (1) When anomaly occurs during establishing communication between indoor and outdoor unit, error code E5 is displayed (outdoor red LED flash 2-times).
In case of E5, the way of troubleshooting is same as above mentioned (except for checking of connecting wire).
When reset the power after E5 occurs, if this anomaly recurs, 🏠WAIT🏠 is displayed on remote control. If power ON/OFF is repeated in a short period (within 1 minute), 🏠WAIT🏠 may be displayed. In such case, please wait for 3 minute after the power breaker OFF.
(2) If any error is detected 30 minutes after displaying “🏠WAIT🏠” on the remote control, the display changes to “INSPECT I/U”.

Error code Remote control: 🏠 WAIT 🏠	LED	Green	Red	Content 🏠 WAIT 🏠 (2)
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Keeps flashing	

<p>1. Applicable model</p> <p>Model equipped with power fuse only. (In case of fuse blown, how to check the unit before replacement of fuse.)</p>	5. Troubleshooting		
<p>2. Error detection method</p>	Diagnosis	Countermeasure	
<p>3. Condition of error displayed</p>	<pre> graph TD D1{Isn't there any short circuit between phases of noise filter?} R1[Replace noise filter] D2{Isn't there any crack or damage on power transistor module or diode stack?} R2[Replace inverter PCB] D3{Isn't there any anomaly on reactor?} R3[Replace reactor] C[Replace fuse.] D1 -- YES --> R1 R1 --> D2 D2 -- YES --> R2 R2 --> D3 D3 -- YES --> R3 R3 --> C D1 -- NO --> D2 D2 -- NO --> D3 D3 -- NO --> C </pre>		<p>Replace fuse.</p>
<p>4. Presumable cause</p> <ul style="list-style-type: none"> • Fuse blown • Noise filter anomaly • Anomalous connection of wire between PCBs • Indoor control PCB anomaly • Remote control anomaly • Breakage of connecting wires of remote control • Outdoor control PCB anomaly 			

Note:

Error code Remote control: 🗄️ WAIT 🗄️	LED	Green	Red	Content 🗄️ WAIT 🗄️ (3)
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Keeps flashing	

1. Applicable model
All models (No display on the remote control after power ON.)

2. Error detection method

3. Condition of error displayed

4. Presumable cause
<ul style="list-style-type: none"> • Fuse blown • Noise filter anomaly • Anomalous connection of wire between PCBs • Indoor control PCB anomaly • Remote control anomaly • Breakage of connecting wires of remote control • Outdoor control PCB anomaly

5. Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD Start[No display on the remote control after power ON.] --> Q1{Does indoor green LED keep flashing?} Q1 -- NO --> Q2{Is the fuse on indoor control PCB OK?} Q1 -- YES --> Q3{Does outdoor red LED flash 2-times?} Q2 -- NO --> C1[Fuse blown → Replace fuse.] Q2 -- YES --> Q4{Is DC18V or higher detected between Red-Red (CNW2) at secondary side of indoor transformer? (1)} Q4 -- NO --> C2[Transformer anomaly.] Q4 -- YES --> Note1[Note (1) Model equipped with transformer (Tr1) only] Note1 --> Q5{Is DC10-11V between X-Y at indoor control PCB side when removing remote control?} Q5 -- NO --> C3[Remote control wire short-circuited.] Q5 -- YES --> C4[Remote control anomaly.] Q3 -- NO --> C5[Indoor control PCB anomaly. Remote control anomaly. Breakage of connecting wires of remote control.] Q3 -- YES --> Q6{Is the connecting wires between indoor and outdoor connected properly?} Q6 -- NO --> C6[Correct the connecting wires properly.] Q6 -- YES --> Q7{Is AC380-415V detected between L1-L2, L2-L3, L3-L1 respectively at outdoor terminal block?} Q7 -- NO --> C7[Outdoor control PCB anomaly → Replace it.] Q7 -- YES --> Q8{Is AC220-240V detected between L-N at indoor terminal block?} Q8 -- NO --> C8[Breakage of connecting wire Noise.] Q8 -- YES --> C9[Indoor control PCB anomaly → Replace it.] </pre>	<p>Fuse blown → Replace fuse.</p> <p>Transformer anomaly.</p> <p>Remote control wire short-circuited.</p> <p>Remote control anomaly.</p> <p>Indoor control PCB anomaly. Remote control anomaly. Breakage of connecting wires of remote control.</p> <p>Correct the connecting wires properly.</p> <p>Outdoor control PCB anomaly → Replace it.</p> <p>Breakage of connecting wire Noise.</p> <p>Indoor control PCB anomaly → Replace it.</p>

Note:

Error code Remote control: WAIT	LED	Green	Red	Content WAIT (4)
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Keeps flashing	

1. Applicable model

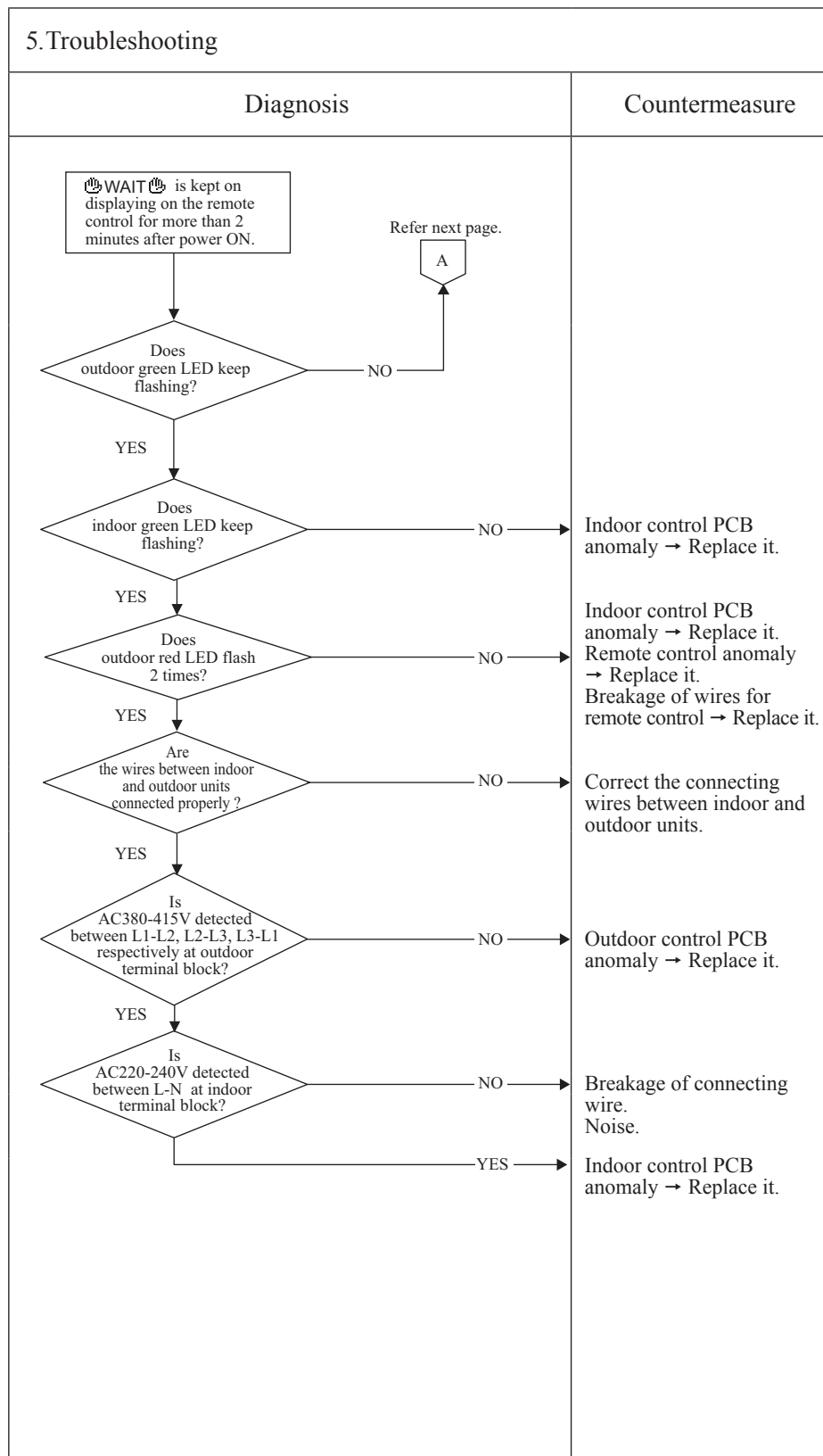
All models

(In case that WAIT is kept on displaying on the remote control for more than 2 minutes after power ON.)

2. Error detection method

3. Condition of error displayed

- 4. Presumable cause**
- Fuse blown
 - Noise filter anomaly
 - Anomalous connection of wire between PCBs
 - Indoor control PCB anomaly
 - Remote control anomaly
 - Breakage of connecting wires of remote control
 - Outdoor control PCB anomaly



Note:

Error code Remote control: 🏠 WAIT 🏠	LED	Green	Red	Content 🏠 WAIT 🏠 (5)
	Indoor	Stays OFF	Stays OFF	
	Outdoor	Stays OFF	Stays OFF	

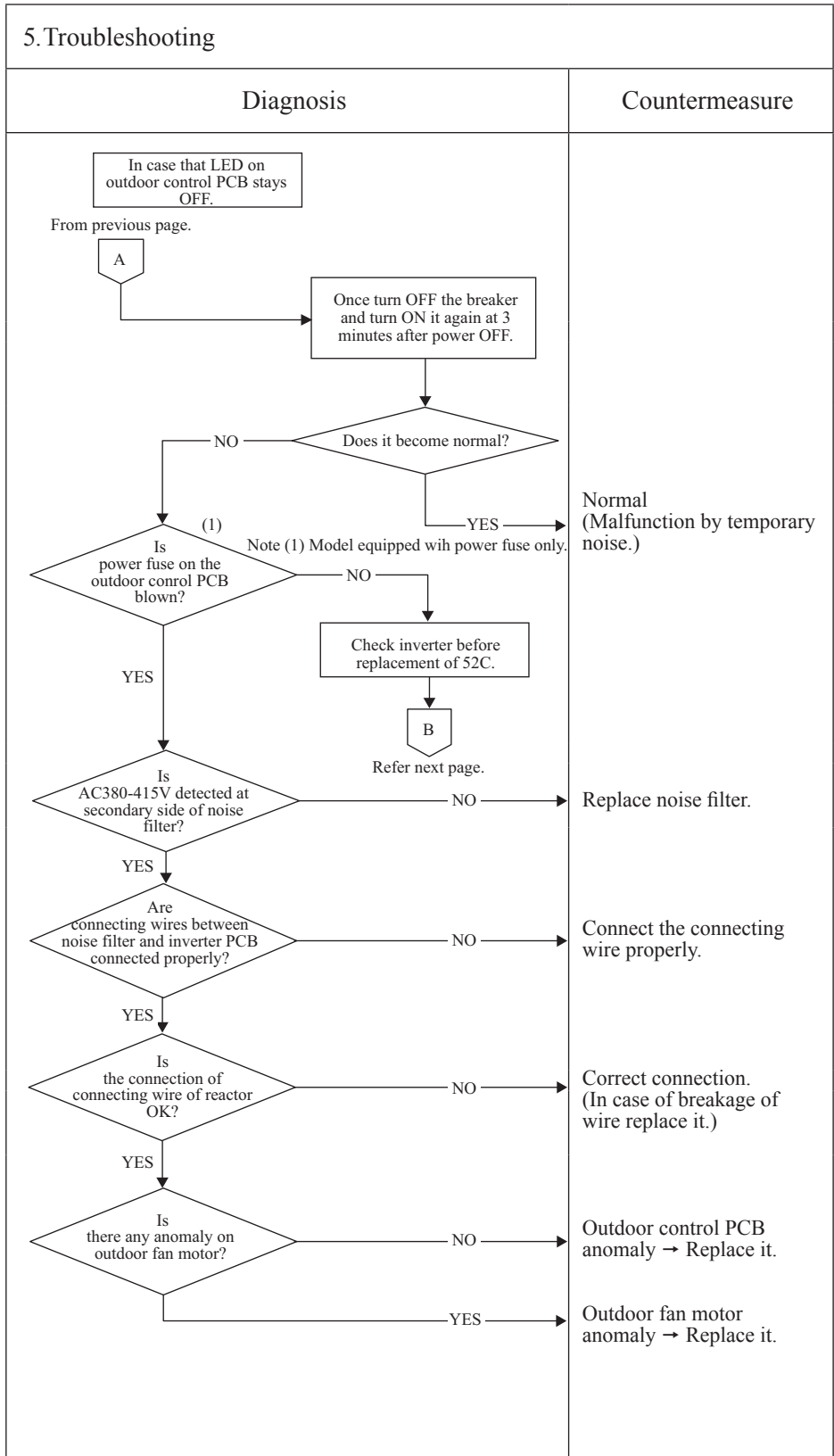
1. Applicable model

All models
(In case that LED on outdoor control PCB stays OFF.)

2. Error detection method

3. Condition of error displayed

- 4. Presumable cause**
- Fuse blown
 - Noise filter anomaly
 - Anomalous connection of wire between PCBs
 - Indoor control PCB anomaly
 - Remote control anomaly
 - Breakage of connecting wires of remote control
 - Outdoor control PCB anomaly



Note:

Error code Remote control: 🏠 WAIT 🏠	LED	Green	Red	Content 🏠 WAIT 🏠 (6)
	Indoor	Stays OFF	Stays OFF	
	Outdoor	Stays OFF	Stays OFF	

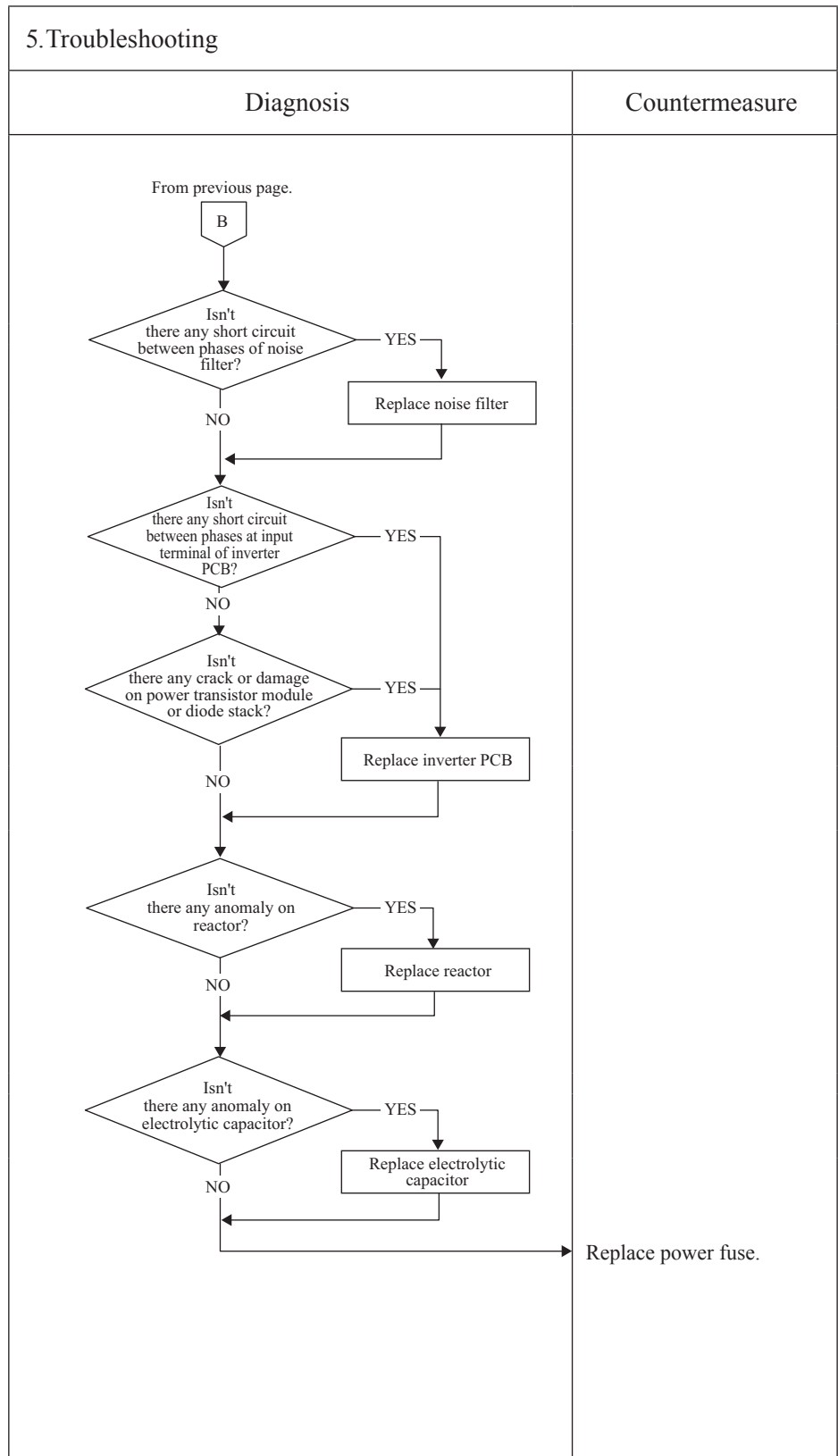
1. Applicable model

Model equipped with power fuse only
(In case of fuse blown, how to check the unit before replacement of fuse.)

2. Error detection method

3. Condition of error displayed

- 4. Presumable cause**
- Fuse blown
 - Noise filter anomaly
 - Anomalous connection of wire between PCBs
 - Indoor control PCB anomaly
 - Remote control anomaly
 - Breakage of connecting wires of remote control
 - Outdoor control PCB anomaly



Note:

Error code Remote control:[No display]	LED	Green	Red	Content [No display]
	Indoor	Stays OFF	Stays OFF	
	Outdoor	Stays OFF	Stays OFF	

1.Applicable model
All models (No display on the remote control after power ON.)

2.Error detection method

3. Condition of error displayed

4.Presumable cause
<ul style="list-style-type: none"> • Fuse blown • Noise filter anomaly • Anomalous connection of wire between PCBs • Indoor control PCB anomaly • Remote control anomaly • Breakage of connecting wires of remote control • Outdoor control PCB anomaly

5.Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD Start[No display on the remote control after power ON.] --> D1{Is DC10V or higher between X-Y detected at remote control terminal?} D1 -- NO --> C1[Remote control anomaly.] D1 -- YES --> D2{Is DC10V or higher between X-Y wires detected when removing remote control?} D2 -- NO --> C2[Remote control anomaly.] D2 -- YES --> D3{Are connecting wires between indoor and outdoor units connected properly?} D3 -- NO --> C3[Correct connecting wire.] D3 -- YES --> C4[Indoor control PCB anomaly.] </pre>	<p>Remote control anomaly.</p> <p>Remote control anomaly.</p> <p>Correct connecting wire.</p> <p>Indoor control PCB anomaly.</p>

Note:

Error code Remote control: E1	LED	Green	Red	Content	Remote control communication error
	Indoor	Keeps flashing	Stays OFF		
	Outdoor	Keeps flashing	Stays OFF		

1. Applicable model
All models
2. Error detection method
When normal communication between remote control and indoor unit is interrupted for more than 2 minutes. (Detectable only with the remote control.)
3. Condition of error displayed
Same as above
4. Presumable cause
<ul style="list-style-type: none"> • Anomalous communication circuit between remote control and indoor unit. • Noise

5. Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD D1{Is it possible to reset normally by the power source reset? (1)} P1[Turn SW7-1 OFF. → ON Disconnect the wire (3) between indoor and outdoor units.] P2[Reset power source] D2{Does one minutes after power ON?} D1 -- YES --> C1[Malfunction by temporary noise. Check peripheral environment.] D1 -- NO --> P1 P1 --> P2 P2 --> D2 D2 -- YES --> C2[Indoor control PCB anomaly → Replace it.] D2 -- NO --> C3[Remote control anomaly → Replace it.] Note1[Note (1) Does the remote control displays “WAIT (1)” even after 3 minutes?] </pre>	

Note: If the indoor unit cannot communicate normally with the remote control for 180 seconds, the indoor unit PCB starts to reset automatically.

Error code Remote control: E2	LED	Green	Red	Content Duplicated indoor unit address
	Indoor	Keeps flashing	Keeps flashing	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
More than 129 indoor units are connected in the same Superlink system. Duplicated indoor unit address

3. Condition of error displayed
Same as above

4. Presumable cause
<ul style="list-style-type: none"> • Number of connected indoor units exceeds the limitation. • Duplicated indoor unit address • Indoor control PCB anomaly

5. Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD D1{Is the number of connected indoor units up to 128 units?} D2{Is the different address No. assigned to each indoor unit?} P1[Reset the power source and restart.] C[Caution: Unless the power source is reset, addresses will not be confirmed.] D3{Is E2 displayed?} D1 -- NO --> C1[Review number of connected units.] D1 -- YES --> D2 D2 -- NO --> C2[Correct indoor unit address setting.] D2 -- YES --> P1 P1 --> C C --> D3 D3 -- NO --> C3[Implement test run.] D3 -- YES --> C4[Replace indoor control PCB. *] style C fill:none,stroke:none </pre>	
	<p>* Before replacement, confirm whether the rotary switch for address setting is not damaged. (It was experienced that No. 5 on rotary switch was not recognized.)</p>

Note:

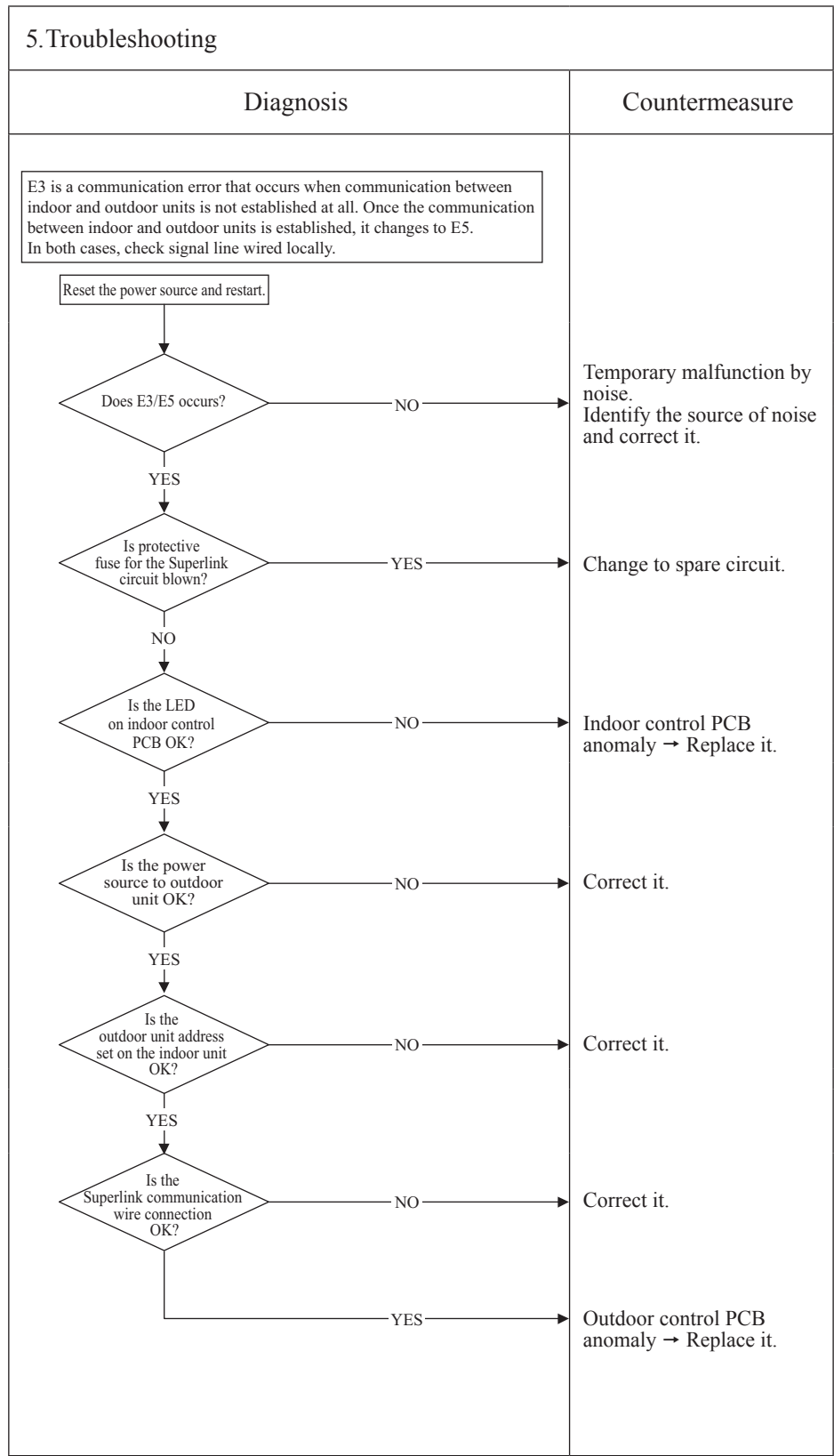
Error code Remote control: E3/5	LED	Green	Red	Content Outdoor unit signal line error
	Indoor	Keeps flashing	2-time flash	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
No outdoor unit exists in the same Superlink system.

3. Condition of error displayed
Same as above

- 4. Presumable cause**
- Power is not supplied to the outdoor unit
 - Unmatch of pairing between indoor and outdoor units
 - Indoor control PCB anomaly
 - Outdoor control PCB anomaly
 - Missing local wiring



Note:

Error code Remote control: E5	LED	Green	Red	Content Communication error during operation
	Indoor	Keeps flashing	*See below	
	Outdoor	Keeps flashing	2-time flash	

1. Applicable model
All models
2. Error detection method
When the communication between indoor and outdoor units is interrupted for more than 2 minutes.
3. Condition of error displayed
When this anomaly is detected during operation.
4. Presumable cause
<ul style="list-style-type: none"> • Unit address No. setting error • Remote control wires broken • Poor connection/disconnection of remote control wires • Indoor control PCB anomaly

5. Troubleshooting	
Diagnosis	Countermeasure
<p>* In case that indoor red LED flashes 2 times</p> <p>Note (1) Check the connection (disconnection, looseness) of signal wires at outdoor terminal block.</p> <p>Is the connection of signal wires at the outdoor unit side OK?</p> <p>NO → Repair signal wires.</p> <p>YES</p> <p>Note (2) Check the connection (disconnection, looseness, breakage) of signal wires between indoor and outdoor units.</p> <p>Is the connection of signal wires between indoor and outdoor units OK?</p> <p>NO → Repair signal wires.</p> <p>YES</p> <p>Reset the power source and restart.</p> <p>Does the remote control LCD becomes normal?</p> <p>NO → Go to the diagnosis of WAIT (1)</p> <p>YES → Unit is normal. (Malfunction by temporary noise, etc.)</p> <p>* In case that indoor red LED stays OFF</p> <p>Reset the power source and restart.</p> <p>Does the remote control LCD becomes normal?</p> <p>NO → Outdoor control PCB anomaly (Network communication circuit anomaly) → Replace it.</p> <p>YES → Unit is normal. (Malfunction by temporary noise, etc.)</p>	

Note: When the pump down switch is turned on, communication between indoor and outdoor units is cancelled so that "Communication error E5" will be displayed on the remote control and indoor control PCB, but this is normal.

Error code Remote control: E6	LED	Green	Red	Content Indoor heat exchanger temperature thermistor anomaly (ThI-R)
	Indoor	Keeps flashing	1-time flash	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
Detection of anomalously low temperature (resistance) of ThI-R1, R2, R3.

3. Condition of error displayed

- If -40°C or lower is detected for 5 seconds continuously, compressor stops. After 3-minutes delay, the compressor is restarted automatically, but if this anomaly occurs again within 60 minutes after the initial detection.
- Or if 70°C or higher is detected for 5 seconds continuously.

4. Presumable cause

- Anomalous connection of indoor heat exchanger temperature thermistor
- Indoor heat exchanger temperature thermistor anomaly
- Indoor control PCB anomaly

5. Troubleshooting

Diagnosis	Countermeasure																
<pre> graph TD Q1{Is the connector of thermistor connected properly?} -- NO --> C1[Insert the connector securely.] Q1 -- YES --> Q2{Are the characteristics of thermistor OK? *1} Q2 -- NO --> C2[Replace thermistor. (ThI-R)] Q2 -- YES --> C3[Replace indoor control. PCB] </pre> <p>Regarding the characteristics of the thermistor, see the following chart.</p> <p>*1 Check several times to prove any poor connection.</p>																	
<p>Temperature-resistance characteristics of indoor heat exchanger temperature thermistor (ThI-R1, R2, R3)</p> <table border="1"> <caption>Approximate data from the graph</caption> <thead> <tr> <th>Temperature (°C)</th> <th>Resistance (kΩ)</th> </tr> </thead> <tbody> <tr><td>0</td><td>16</td></tr> <tr><td>10</td><td>12</td></tr> <tr><td>20</td><td>8</td></tr> <tr><td>25</td><td>5</td></tr> <tr><td>30</td><td>4</td></tr> <tr><td>40</td><td>3</td></tr> <tr><td>50</td><td>2.5</td></tr> </tbody> </table>	Temperature (°C)	Resistance (kΩ)	0	16	10	12	20	8	25	5	30	4	40	3	50	2.5	
Temperature (°C)	Resistance (kΩ)																
0	16																
10	12																
20	8																
25	5																
30	4																
40	3																
50	2.5																

Note:

Error code Remote control: E7	LED	Green	Red	Content Indoor return air temperature thermistor anomaly (ThI-A)
	Indoor	Keeps flashing	1-time flash	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
Detection of anomalously low temperature (resistance) of ThI-A.

3. Condition of error displayed

- If -20°C or lower is detected for 5 seconds continuously, compressor stops. After 3-minutes delay the compressor is restarted automatically, but if this anomaly occurs again within 60 minutes after the initial detection.
- Or detected for 5 seconds continuously.

4. Presumable cause

- Anomalous connection of indoor return air temperature thermistor
- Indoor return air temperature thermistor anomaly
- Indoor control PCB anomaly

5. Troubleshooting

Diagnosis	Countermeasure																
<pre> graph TD Q1{Is the connector of thermistor connected properly?} -- NO --> C1[Insert the connector securely.] Q1 -- YES --> Q2{Are the characteristics of thermistor OK? *1} Q2 -- NO --> C2[Replace thermistor (ThI-A).] Q2 -- YES --> C3[Replace indoor control PCB.] </pre> <p>*1 Check several times to prove any poor connection.</p>																	
<p>Temperature-resistance characteristics of indoor return air temperature thermistor (ThI-A)</p> <table border="1"> <caption>Temperature-resistance characteristics of indoor return air temperature thermistor (ThI-A)</caption> <thead> <tr> <th>Temperature (°C)</th> <th>Temperature sensor resistance (kΩ)</th> </tr> </thead> <tbody> <tr><td>0</td><td>15</td></tr> <tr><td>10</td><td>10</td></tr> <tr><td>20</td><td>7</td></tr> <tr><td>25</td><td>5</td></tr> <tr><td>30</td><td>4</td></tr> <tr><td>40</td><td>3</td></tr> <tr><td>50</td><td>2.5</td></tr> </tbody> </table>	Temperature (°C)	Temperature sensor resistance (kΩ)	0	15	10	10	20	7	25	5	30	4	40	3	50	2.5	
Temperature (°C)	Temperature sensor resistance (kΩ)																
0	15																
10	10																
20	7																
25	5																
30	4																
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50	2.5																

Note:

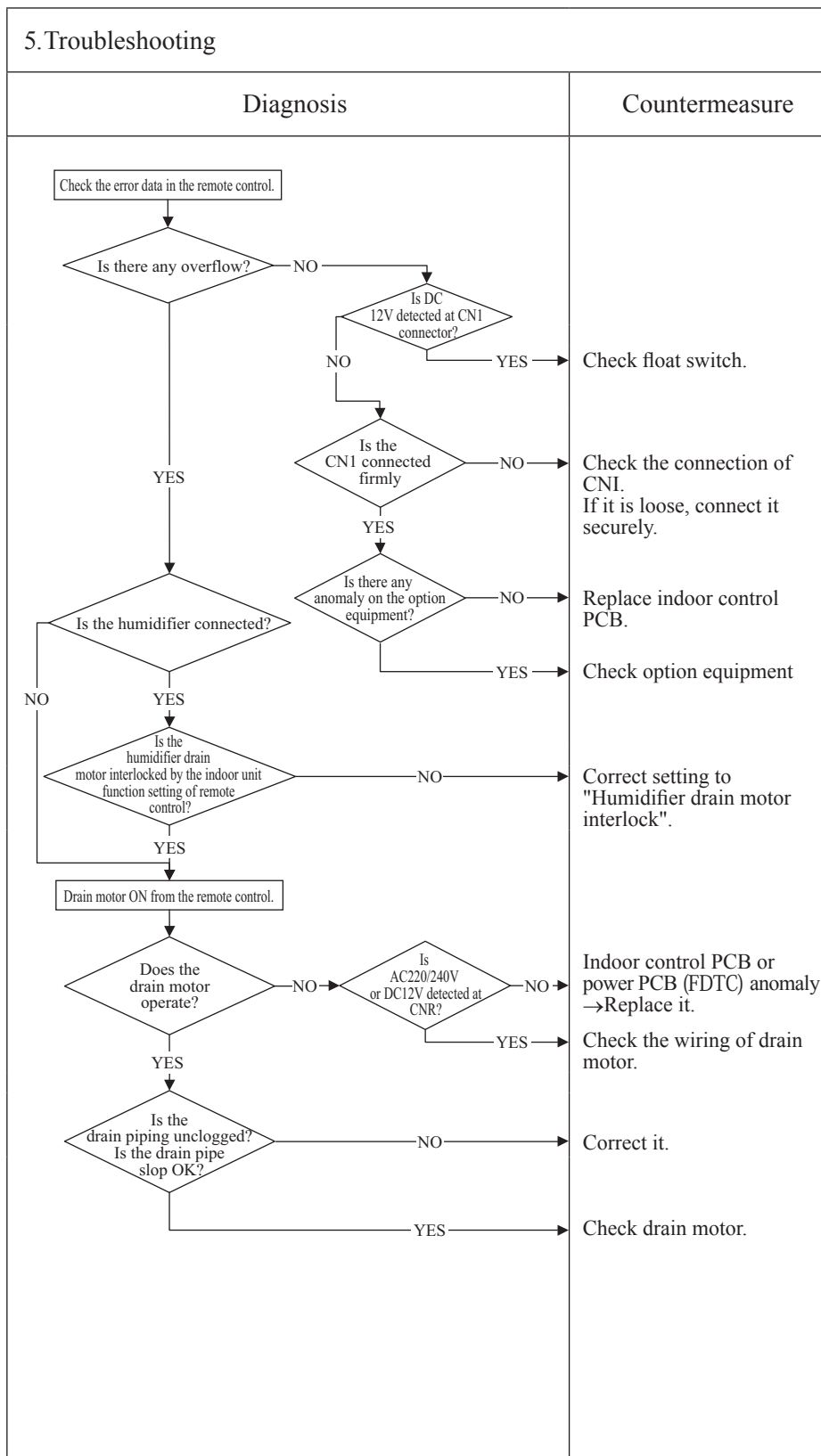
Error code Remote control: E9	LED	Green	Red	Content <h2 style="text-align: center;">Drain trouble</h2>
	Indoor	Keeps flashing	1-time flash	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
FDT, FDTC, FDTW, FDTQ, FDTS, FDU, FDUM, FDUT and FDU-F series

2. Error detection method
Float switch is activated.

3. Condition of error displayed
If the float switch OPEN is detected for 3 seconds continuously or if float switch connector is disconnected or wire broken.

- 4. Presumable cause**
- Indoor control PCB anomaly
 - Mistake in setting of float switch
 - Mistake in setting of humidifier drain motor interlock
 - Mistake in setting of option equipment
 - Mistake in drain piping
 - Drain motor anomaly
 - Disconnection/breakage of drain motor wires



Note: When this anomaly occurs at power ON, disconnection of connector or breakage of wire of float switch is suspected. Check and correct it (or replace it, if necessary).

Error code Remote control: E10	LED	Green	Red	Content Excessive number of indoor units (more than 17 units) by controlling one remote control
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
When it detects more than 17 of indoor units connected to one remote control.

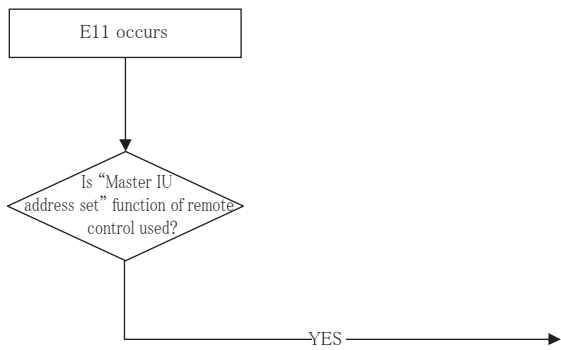
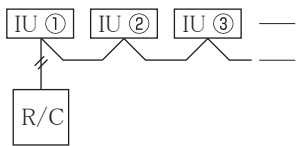
3. Condition of error displayed
Same as above

4. Presumable cause
<ul style="list-style-type: none"> • Excessive number of indoor units connected. • Remote control anomaly.

5. Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD A{Aren't more than 17 indoor units connected to one remote control?} -- NO --> B[Remote control anomaly -> Replace it.] A -- YES --> C[Reduce to 16 or less units.] </pre>	

Note:

Error code Remote control: E11	LED	Green	Red	Content Address setting error of indoor units
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

<p>1. Applicable model</p> <p>All models</p>	<p>5. Troubleshooting</p>	
<p>2. Error detection method</p> <p>IU address has been set using the "Master IU address set" function of remote control.</p>	<p>Diagnosis</p>  <pre> graph TD A[E11 occurs] --> B{Is "Master IU address set" function of remote control used?} B -- YES --> C[Countermeasure] </pre> <p>In case the wiring is below and "Master IU address set" is used, E11 is appeared.</p> 	<p>Countermeasure</p> <ul style="list-style-type: none"> · In cases of RC-E5 Return address No. to "IU ..." using [▲] or [▲] button. · In cases of RC-EX1A Menu → Next → IU settings → Select IU
<p>3. Condition of error displayed</p> <p>Same as above</p>		
<p>4. Presumable cause</p> <p>Same as above</p>		

Note:

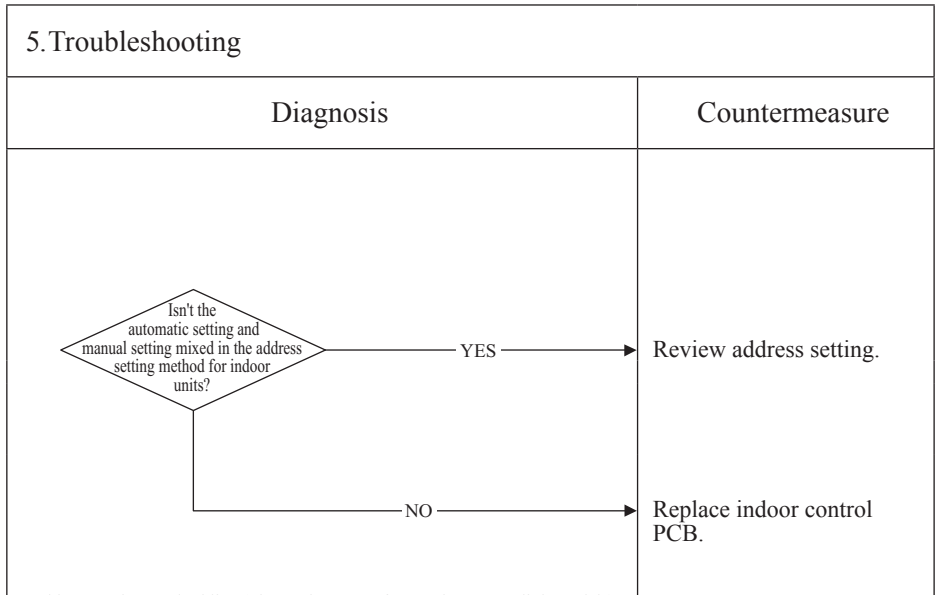
Error code Remote control: E12	LED	Green	Red	Content Address setting error by mixed setting method
	Indoor	Keeps flashing	Keeps flashing	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
Automatic address setting and manual address setting are mixed when setting address of indoor units.

3. Condition of error displayed
Same as above

4. Presumable cause
Mistake in address setting for indoor unit.



Address setting method list (Figures in [] are for previous Superlink models)

		Models for new Superlink protocol			Models for previous Superlink protocol		
		Indoor unit address setting		Outdoor unit address setting	Indoor unit address setting		Outdoor unit address setting
		Indoor unit No. SW	Outdoor unit No. SW	Outdoor unit No. SW	Indoor unit No. SW	Outdoor unit No. SW	Outdoor unit No. SW
Manual address setting	(New SL)	000-127	00-31	00-31	00-47	00-47	00-47
	(Previous SL)	[00-47]	[00-47]	[00-47]			
Automatic address setting for single refrigerant system	(New SL)	000	49	49	49	49	49
	(Previous SL)						
Automatic address setting for multiple refrigerant systems	(New SL)	000	49	00-31	Not available		
	(Previous SL)	Not available					

Note:

Error code Remote control: E16	LED	Green	Red	Content Indoor DC fan motor anomaly (FDT, FDTC, FDTW, FDTS, FDU, FDUM, FDUT71, FDK, FDE, FDFW, FDU-F series)
	Indoor	Keeps flashing	1(2)-time flash	
	Outdoor	Keeps flashing	Stays OFF	

Note (1) Value in () is for the FM2 only.

1. Applicable model
FDT, FDTC, FDTW, FDTS, FDU, FDUM, FDUT71, FDK, FDE, FDFW, FDU-F series only
2. Error detection method
Detected by rotation speed of indoor fan motor
3. Condition of Error displayed
<ul style="list-style-type: none"> When actual rotation speed of indoor fan motor drops to lower than 200min⁻¹ for 30 seconds continuously, the compressor and the indoor fan motor stop. After 2-seconds, it starts again automatically, but if this error occurs 4 times within 60 minutes after the initial detection.
4. Presumable cause
<ul style="list-style-type: none"> Defective indoor power (motor) PCB Defective indoor control PCB Foreign material at rotational area of fan propeller Defective fan motor Dust on control PCB Blown fuse External noise, surge

5. Troubleshooting	
Diagnosis	Countermeasure
<p>Does any foreign material intervene in rotational area of fan propeller?</p> <p>NO</p> <p>Does the fan rotate smoothly when turned by hand?</p> <p>NO</p> <p>YES</p> <p>Is DC280V detected between ①-④(①-③,⑥-④) of fan power PCB connector CNM? (1),(2)</p> <p>NO</p> <p>Is the fuse F1,F2,F3 blown?</p> <p>NO</p> <p>YES</p> <p>Is DC280V detected between ⑥-④ of motor control PCB connector CNM? (3)</p> <p>NO</p> <p>Power source reset</p> <p>Is it normalized? (Is DC280V detected between ⑥-④ of motor control PCB connector CNM?) (4)</p> <p>NO</p> <p>YES</p>	<p>Remove foreign material.</p> <p>Replace the fan motor.</p> <p>Check power voltage.</p> <p>Replace faulty fan motor and power PCB.</p> <p>Replace harness assy between motor PCB and power PCB.</p> <p>Replace fan motor. [If the error persists after replacing the fan motor, replace the indoor control PCB. (FDU224,280 and FDU1800,2400F (FM1) : Motor PCB)]</p> <p>Malfunction by temporary noise.</p>

Note:

Error code Remote control: E18	LED	Green	Red	Content
	Indoor	Keeps flashing	1-ime flash	
	Outdoor	Keeps flashing	Stays OFF	

Address setting error of master and slave indoor units

1. Applicable model

Heat recovery 3-pipe combination systems only
 (When the branch control is shared to operate indoor units in the same mode)

2. Error detection method

(1) When the address setting for the master indoor unit is not existing in the same Superlink system.
 (2) When the address setting for the slave indoor unit is set for the master indoor unit redundantly.

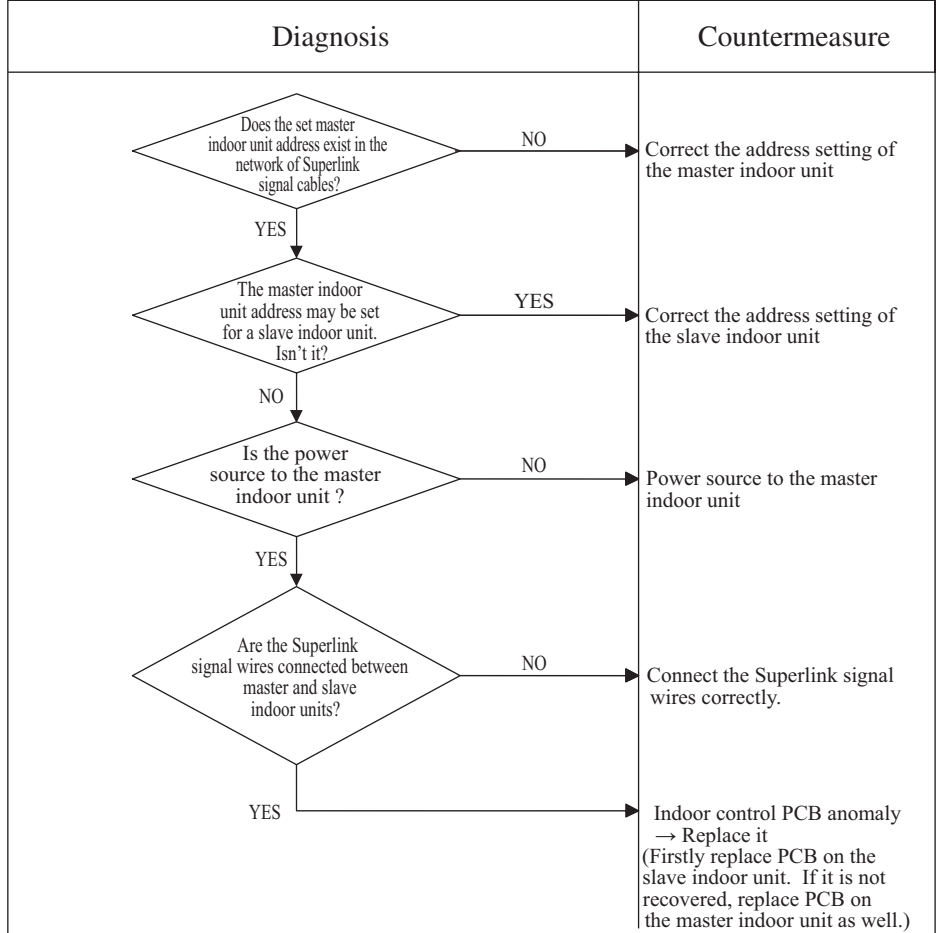
3. Condition of error displayed

Same as above

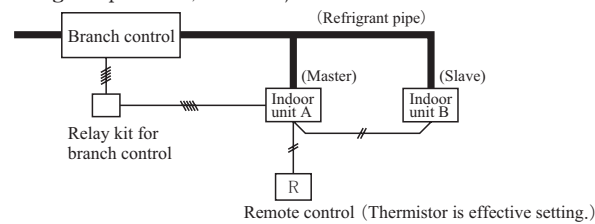
4. Presumable cause

- Address setting error of the master indoor unit
- No power source to the master indoor unit
- No connection of Superlink signal wires between master and slave indoor unit.
- PCB of master or slave unit, of both of them, is defective.

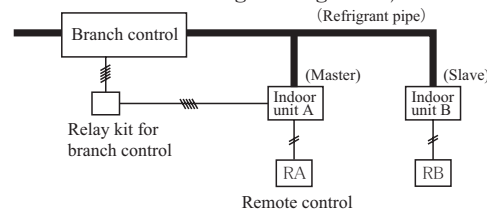
5. Troubleshooting



• Example of connection of indoor units, which are located at the downstream of branch control.
 ① Control of two or more indoor units with a remote control.
 (One remote control controls all indoor units at the same RUN/STOP, cooling/heating mode, setting temperature, or other.)



② One remote control is connected to each of master and slave indoor units.
 (The cooling/heating mode is set on the master indoor unit. It can be set individually for any mode other than the cooling/heating mode.)



Note:

Error code Remote control: E19	LED	Green	Red	Content Indoor unit operation check, drain motor check mode anomaly
	Indoor	Keeps flashing	1-time flash	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model	5. Troubleshooting		
All models	Diagnosis		Countermeasure
2. Error detection method	<pre> graph TD Start[E19 occurs when the power ON] --> Decision{Is SW7-1 on the indoor control PCB ON?} Decision -- NO --> Countermeasure1[Indoor control PCB anomaly (Anomalous SW7) -> Replace.] Decision -- YES --> Countermeasure2[Turn SW7-1 on the indoor control PCB OFF and reset the power.] </pre>		
E19 occurs			
3. Condition of error displayed	Same as above		
4. Presumable cause	Mistake in SW7-1 setting (Due to forgetting to turn OFF SW7-1 after indoor operation check)		

Note: Indoor operation check/drain pump check mode
 If the power is ON after SW7-1ON, indoor operation check/drain pump check mode can be established.
 1) When the communication between remote control and indoor PCB is established 15 seconds after power ON, it goes to indoor operation check.
 2) When the communication between remote control and indoor PCB is not established, it goes to drain pump check. (CnB connector should be open before power ON.)

Error code Remote control: E20	LED	Green	Red	Content Indoor DC fan motor rotation speed anomaly (FDT, FDTC, FDTW, FDTS, FDU, FDUM, FDUT71, FDK, FDE, FDFW, FDU-F series)
	Indoor	Keeps flashing	1(2)-time flash	
	Outdoor	Keeps flashing	Stays OFF	

Note (1) Value in () is for the FM2 only.

1. Applicable model
FDT, FDTC, FDTW, FDTS, FDU, FDUM, FDUT71, FDK, FDE, FDFW, FDU-F series only
2. Error detection method
Detected by rotation speed of indoor fan motor
3. Condition of Error displayed
<ul style="list-style-type: none"> When the actual fan rotation speed does not reach to the speed of [required speed -50 (FDU: -500) min⁻¹] after 2 minutes have been elapsed since the fan motor rotation speed command was output, the unit stops by detecting indoor fan motor anomaly.
4. Presumable cause
<ul style="list-style-type: none"> Defective indoor power (motor) PCB Defective indoor control PCB Foreign material at rotational area of fan propeller Defective fan motor Dust on control PCB Blown fuse External noise, surge

5. Troubleshooting	
Diagnosis	Countermeasure
<pre> graph TD D1{Does any foreign material intervene in rotational area of fan propeller?} -- YES --> C1[Remove foreign material.] D1 -- NO --> D2{Does the fan rotate smoothly when turned by hand?} D2 -- YES --> D3{Is DC280V detected between ①-④(①-③, ⑥-④) of fan power PCB connector CNM?} D2 -- NO --> C2[Replace the fan motor.] D3 -- YES --> D4{Is the fuse F1,F2,F3 blown?} D3 -- NO --> D5{Is DC280V detected between ⑥-④ of motor control PCB connector CNM?} D4 -- YES --> C3[Replace faulty fan motor and power PCB.] D4 -- NO --> C4[Check power voltage.] D5 -- YES --> R1[Power source reset] D5 -- NO --> C5[Replace harness assy between motor PCB and power PCB.] R1 --> D6{Is it normalized? (Is DC280V detected between ⑥-④ of motor control PCB connector CNM?)} D6 -- YES --> C6[Malfunction by temporary noise.] D6 -- NO --> C7[Replace fan motor. [If the error persists after replacing the fan motor, replace the indoor control PCB. (FDU224,280 and FDU1800,2400F (FM1) : Motor PCB)]] </pre>	

Note:

Error code Remote control: E21	LED	Green	Red	Content
	Indoor	Keeps flashing	1-time flash	
	Outdoor	Keeps flashing	Stays OFF	

Defective panel switch operation (FDT)

<p>1. Applicable model</p> <p>FDT series only</p>	<p>5. Troubleshooting</p>	
<p>2. Error detection method</p> <p>Panel switch (PS) has detected open for more than 1 second.</p>	<p style="text-align: center;">Diagnosis</p> <pre> graph TD Q1{Is grill opened?} -- YES --> C1[Reset the error and close the grill.] Q1 -- NO --> Q2{Does matter improve if panel switch is turned ON forcibly after resetting error?} Q2 -- YES --> C2[Insufficient push on the panel switch at the internal face of grill → Attach 3 mm thick rubber sheet at the section where the panel switch touches the inside of grill. Close then the grill.] Q2 -- NO --> Q3{Are connectors at right inserted properly?} Q3 -- NO --> C3[Disconnected, poorly connected connectors → Reinsert properly.] Q3 -- YES --> Q4{Is there continuity between #1 - #4 of CNV on indoor control PCB when panel switch operation is checked?} Q4 -- NO --> C4[• Defective panel switch or incorrect panel switch wiring → Replace panel switch. • Broken wire between panel PCB (CNV) → Correct or replace wire.] Q4 -- YES --> C5[Defective indoor control PCB → Replace indoor control PCB.] </pre>	<p style="text-align: center;">Countermeasure</p>
<p>3. Condition of Error displayed</p> <p>Same as above</p>		
<p>4. Presumable cause</p> <ul style="list-style-type: none"> • Defective panel switch • Disconnection of wiring • Defective indoor control PCB 		

Note:

Error code Remote control: E28	LED	Green	Red	Content Remote control temperature thermistor anomaly (Thc)
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	Stays OFF	

1. Applicable model
All models

2. Error detection method
Detection of anomalously low temperature (resistance) of thermistor (Thc).

3. Condition of error displayed
<ul style="list-style-type: none"> If -50°C or lower is detected for 5 seconds continuously, compressor stops. After 3-minutes delay, the compressor is restarted automatically, but if this anomaly occurs again within 60 minutes after the initial detection.

4. Presumable cause
<ul style="list-style-type: none"> Anomalous connection of remote control temperature thermistor Remote control temperature thermistor anomaly Remote control PCB anomaly

5. Troubleshooting

Diagnosis	Countermeasure																																																																								
<pre> graph TD Q1{Is the connector of thermistor connected properly?} -- NO --> C1[Insert the connector securely.] Q1 -- YES --> Q2{Are the characteristics of thermistor OK? Is the thermistor wire OK *1?} Q2 -- NO --> C2[Replace thermistor (Thc).] Q2 -- YES --> C3[Replace indoor control PCB.] </pre> <p>*1 Check several times to prove any poor connection.</p> <p>Temperature-resistance characteristics of remote control temperature thermistor (Thc).</p> <table border="1"> <thead> <tr> <th>Temperature (°C)</th> <th>Resistance (kΩ)</th> <th>Temperature (°C)</th> <th>Resistance (kΩ)</th> <th>Temperature (°C)</th> <th>Resistance (kΩ)</th> <th>Temperature (°C)</th> <th>Resistance (kΩ)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>65</td> <td>14</td> <td>33</td> <td>30</td> <td>16</td> <td>46</td> <td>8.5</td> </tr> <tr> <td>1</td> <td>62</td> <td>16</td> <td>30</td> <td>32</td> <td>15</td> <td>48</td> <td>7.8</td> </tr> <tr> <td>2</td> <td>59</td> <td>18</td> <td>27</td> <td>34</td> <td>14</td> <td>50</td> <td>7.3</td> </tr> <tr> <td>4</td> <td>53</td> <td>20</td> <td>25</td> <td>36</td> <td>13</td> <td>52</td> <td>6.7</td> </tr> <tr> <td>6</td> <td>48</td> <td>22</td> <td>23</td> <td>38</td> <td>12</td> <td>54</td> <td>6.3</td> </tr> <tr> <td>8</td> <td>44</td> <td>24</td> <td>21</td> <td>40</td> <td>11</td> <td>56</td> <td>5.8</td> </tr> <tr> <td>10</td> <td>40</td> <td>26</td> <td>19</td> <td>42</td> <td>9.9</td> <td>58</td> <td>5.4</td> </tr> <tr> <td>12</td> <td>36</td> <td>28</td> <td>18</td> <td>44</td> <td>9.2</td> <td>60</td> <td>5.0</td> </tr> </tbody> </table>	Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)	0	65	14	33	30	16	46	8.5	1	62	16	30	32	15	48	7.8	2	59	18	27	34	14	50	7.3	4	53	20	25	36	13	52	6.7	6	48	22	23	38	12	54	6.3	8	44	24	21	40	11	56	5.8	10	40	26	19	42	9.9	58	5.4	12	36	28	18	44	9.2	60	5.0	<p>Insert the connector securely.</p> <p>Replace thermistor (Thc).</p> <p>Replace indoor control PCB.</p>
Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)	Temperature (°C)	Resistance (kΩ)																																																																		
0	65	14	33	30	16	46	8.5																																																																		
1	62	16	30	32	15	48	7.8																																																																		
2	59	18	27	34	14	50	7.3																																																																		
4	53	20	25	36	13	52	6.7																																																																		
6	48	22	23	38	12	54	6.3																																																																		
8	44	24	21	40	11	56	5.8																																																																		
10	40	26	19	42	9.9	58	5.4																																																																		
12	36	28	18	44	9.2	60	5.0																																																																		

Note: After 10 seconds has elapsed since remote control temperature thermistor was switched from invalid to valid, E28 will not be displayed even if the thermistor harness is disconnected or broken. However, in such case, the indoor return air temperature thermistor (ThI-A) will be valid instantly instead of the remote control temperature thermistor (Thc). Please note that even though the remote control temperature thermistor (Thc) is valid, the displayed return air temperature on the remote control LCD shows the value detected by the indoor return air temperature thermistor (ThI-A), not by the remote control temperature thermistor (Thc).

Error code Remote control: E63 7-segment display: E63	LED	Green	Red	Content <h2 style="text-align: center;">Emergency stop</h2>
	Indoor	Keeps flashing	Stays OFF	
	Outdoor	Keeps flashing	1-time flash	

1. Applicable model
All models

2. Error detection method
When ON signal is inputted to the CnT terminal of indoor unit control PCB.

3. Condition of error displayed
Same as above

4. Presumable cause
Factors for emergency stop

5. Troubleshooting	
Diagnosis	Countermeasure
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Save data for 30 minutes before stopping in Mente PC.</div> <pre> graph TD A{Is the remote control setting of Emergency Stop "Valid"?} -- NO --> B[Replace remote control PCB.] A -- YES --> C{Is ON signal inputted to the CnT terminal of indoor unit control PCB?} C -- NO --> D[Replace indoor unit control PCB.] C -- YES --> E[Check the cause of emergency stop. (It is better to have the data for 30 minutes before stopping, when instructing the installer)] </pre>	
	Check and save the data of operating conditions. Check the conditions whether it occurs immediately after the power on or during operation.

Note: Indoor unit detected emergency stop signal gives command "all stop"

11.3 Instruction of how to replace PCB

(1) Control PCB

(a) FDT, FDTW, FDTs, FDU, FDUM, FDTU71, FDE, FDU-F series

PSB012D991B

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.
 - WARNING** Wrong installation would cause serious consequences such as injuries or death.
 - CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

WARNING

- Replacement should be performed by the specialist. If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions. Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Start the work after elapsing 1 minutes or more from power off. Replacement during the applying the current would cause the electric shock, unit failure or improper running. It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement. Defectiveness of replacement may cause electric shock or fire.

CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

Replace and set up the PCB according to this instruction.

(i) Set to an appropriate address and function using switch on PCB.

Select the same setting with the removed PCB.

Item	Switch	Content of control	
Address	SW1,2 (Blue)	Indoor unit address : 00~99	
	SW5-2	OFF	Indoor unit address : under 100
		ON	Indoor unit address : 100 or more
	SW3,4 (Green)	Outdoor unit address	

Item	Switch	Content of control	
Superlink setting	SW5-1	OFF	Automatic adjustment
		ON	Fixed previous version of Superlink protocol
Test run	SW7-1	OFF	Normal
		ON	Operation check/drain motor test run

(ii) Set to an appropriate capacity using the model selector switches (SW6, 8 and J1).

Select the same setting with the removed PCB.

Setting model	SW6				SW8	J1
	-1	-2	-3	-4	-1	
15	OFF	OFF	OFF	OFF	ON	OPEN
22	OFF	OFF	OFF	OFF	OFF	OPEN
28	ON	OFF	OFF	OFF	OFF	OPEN
36	OFF	ON	OFF	OFF	OFF	OPEN
45	OFF	OFF	ON	OFF	OFF	OPEN

Setting model	SW6				SW8	J1
	-1	-2	-3	-4	-1	
56	OFF	ON	ON	OFF	OFF	OPEN
71	OFF	OFF	OFF	ON	OFF	OPEN
90	OFF	ON	OFF	ON	OFF	OPEN

Setting model	SW6				SW8	J1
	-1	-2	-3	-4	-1	
112	ON	ON	OFF	ON	OFF	OPEN
140	OFF	OFF	ON	ON	OFF	OPEN
160	ON	OFF	ON	ON	OFF	OPEN
224	OFF	ON	ON	ON	OFF	OPEN
280	ON	ON	ON	ON	OFF	OPEN



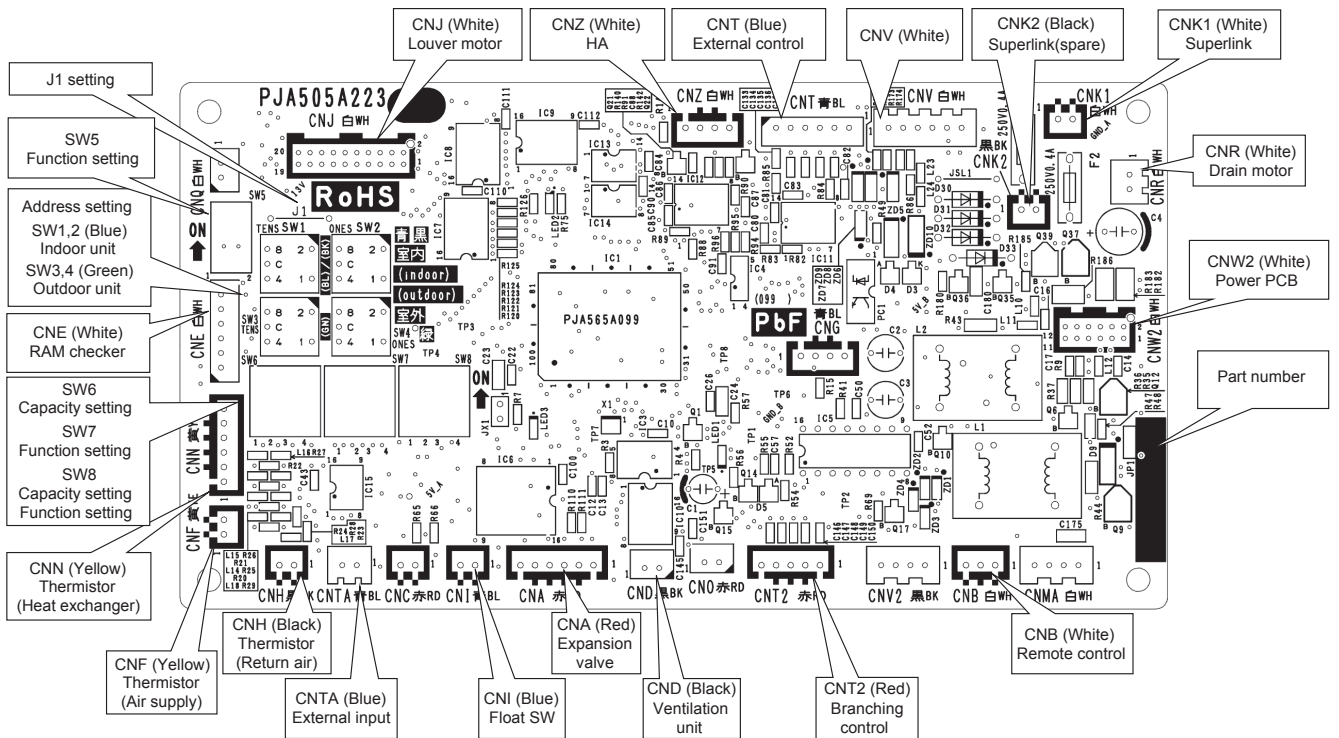
Example setting for 56

(iii) Replace the PCB

- 1) Exchange PCB after detaching all connectors connected with the PCB.
- 2) Fix the PCB so as not to pinch the wirings.
- 3) Connect connectors to the PCB. Match the wiring connector to the connector color on the PCB and connect it.
- 4) Match the setting switches (include "J1") with the former PCB.

(iv) Control PCB

Parts mounting are different by the kind of PCB.



(b) FDTC series

PSB012D977D

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
- Both mentions the important items to protect your health and safety so strictly follow them by any means.
- ⚠ WARNING** Wrong installation would cause serious consequences such as injuries or death.
- ⚠ CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist.
- If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
- Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work.
- Replacement during the applying the current would cause the electric shock, unit failure or improper running.
- It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
- Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
- Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

Replace and set up the PCB according to this instruction.

- (i) Set to an appropriate address and function using switch on PCB.
Select the same setting with the removed PCB.

Item	Switch	Content of control
Address	SW1,2 (Blue)	Indoor unit address : 00-99
	SW5-2	OFF Indoor unit address : under 100
		ON Indoor unit address : 100 or more
SW3,4 (Green)	Outdoor unit address	
Item	Switch	Content of control
Superlink setting	SW5-1	OFF Automatic adjustment
		ON Fixed previous version of Superlink protocol
Testrun	SW7-1	OFF Normal
		ON Operation check/drain motor test run

- (ii) Set to an appropriate capacity using the model selector switches (SW6 and J1).
Select the same setting with the removed PCB.

SW6	-1	-2	-3	-4	J1
15	OFF	OFF	OFF	OFF	OPEN
22	OFF	OFF	OFF	OFF	OPEN
28	ON	OFF	OFF	OFF	OPEN
36	OFF	ON	OFF	OFF	OPEN
45	OFF	OFF	ON	OFF	OPEN
SW6	-1	-2	-3	-4	J1
140	OFF	OFF	ON	ON	OPEN
160	ON	OFF	ON	ON	OPEN
224	OFF	ON	ON	ON	OPEN
280	ON	ON	ON	ON	OPEN

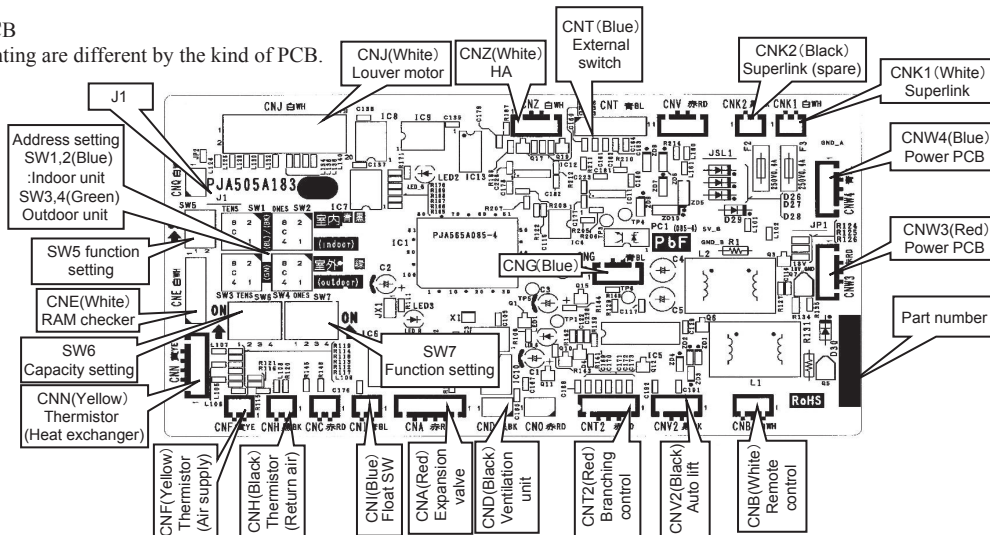


- (iii) Replace the PCB

- 1) Fix the PCB so as not to pitch the cords.
- 2) Connect connectors to the PCB. Connect a cable connector with the PCB connector of the same color.
- 3) Do not pass CPU surrounding about wirings.

- (iv) Control PCB

Parts mounting are different by the kind of PCB.





(c) FDTQ, FDUT15-56, FDUH, DFLL, FDFU series

PSB012D975B

PSB012D975F

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
- Both mentions the important items to protect your health and safety so strictly follow them by any means.
-  **WARNING** Wrong installation would cause serious consequences such as injuries or death.
-  **CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

Replace and set up the PCB according to this instruction.

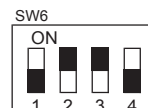
- (i) Set to an appropriate address and function using switch on PCB.
Select the same setting with the removed PCB.

Item	Switch	Content of control
Address	SW1,2 (Blue)	Indoor unit address : 00-99
	SW5-2	OFF Indoor unit address : under 100
		ON Indoor unit address : 100 or more
SW3,4 (Green)	Outdoor unit address	
Item	Switch	Content of control
Superlink setting	SW5-1	OFF Automatic adjustment
		ON Fixed previous version of Superlink protocol
Testrun	SW7-1	OFF Normal
		ON Operation check/drain motor test run

- (ii) Set to an appropriate capacity using the model selector switches (SW6 and J1).
Select the same setting with the removed PCB.

SW6	-1	-2	-3	-4	J1	SW6	-1	-2	-3	-4	J1
15	OFF	OFF	OFF	OFF	OPEN	56	OFF	ON	ON	OFF	OPEN
22	OFF	OFF	OFF	OFF	OPEN	71	OFF	OFF	OFF	ON	OPEN
28	ON	OFF	OFF	OFF	OPEN	80	ON	OFF	OFF	ON	OPEN
36	OFF	ON	OFF	OFF	OPEN	90	OFF	ON	OFF	ON	OPEN
45	OFF	OFF	ON	OFF	OPEN	112	ON	ON	OFF	ON	OPEN

SW6	-1	-2	-3	-4	J1
140	OFF	OFF	ON	ON	OPEN
160	ON	OFF	ON	ON	OPEN
224	OFF	ON	ON	ON	OPEN
280	ON	ON	ON	ON	OPEN



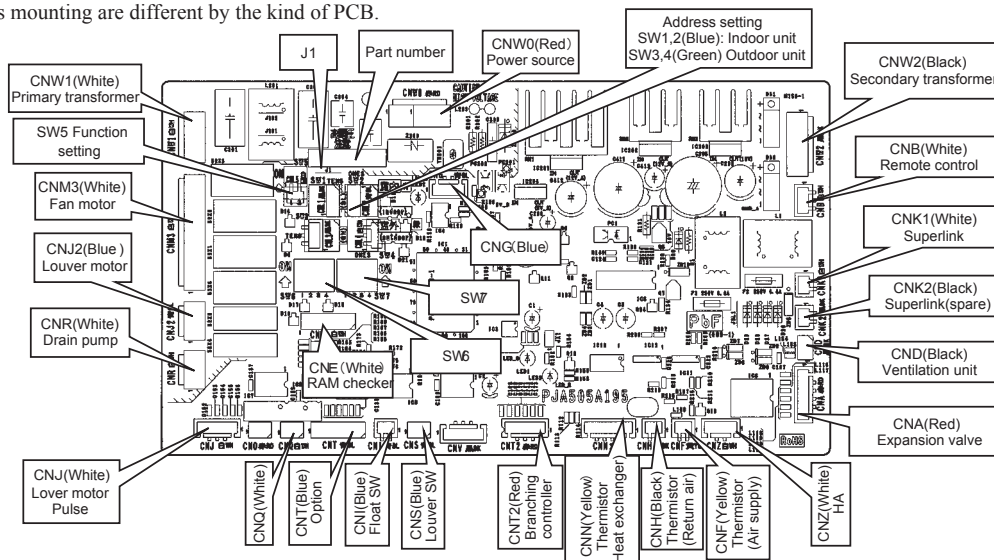
Example setting for 56

- (iii) Replace the PCB

- 1) Fix the PCB so as not to pitch the cords.
- 2) Connect connectors to the PCB. Connect a cable connector with the PCB connector of the same color.
- 3) Do not pass CPU surrounding about wirings.

- (iv) Control PCB

Parts mounting are different by the kind of PCB.



(d) FDK series

PHA012D046

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
Both mentions the important items to protect your health and safety so strictly follow them by any means.
- | | |
|---|----------------|
| ⚠ | WARNING |
|---|----------------|

 Wrong installation would cause serious consequences such as injuries or death.
- | | |
|---|----------------|
| ⚠ | CAUTION |
|---|----------------|

 Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

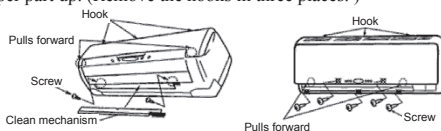
- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

(i) Remove the PCB

Remove the control box and replace the PCB after the front panel is removed.

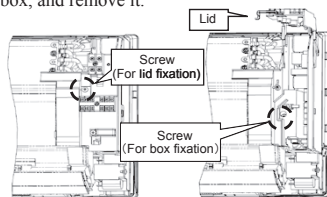
<Remove the front panel>

- Remove the clean mechanism. (FDK28, 36, 45KXE6 Only)
- Remove 7 set screws.
- Float short the lower side of front panel. Next, Remove it to push the upper part up. (Remove the hooks in three places.)



<Remove the control box>

- Remove the screw for Lid fixation.
- Raise the Lid, and remove the screw for box fixation.
- Pull short the control box, and remove it.



(ii) Set to an appropriate address and function using switch on PCB.

Select the same setting with the removed PCB.

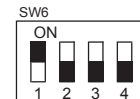
Item	Switch	Content of control
Address	SW1,2	Indoor unit address : 0-99
	SW5-2 OFF	Indoor unit address : under 100
	ON	Indoor unit address : 100 or more
	SW3,4	Outdoor unit address
Superlink setting	SW5-1 OFF	Automatic adjustment
	ON	Fixed previous version's superlink
Test run	SW7-1 OFF	Normal
	ON	Operation check/drain motor test run
Japan/Export	J1 OFF	Export
	ON	Japan

(iii) Set to an appropriate capacity using the model selector switch (SW6).

Set capacity by SW6.

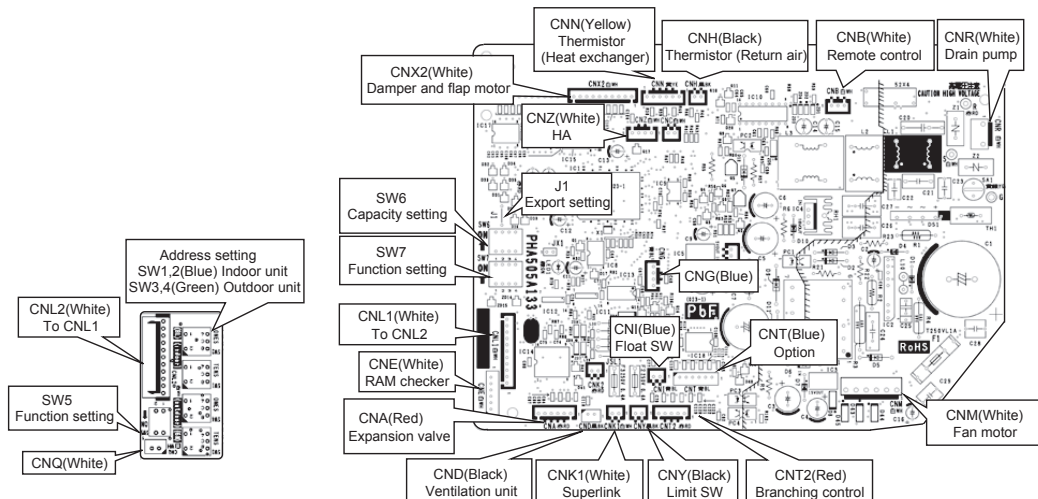
Select the same setting with the removed PCB.

SW6	-1	-2	-3	-4
28	ON	OFF	OFF	OFF
36	OFF	ON	OFF	OFF
45	OFF	OFF	ON	OFF
71	OFF	OFF	OFF	ON



Example setting for 28

(iv) Control PCB



(e) FDTW series

PGF012D003A

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.

- ⚠ WARNING Wrong installation would cause serious consequences such as injuries or death.
- ⚠ CAUTION Wrong installation might cause serious consequences depending on circumstances.

- After completing the replacement, do commissioning to confirm there are no abnormalities.

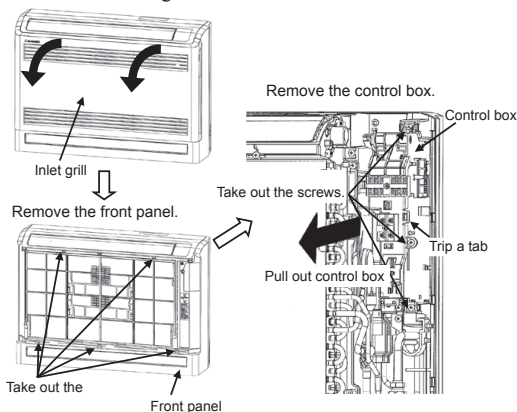
⚠ WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

- (i) Remove the PCB
Remove the inlet grill.

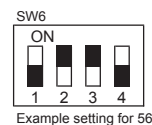


- (ii) Set to an appropriate address and function using switch on PCB
Select the same setting with the removed PCB.

Item	Switch	Content of control	
Address	SW1,2(Blue)	Indoor unit address : 00—99	
	SW5-2	OFF	Indoor unit address : under 100
		ON	Indoor unit address : 100 or more
	SW3,4(Green)	Outdoor unit address	
Superlink setting	SW5-1	OFF	Automatic adjustment
		ON	Fixed previous version of Superlink
Test run	SW7-1	OFF	Normal
		ON	Operation check/drain motor test run

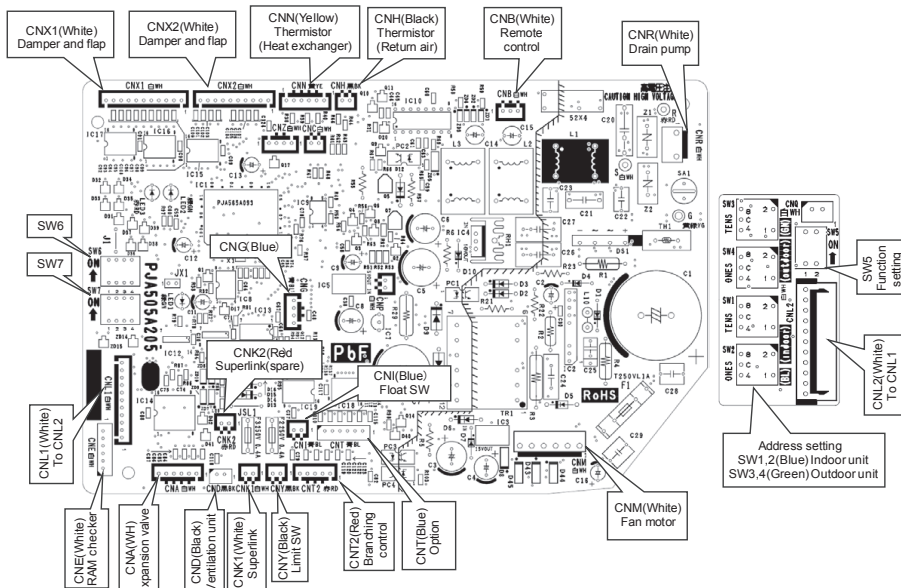
- (iii) Set to an appropriate capacity using the model selector switch(SW6)
Select the same capacity with the PCB removed from the unit.

SW6	-1	-2	-3	-4
22	OFF	OFF	OFF	OFF
28	ON	OFF	OFF	OFF
36	OFF	ON	OFF	OFF
45	OFF	OFF	ON	OFF
56	OFF	ON	ON	OFF



- (iv) Replace the PCB
- 1) Fix the PCB so as not to pitch the cords.
 - 2) Connect connectors to the PCB. Connect a cable connector with the PCB connector of the same color.
 - 3) Do not pass CPU surrounding about wirings.

- (v) Control PCB
The position of the connector and the switch is shown as follows.



(2) Power PCB
(a) FDT, FDTS, FDUM22-71, FDUT, FDE series

PSB012D992

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- **WARNING** Wrong installation would cause serious consequences such as injuries or death.
- **CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

WARNING

- Replacement should be performed by the specialist.
 If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
 Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Start the work after elapsing 1 minutes or more from power off.
 Replacement during the applying the current would cause the electric shock, unit failure or improper running.
 It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
 Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
 Defectiveness of replacement may cause electric shock or fire.

CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

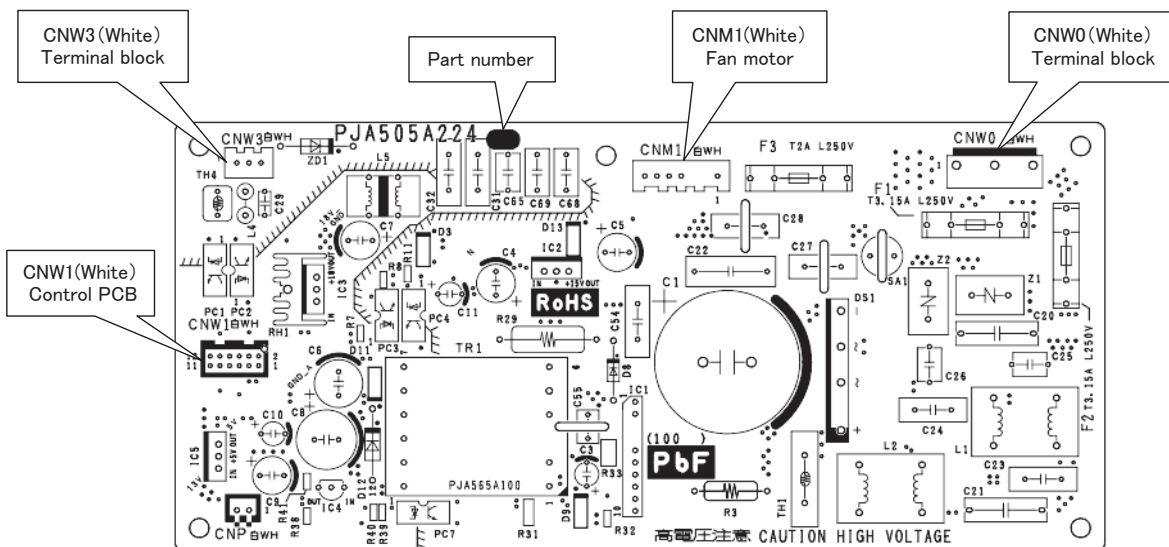
This PCB is a general PCB. Replace the PCB according to this instruction.

(i) Replace the PCB

- Unscrew terminal of the wiring(yellow/green) connected to terminal block (CNW0) from the box.
- Replace the PCB only after all the wirings connected to the connector are removed.
- Fix the board such that it will not pinch any of the wires.
- Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- Screw back the terminal of wiring, that was removed in a).

(ii) Power PCB

Parts mounting are different by the kind of PCB.



(b) FDTC series

PSB012D953A

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.

- ⚠ WARNING Wrong installation would cause serious consequences such as injuries or death.
- ⚠ CAUTION Wrong installation might cause serious consequences depending on circumstances.

- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist. If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions. Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Replacement during the applying the current would cause the electric shock, unit failure or improper running. It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement. Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

This PCB is a general PCB. Replace the PCB according to this instruction.

(i) Replace the PCB (refer to right dwg.)

- Unscrew terminal of the wiring (yellow/green) soldered to PCB from the box.
 - Cut the band that binds the wiring (red and blue) from connector CNW1 and CNW2, and the wiring (yellow/green) from PCB (T2/T3).
- (Note 1)
(However, do not cut the band that binds only the red and blue wirings.)
- Replace the PCB only after all the wirings connected to the connector are removed.
 - Fix the board such that it will not pinch any of the wires.
 - Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB. (Note 2)
 - Let the wiring (red and blue) pass beneath the (yellow/green) wiring and bind together with band.
 - Screw back the terminal of wiring (yellow/green) from PCB (T1, T2/T3), that was removed in a).

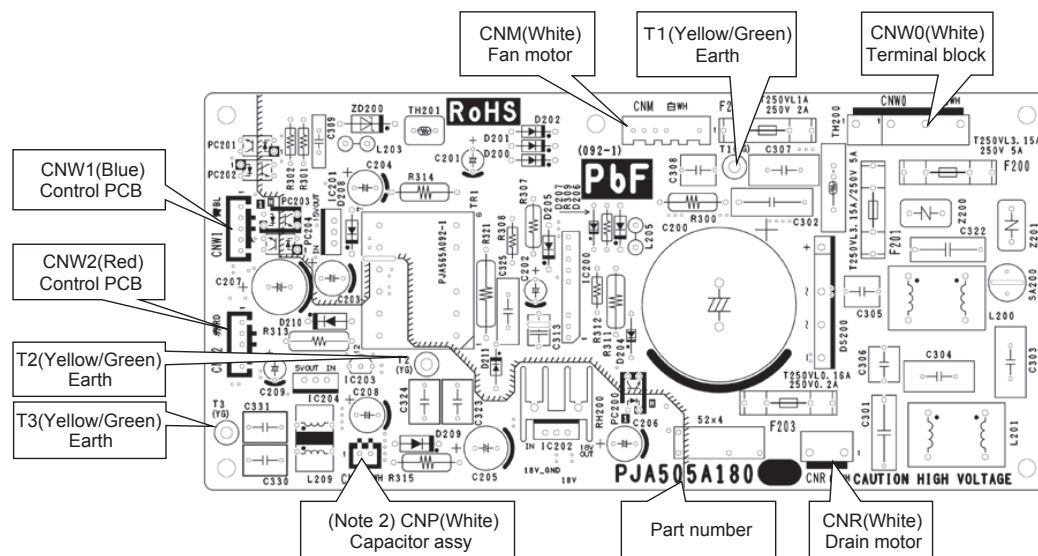
In that case, do not place the crimping part of the wiring under the PCB.

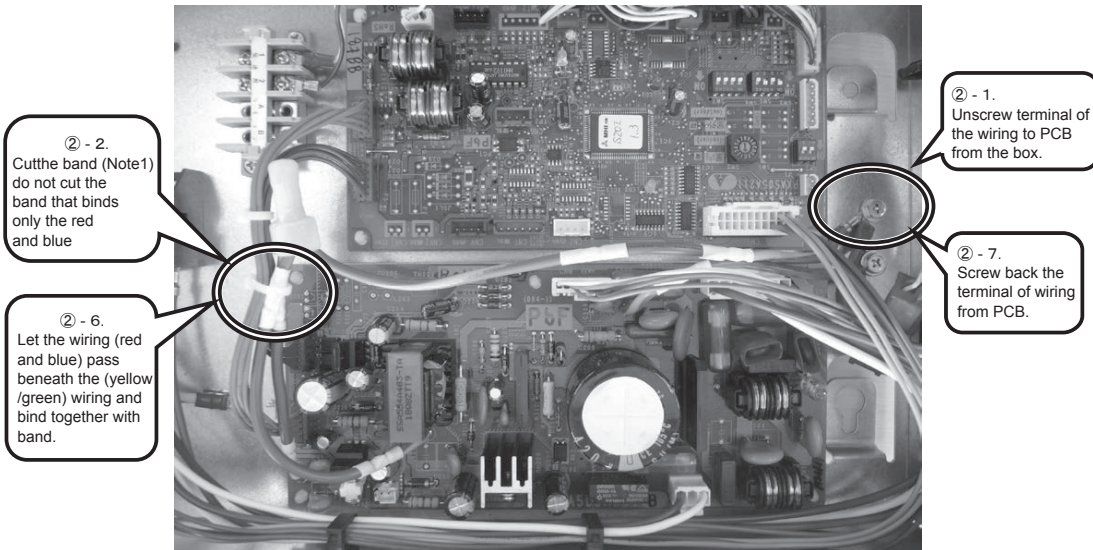
Note 1 : It might not be applicable on some models.

Note 2 : After replacing PCB, connection between capacitor assy and connector CNP is **no longer needed**.

(ii) Power PCB

Parts mounting are different by the kind of PCB.





(c) FDTW, FDUM90-160 series

PSB012D993

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.

⚠ WARNING

Wrong installation would cause serious consequences such as injuries or death.

⚠ CAUTION

Wrong installation might cause serious consequences depending on circumstances.

- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist. If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions. Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Replacement during the applying the current would cause the electric shock, unit failure or improper running. It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement. Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

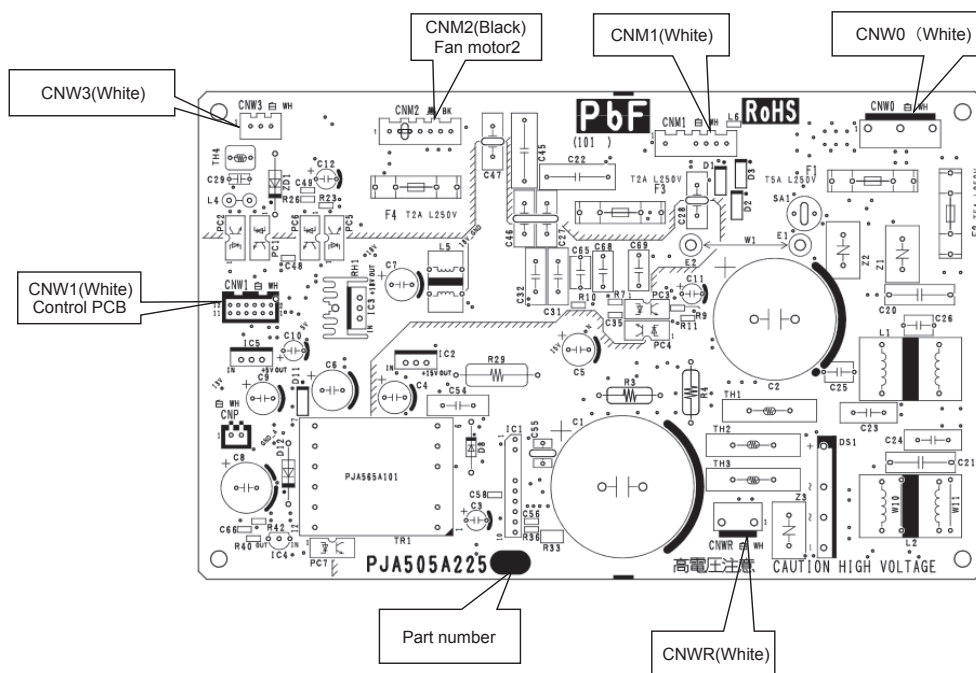
This PCB is a general PCB. Replace the PCB according to this instruction.

(i) Replace the PCB

- Unscrew terminal of the wiring (yellow/green) connected to terminal block (CNW0) from the box.
- Replace the PCB only after all the wirings connected to the connector are removed.
- Fix the board such that it will not pinch any of the wires.
- Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- Screw back the terminal of wiring, that was removed in a).

(ii) Power PCB

Parts mounting are different by the kind of PCB.



(d) FDU45-160 series

PSC012D021

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.



WARNING Wrong installation would cause serious consequences such as injuries or death.



CAUTION Wrong installation might cause serious consequences depending on circumstances.

- After completing the replacement, do commissioning to confirm there are no abnormalities.

WARNING

- Replacement should be performed by the specialist. If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions. Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Replacement during the applying the current would cause the electric shock, unit failure or improper running. It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement. Defectiveness of replacement may cause electric shock or fire.

CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

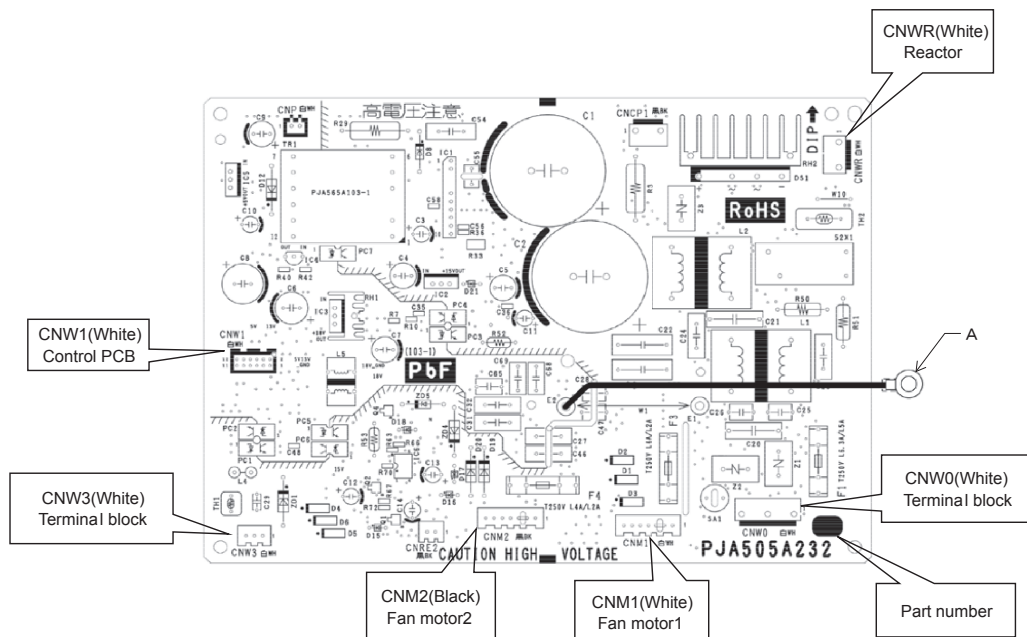
This PCB is a general PCB. Replace the PCB according to this instruction.

(i) Replace the PCB

- Unscrew terminal (Arrow A) of the "E2" wiring (yellow/green) that is connected to PCB.
- Replace the PCB only after all the wirings connected to the connector are removed.
- Fix the board such that it will not pinch any of the wires.
- Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- Screw back the terminal (Arrow A) of the "E2" wiring, that was removed in a).

(ii) Power PCB



Parts mounting are different by the kind of PCB.



(e) FDU224, 280, FDU1800, 2400F series

PSC012D035

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means.
 -  **WARNING** Wrong installation would cause serious consequences such as injuries or death.
 -  **CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Start the work after elapsing 1 minutes or more from power off.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

CAUTION

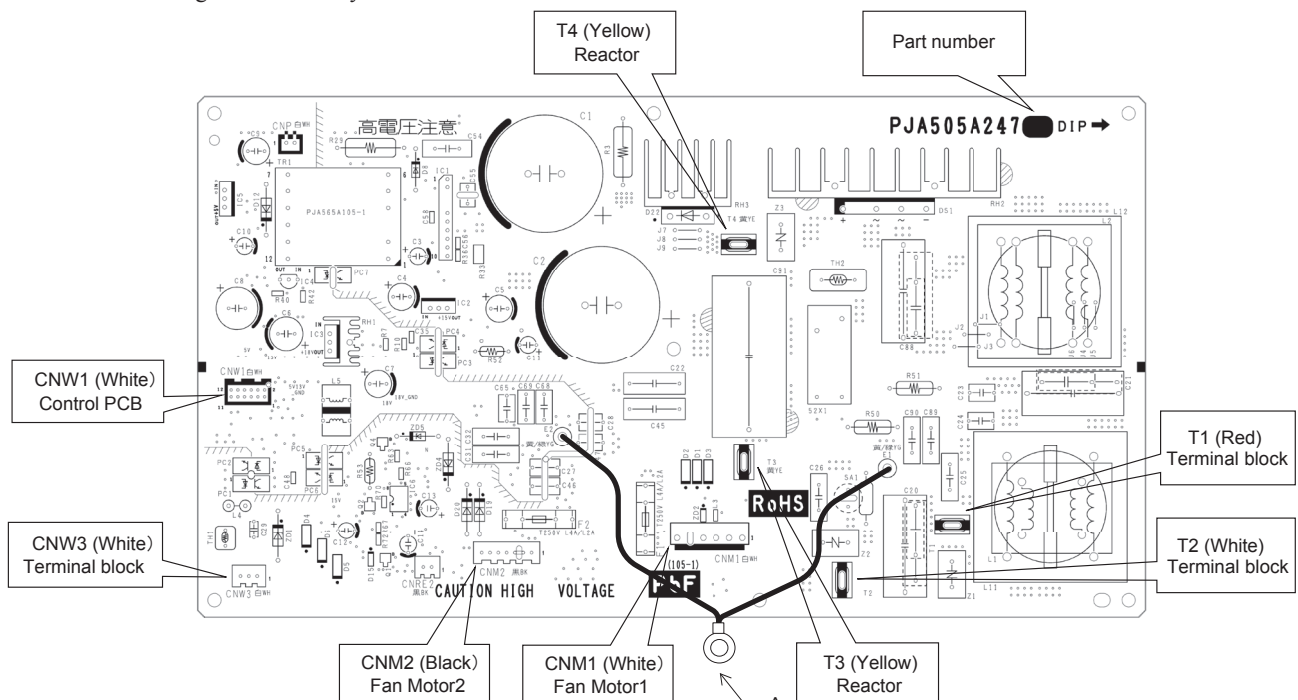
- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

(1) Replace the PCB

- a) Unscrew terminal(Arrow A) of the "E1, E2" wiring(yellow/green) that is connected to PCB.
- b) Replace the PCB only after all the wirings connected to the connector are removed.
- c) Fix the board such that it will not pinch any of the wires.
- d) Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- e) Screw back the terminal(Arrow A) of the "E1, E2" wiring, that was removed in a).

(2) Power PCB

Parts mounting are different by the kind of PCB.



SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
Both mentions the important items to protect your health and safety so strictly follow them by any means.
- ⚠ **WARNING** Wrong installation would cause serious consequences such as injuries or death.
- ⚠ **CAUTION** Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Start the work after elapsing 1 minutes or more from power off.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

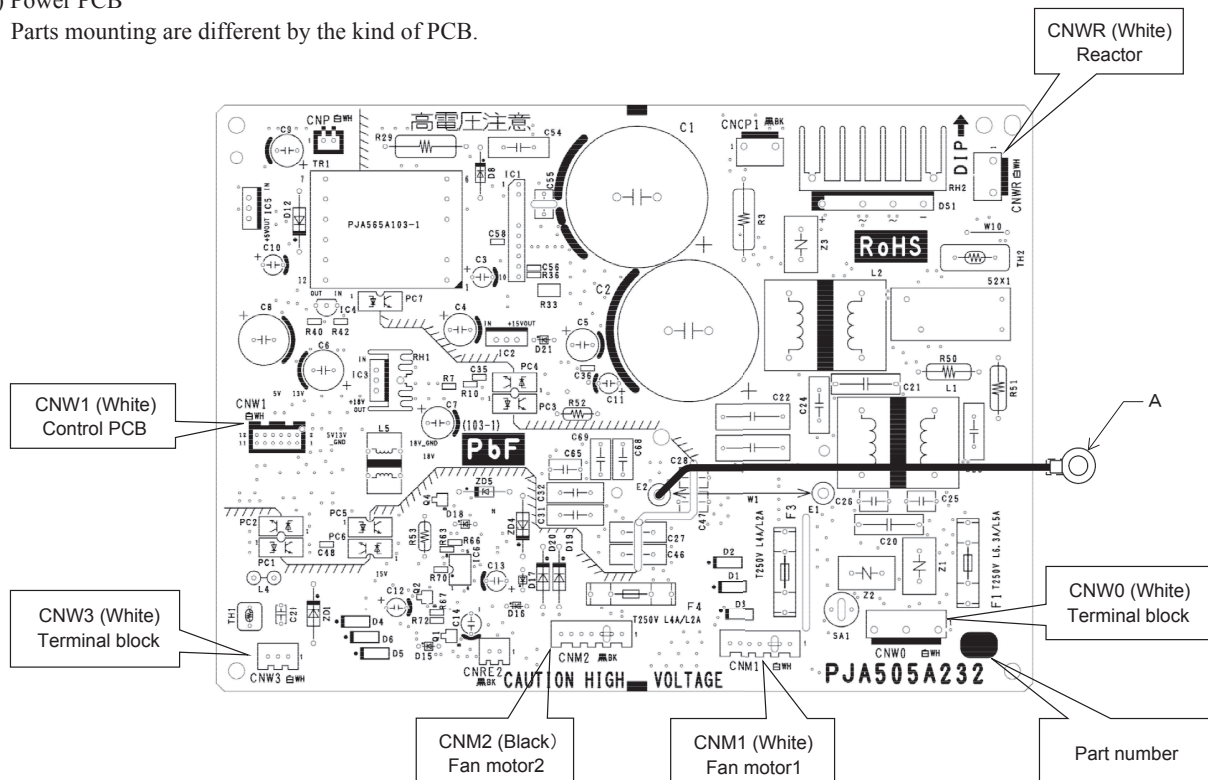
This PCB is a general PCB. Replace the PCB according to this insytruction.

(1) Replace the PCB

- a) Unscrew terminal(Arrow A) of the "E2" wiring(yellow/green) that is connected to PCB.
- b) Replace the PCB only after all the wirings connected to the connector are removed.
- c) Fix the board such that it will not pinch any of the wires.
- d) Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- e) Screw back the terminal(Arrow A) of the "E2" wiring, that was removed in a).

(2) Power PCB

Parts mounting are different by the kind of PCB.



(3) Fan motor control PCB (FDU224, 280, FDU1800, 2400F only)

PSC012D036

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION.
Both mentions the important items to protect your health and safety so strictly follow them by any means.
- | | |
|---|----------------|
| ⚠ | WARNING |
|---|----------------|

 Wrong installation would cause serious consequences such as injuries or death.
- | | |
|---|----------------|
| ⚠ | CAUTION |
|---|----------------|

 Wrong installation might cause serious consequences depending on circumstances.
- After completing the replacement, do commissioning to confirm there are no abnormalities.

⚠ WARNING

- Replacement should be performed by the specialist.
If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire.
- Replace the PCB correctly according to these instructions.
Improper replacement may cause electric shock or fire.
- Shut off the power before electrical wiring work. Start the work after elapsing 1 minutes or more from power off.
Replacement during the applying the current would cause the electric shock, unit failure or improper running.
It would cause the damage of connected equipment such as fan motor, etc.
- Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connections or hold could result in abnormal heat generation or fire.
- Check the connection of wiring to PCB correctly before turning on the power, after replacement.
Defectiveness of replacement may cause electric shock or fire.

⚠ CAUTION

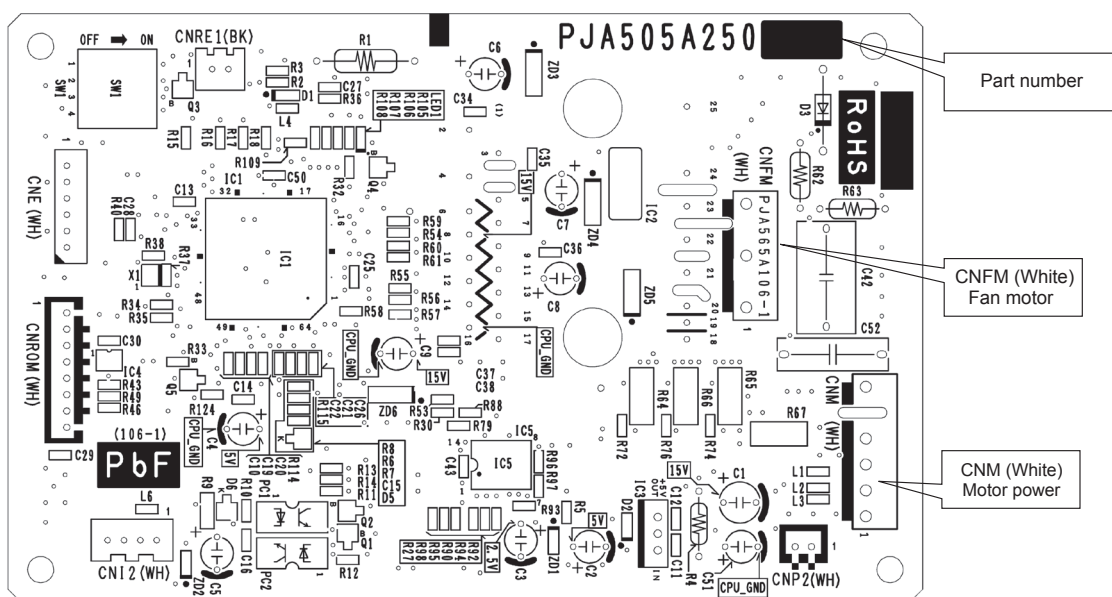
- In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction.
- Insert connector securely, and hook stopper. It may cause fire or improper running.
- Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

(1) Replace the PCB

- Take off the connection of connector and remove the screw of power transistor then remove the PCB.
Wipe off the silicon grease neatly on the controller's radiation heat fins.
- Before installing the power transistor on the new PCB, **apply uniformly a bundled of silicon grease** first on the surface of power transistor.
Make sure it is applied to prevent **damage on power transistor**, and install the PCB not to pinch the wirings.
- Tighten the screw of power transistor and reconnect the wirings to the PCB.
Confirm the connection and don't use soldering in the connection.
Tighten properly the power transistor with a screw and make sure there is no slack.
Power transistor can be damage if not properly tighten. (Recommended power transistor tightening torque: 0.59-0.78N·m)

(2) Fan motor control PCB

Parts mounting are different by the kind of PCB.



10.4 Indoor PCB setting

Code	Input	Default setting		Remarks
SW1	Indoor unit address No.(Order of 10)	0		0-9
SW2	Indoor unit address No.(Order of 1)	0		0-9
SW3	Outdoor unit address No.(Order of 10)	4		0-9
SW4	Outdoor unit address No.(Order of 1)	9		0-9
SW5-1	Superlink selection	Automatic*/Previous SL	OFF	Automatic
SW5-2	Indoor unit address No.(Order of 100)	OFF	0	OFF : 0, ON : 1
SW6-1	Model selection	As per model		See table 1
SW6-2				
SW6-3				
SW6-4				
SW8-1				
SW7-1	Test run, Drain motor	Normal*/Test run	OFF	Normal
SW7-2	Reserved		OFF	Keep OFF
SW7-3	Spare		OFF	Keep OFF
SW7-4	Reserved		OFF	Keep OFF
JSL1	Superlink terminal spare	Normal*/switch to spare	With	Normal

*Default setting

Table 1

■Model selection with SW6-1 - SW6-4 and SW8-1

	P15	P22	P28	P36	P45	P56	P71	P90	P112	P140	P160
SW6-1	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
SW6-2	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	ON	OFF	OFF
SW6-3	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	ON	ON
SW6-4	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON
SW8-1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

	P224	P280
SW6-1	OFF	ON
SW6-2	ON	ON
SW6-3	ON	ON
SW6-4	ON	ON
SW8-1	OFF	OFF

12. OPTION PARTS

12.1 Wireless kit



(1) FDT series (RCN-T-36W-E)

PJF012D010

The FDT series is an exclusive series with all wired models. However, these models can also be used wireless units by using the option wireless kit.




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 wireless 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) Uneven surface (7) Places affected by the direct airflow 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
---	--
- DO NOT leave the wireless kit without the cover.
In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust. 

Attention

- Instruct the customer how to operate it correctly referring to the instruction manual.
- User's manual of a wireless remote control is attached to a indoor unit or a outside unit.
- Read this together with a manual attached to this kit.

Notes:






Following functions of indoor unit series are not able to be set with this wireless remote control.
4-fan speed setting (PHi/Hi/Me/Lo) → 3-fan speed setting (Hi/Me/Lo)

(a) **Wireless kit model**

Model
RCN-T-36W-E

(b) **Accessories**

Please make sure that you have all of the following accessories.

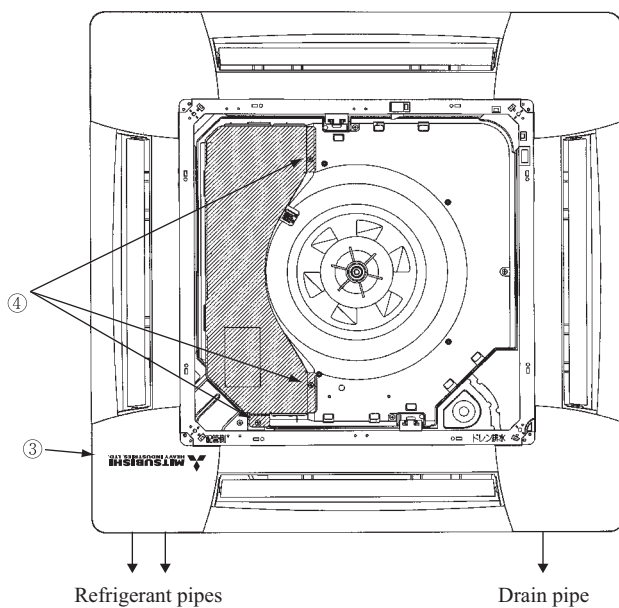
Receiver		1	Wireless remote control holder		1
Wireless remote control		1	Wood screw for holder		2
Parts set		1	AAA dry cell battery (RO3)		2

(c) **How to install the receiver**

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

- ① Attach the decorative panel onto the air-conditioner according to the installation manual for the panel.
- ② Remove the air return grille.
- ③ Remove a corner panel located on the refrigerant pipes side.
- ④ Remove three screws and detach the cover (indicated as shadowed area) from the control box of the air-conditioner.

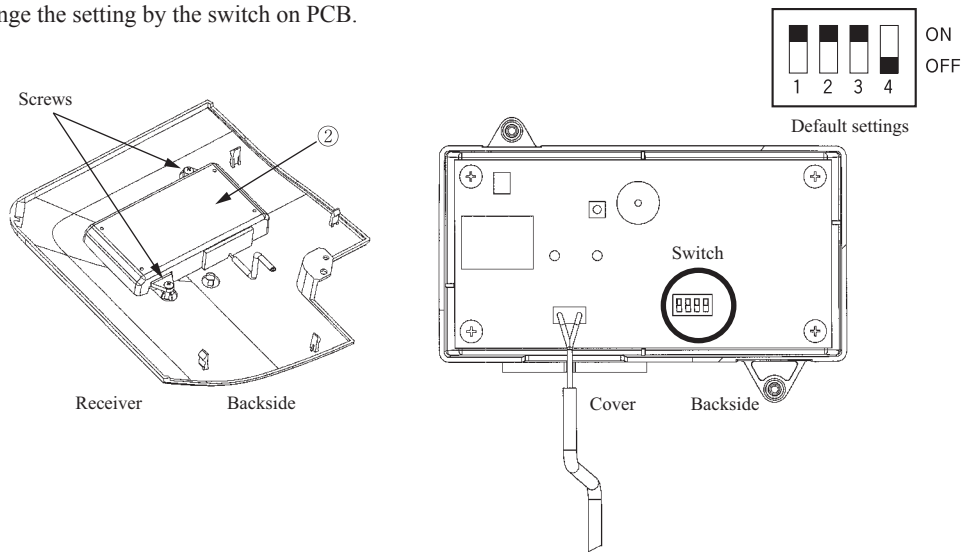


Setting on site

- ① PCB on the receiver has the following switches to set the functions. Default setting is shown with mark.

SW1	Customized signal setting to avoid mixed communication	<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 valid/Invalid	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
SW4	Auto restart	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid

- ② Remove the cover by unscrewing two screws from the back of receiver.
- ③ Change the setting by the switch on PCB.



- ④ When SW1 is turned to OFF position, change the corresponding remote control setting as follows:

How to change the remote control setting

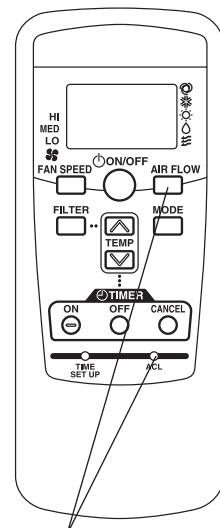
Pressing **ACL** and **AIR FLOW** button at the same time or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Note

* When the batteries are removed, the setting will return to the default setting. Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air-conditioner.)

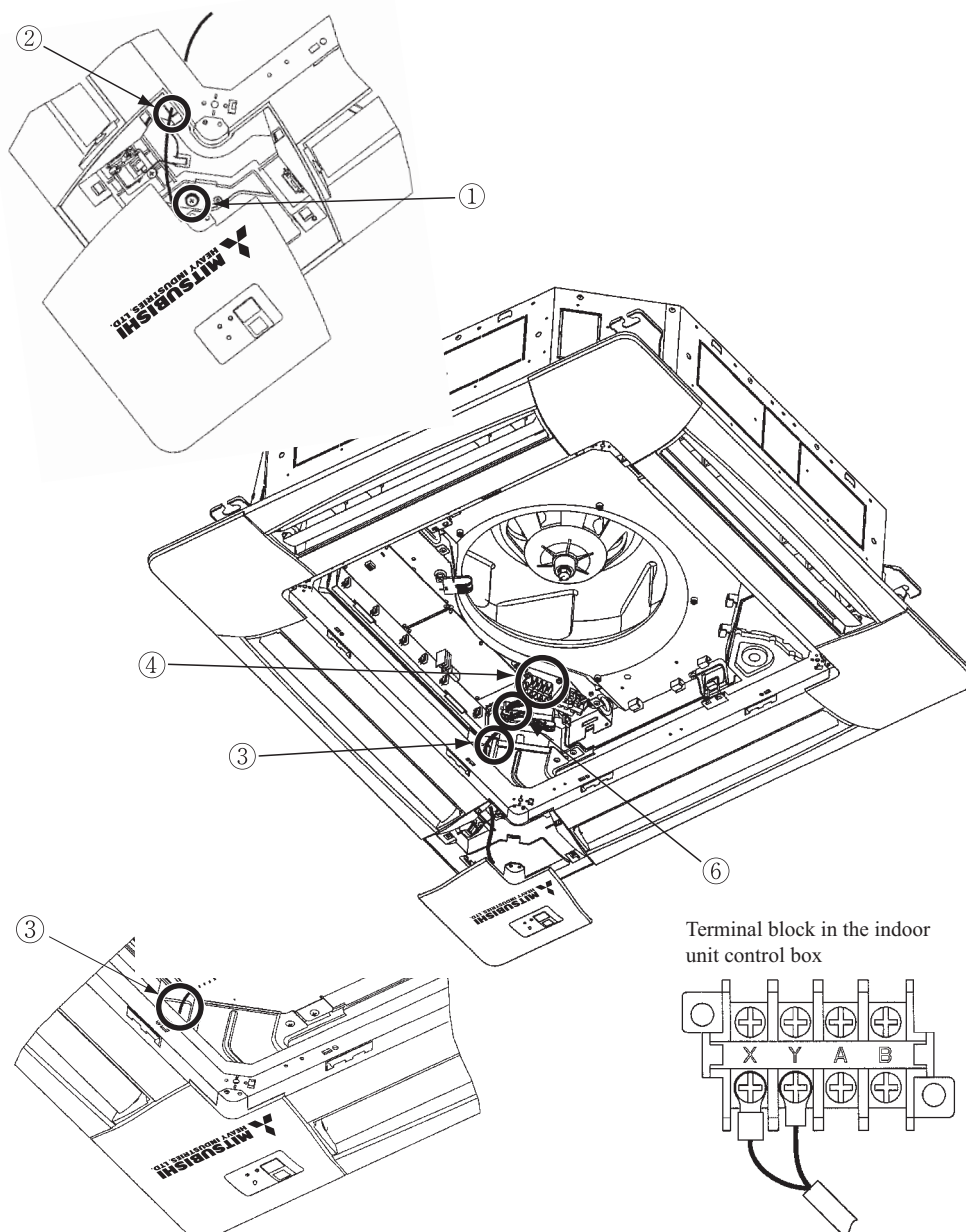


Radio interference prevention mode

Installation of the receiver

- ① Loosen the bolts which fix the panel and make a gap between the panel and the indoor unit
- ② Put the wiring of the receiver through the opening.
- ③ Put the wiring on the notch on the control box so as not to be pinched by the control box and lid as shown below.
- ④ Connect the wiring to the terminal block provided in the control box. (Non- polarized)
- ⑤ Attach the receiver to the panel according to the panel installation manual.
- ⑥ Fix the wiring with the clamp so that the wiring do not contact the edge of control box's metal sheet.
- ⑦ Reattach the control box lid with 3 screws removed.

*Note: Make sure the wires not to be pinched by any other parts like panel, control box and indoor unit.



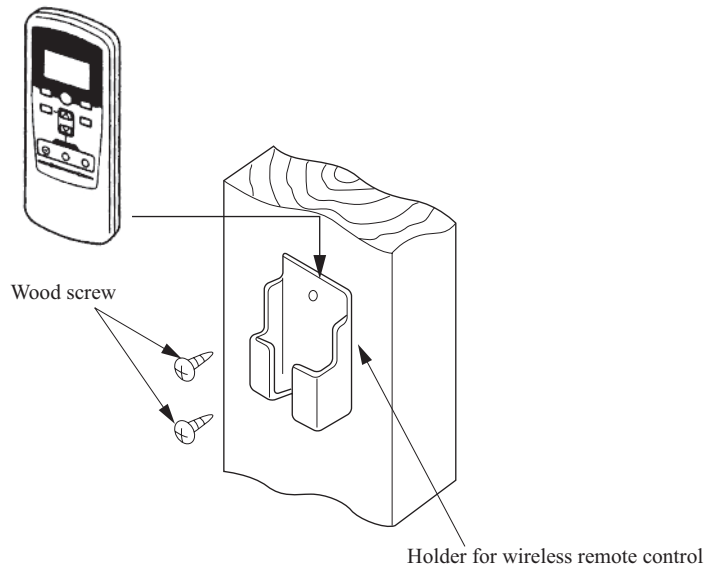
(d) Remote control

Installation of the wireless control holder

Caution

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

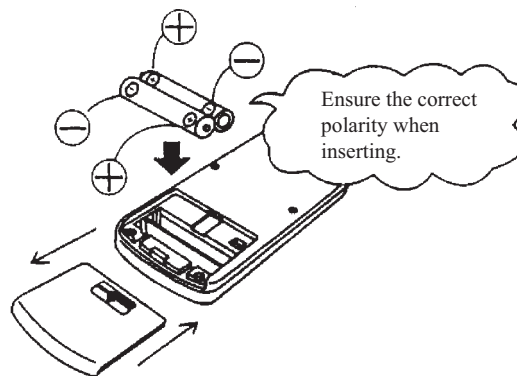


Installation tips for the wireless remote control holder

- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the wireless remote control.
- 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.



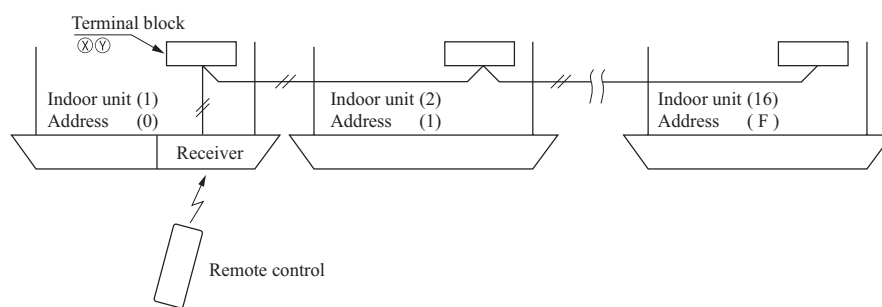
Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core 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
(Maximum total extension 600m.)

Standard	Within 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0 mm ²



- ③ 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.

Master/Slave setting when using plural remote controls

Up to two receivers can be installed in one indoor unit group.

When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

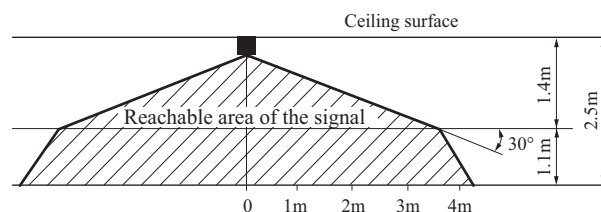
(For the method of switching, please see **Setting on site** in the section of **How to install the receiver** in this manual.)

Wireless remote control's operable area

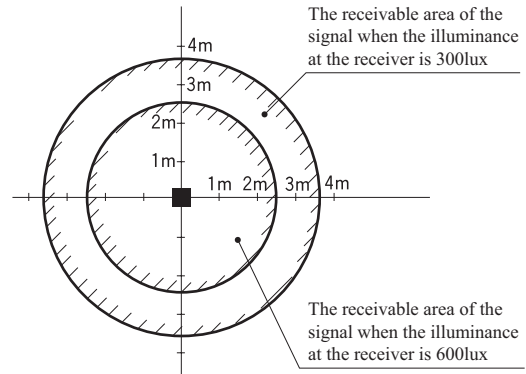
- ① Standard reachable area of the signal

[condition] Illuminance at the receiver: 300lux

(when no lighting is installed within 1m of the receiver in an ordinary office.)



- 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 1.1m high under the condition of ceiling height of 2.5m. When the illuminance becomes double, the area is narrowed down to two thirds.



- ③ Installation tips when several receivers are installed close 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)

(e) How to disable the Auto mode operation

VRF system (except heat recovery 3-pipe systems) cannot be operated in Auto mode. Make sure to set the remote control for the models so as not to be able to choose Auto mode.

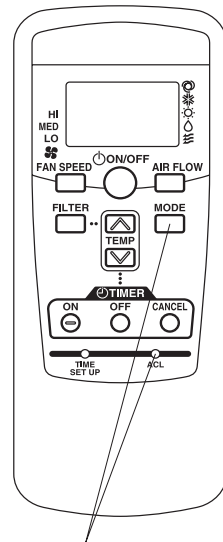
Pushing **ACL** and **MODE** button at the same time or inserting the batteries with pressing **MODE** button will make auto mode operation.

Attention

* When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user’s manual attached on the air-conditioner.)



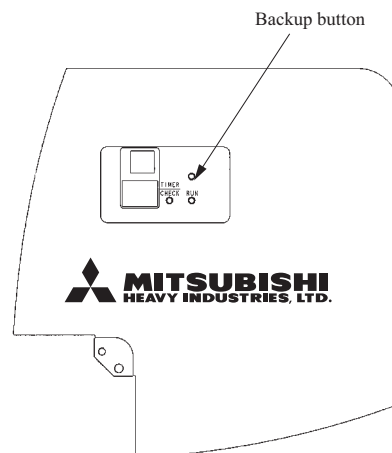
Auto mode operation setting

(f) Backup button

A backup button is provided on the receiver.

Even when the operation from the wireless remote control is not possible (due to flat batteries, control lost, or control failure), still it possible to operate as temporary means. Press the button directly when operating it.

- ① The air-conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- ② The air-conditioner stops the operation when the button is pressed when in operation.


**(g) Cooling test run operation**

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote control, while the backup button on the receiver is pressed.
- If the backup button 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 by consulting with inspection guides on the wiring diagram of outdoor units.

(h) 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 button 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.

(2) FDTC series (RCN-TC-24W-ER)PJA012D758 


The FDTC series is an exclusive series with all wired models. However, these models can also be used wireless units by using the option wireless kit.

**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 wireless 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) Uneven surface (7) Places affected by the direct airflow 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
---	--
- DO NOT leave the wireless kit without the cover.
In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust. 

Attention

- Instruct the customer how to operate it correctly referring to the instruction manual.
- User's manual of a wireless remote control is attached to a indoor unit or a outside unit.
- Read this together with a manual attached to this kit.

Notes:






Following functions of indoor unit series are not able to be set with this wireless remote control.
4-fan speed setting (PHi/Hi/Me/Lo) → 3-fan speed setting (Hi/Me/Lo)

(a) **Wireless kit model**

Model
RCN-TC-24W-ER

(b) **Accessories**

Please make sure that you have all of the following accessories.

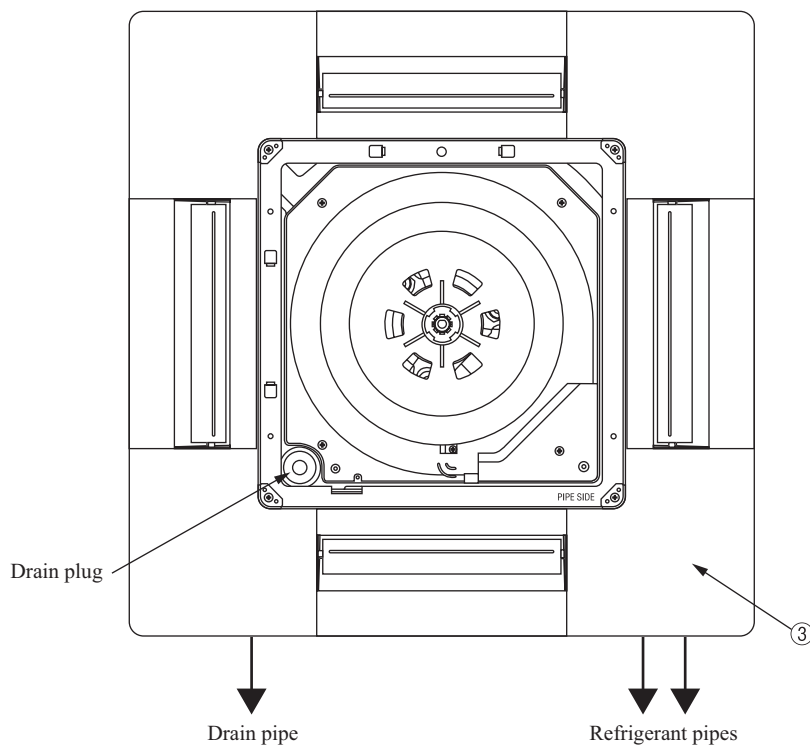
Receiver		1	Wireless remote control holder		1
Wireless remote control		1	Wood screw for holder		2
Parts set		1	AAA dry cell battery (RO3)		2

(c) **How to install the receiver**

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

- ① Attach the decorative panel onto the air-conditioner according to the installation manual for the panel.
- ② Remove the air return grille.
- ③ Remove a corner panel located on the refrigerant pipes side.
- ④ Remove to screws and detach the lid from the control box of the air-conditioner.



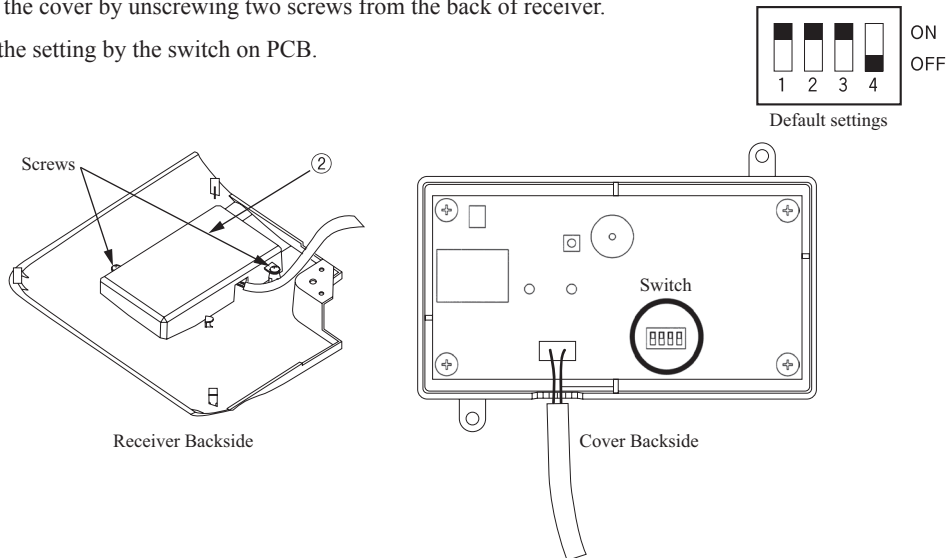
Setting on site

① PCB on the receiver has the following switches to set the functions. Default setting is shown with mark.

SW1	Customized signal setting to avoid mixed communication	<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 valid/Invalid	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
SW4	Auto restart	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid

〈To change the settings〉

- ② Remove the cover by unscrewing two screws from the back of receiver.
- ③ Change the setting by the switch on PCB.



④ When SW1 is turned to OFF position, change the corresponding remote control setting as follows:

How to change the remote control setting

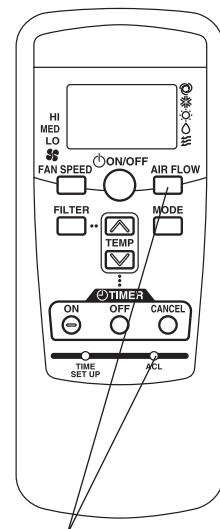
Pressing **ACL** switch with **AIR FLOW** button kept pressing or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Note

* When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries.(How to set is also mentioned in the user’s manual attached on the air-conditioner.)

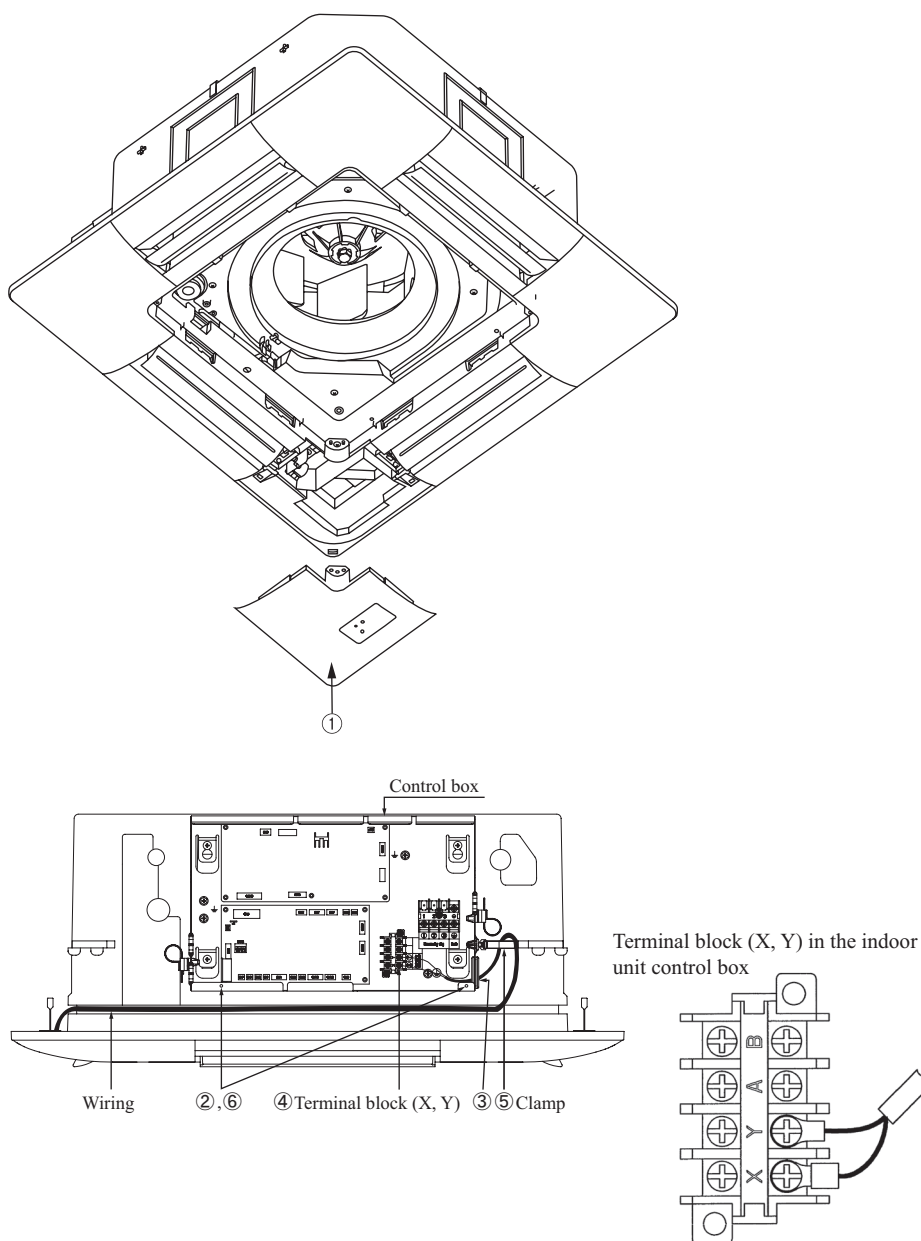


Radio interference prevention mode

Installation of the receiver

- ① Attach the receiver to the panel according to the panel installation manual.
- ② Remove two screws and detach the lid from the control box.
- ③ Put the wiring in the control box with other wiring as shown below.
- ④ Connect the wiring to the terminal block (X, Y) provided in the control box. (Non- polarized)
- ⑤ Fix the wiring with the clamp as shown below.
- ⑥ Reattach the control box lid with 2 screws removed.

* Note: Make sure wires not to be pinched by any other parts like panel and control box.



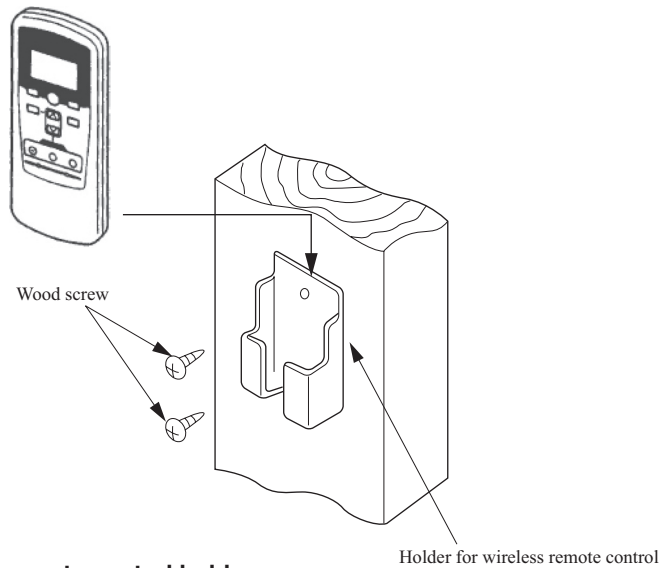
(d) Remote control

Installation of the remote control holder

Caution

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

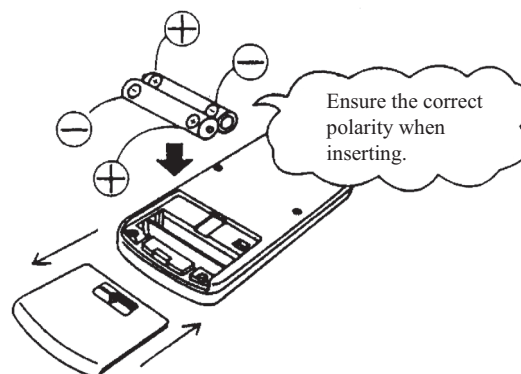


Installation tips for the wireless remote control holder

- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the wireless remote control.
- 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.

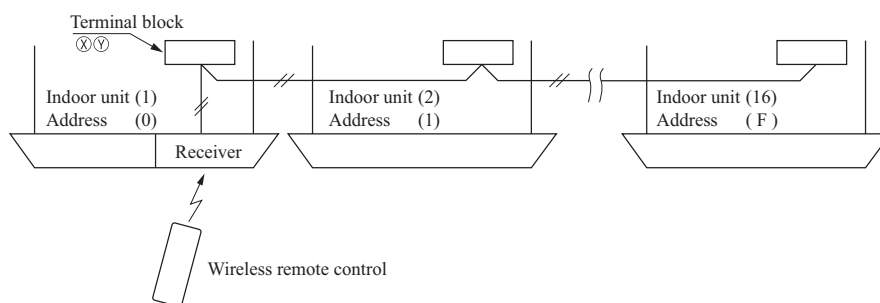


Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
- ② For signal 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 (Maximum total extension 600m.)	
Standard	Within 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0 mm ²



- ③ 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.

Master/Slave setting when using plural remote controls

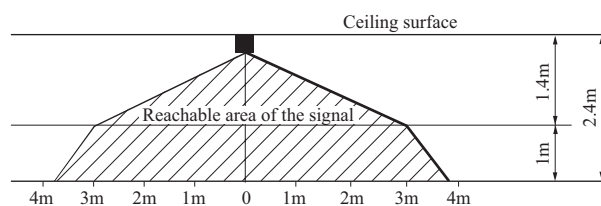
Up to two receivers can be installed in one indoor unit group.

When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

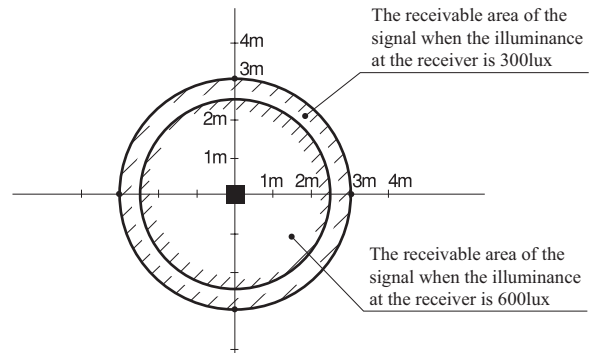
(For the method of switching, please see **Setting on site** in the section of **How to install the receiver** in this manual.)

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.)



- 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.



- ③ Installation tips when several receivers are installed close 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)

(e) How to disable the Auto mode operation

VRF system (except heat recovery 3-pipe systems) cannot be operated in Auto mode. Make sure to set the remote control for the models so as not to be able to choose Auto mode.

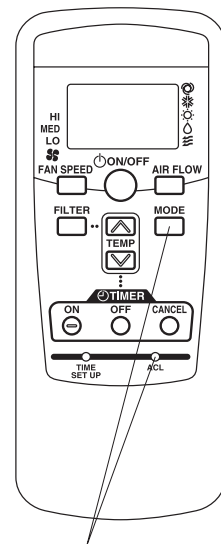
Pushing **ACL** switch with **MODE** button kept pressing or inserting the batteries with pressing **MODE** button will make auto mode operation.

Note

* When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user’s manual attached on the air-conditioner.)

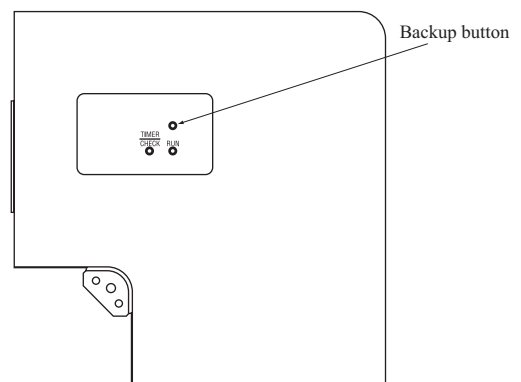


Auto mode operation setting

(f) Backup button

A backup button is provided on the receiver. Even when the operation from the wireless remote control is not possible (due to flat batteries, control lost, or control failure), still it possible to operate as temporary means. Press the button directly when operating it.

- ① The air-conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- ② The air-conditioner stops the operation when the button is pressed when in operation.



(g) Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote control, while the backup button on the receiver is pressed.
- If the backup button 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 by consulting with inspection guides on the wiring diagram of outdoor units.

(h) 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 button 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.

(3) FDTW series (RCN-TW-E)

PJB012D302A

SAFETY PRECAUTIONS

- First of all, read the "SAFETY PRECAUTIONS" carefully and strictly follow the instruction 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

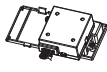







- Installation should be performed by the specialist.
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. [👉]
- Install the system correctly according to these installation manuals.
Improper installation may cause explosion, injury, water leakage, electric shock, and fire. [👉]
- 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. [👉]
- 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. [👉]
- Do not repair by yourself. And consult with the dealer about repair.
Improper repair 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

- DO NOT install the wireless kit 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
- (7) Places affected by the direct airflow of the AC unit.
- (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
- DO NOT leave the wireless kit without the cover. [🚫]
In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

① Accessory

Check the following items.

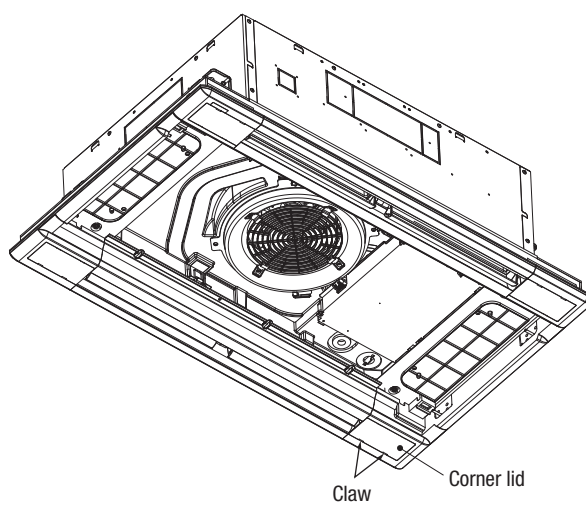
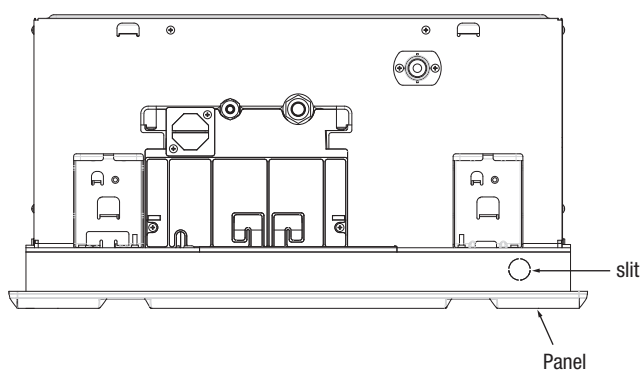
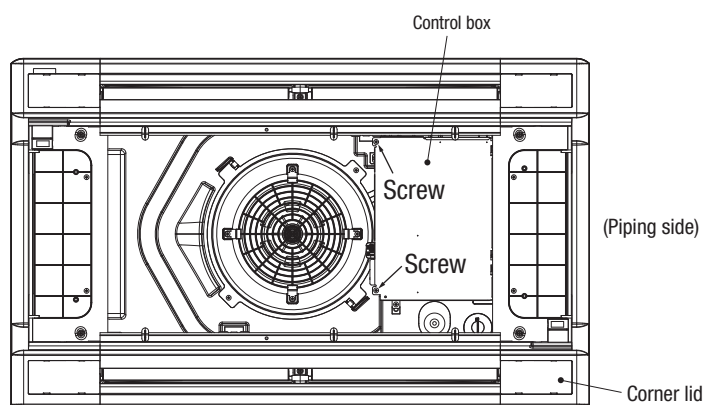
Receiver	Wireless remote control	Wireless remote control holder	Wood screw for holder	AAA dry cell battery (R03)	Wire clamp	Grommet	Tapping screw
							
1	1	1	2	2	2	1	2

② How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

- ① Remove the service panel and the air filter.
- ② Remove the control box lid (fixed with 2 screws) on the main unit of air-conditioner.
- ③ Cut off the insulator slit attached to the side face of panel.
- ④ Release the hooks of corner lid using the tip of flat head screwdriver, or the like.



② How to install the receiver

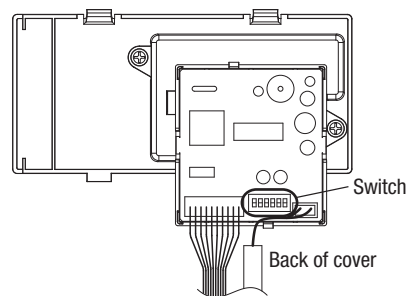
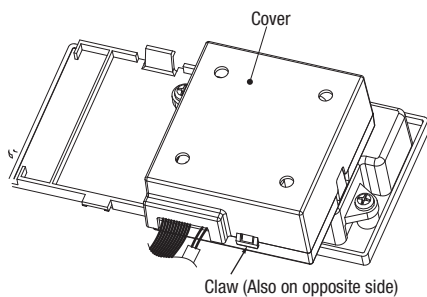
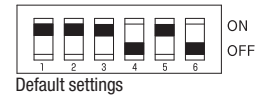
Setting on site

- ① The interface PCB has the following switches to set the function.
Default setting is shown with mark.

SW1-1	Prevents interference during plural setting	ON : Normal (1ch) OFF : Customized (2ch)
SW1-2	Receiver master/slave setting	ON : Master OFF : Slave
SW1-3	Buzzer valid/invalid	ON : Valid OFF : Invalid
SW1-4	Auto restart	ON : Valid OFF : Invalid
SW1-5	Indication for error	ON : Valid OFF : Invalid
SW1-6	Not in use	ON : --- OFF : ---

<To change setting>

- ② Remove the cover by unscrewing two screws from the back of receiver.
③ Change the setting by the switch on PCB.



- ④ When SW1-1 is turned to OFF position, change the corresponding remote control setting as follows:

How to change the remote control setting

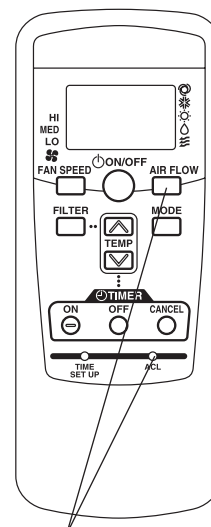
Pressing **ACL** switch with **AIR FLOW** button kept pressing or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Note

- ※When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer about the procedure when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air-conditioner.)



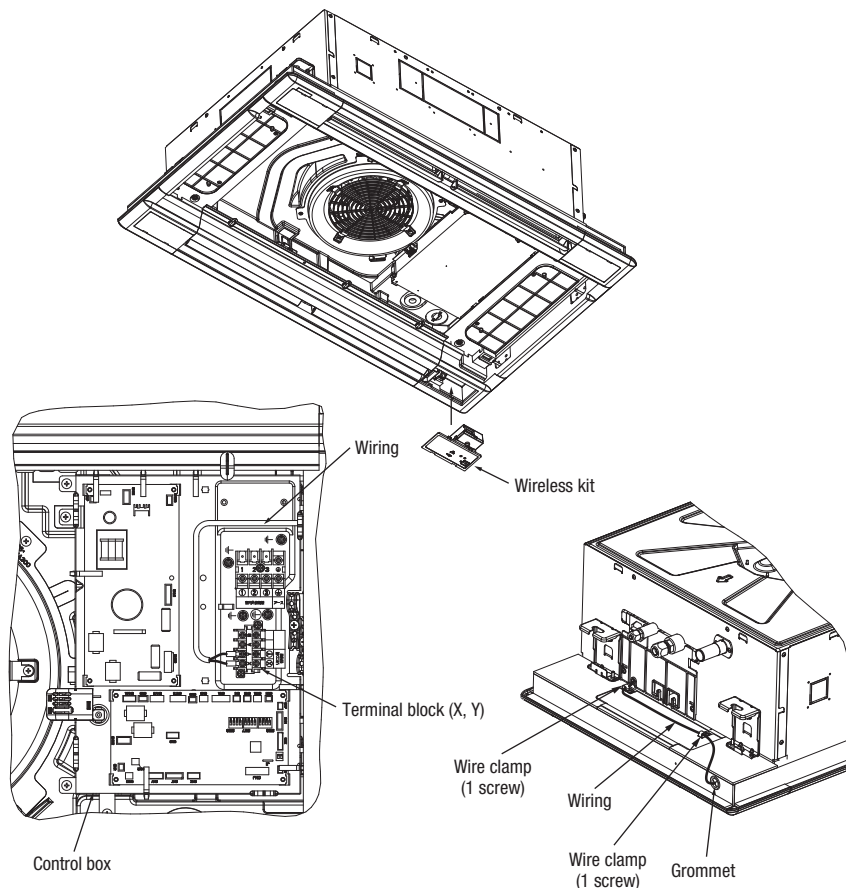
Radio interference prevention mode

② How to install the receiver

Installation of the receiver

- ① Attach the wireless kit on the panel as shown below.
- ② Install the grommet and wire clamps.
- ③ Introduce the wires of wireless kit in the control box as shown below.
- ④ Connect the wiring to the terminal block (X,Y) provided in the control box.(No polarity)
- ⑤ Reinstall the control box lid with 2 screws.

※Note: Make sure wires not to be pinched by any other parts like panel and control box.



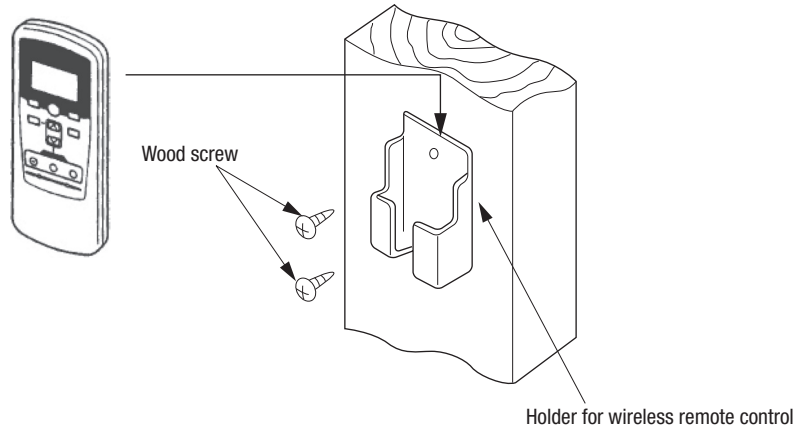
③ Remote control

Installation of the remote control holder

Caution

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

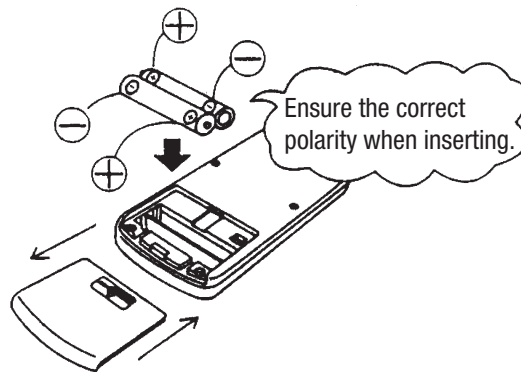


Installation tips for the wireless remote control holder

- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the wireless remote control.
- 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.



Control plural indoor units with one remote control

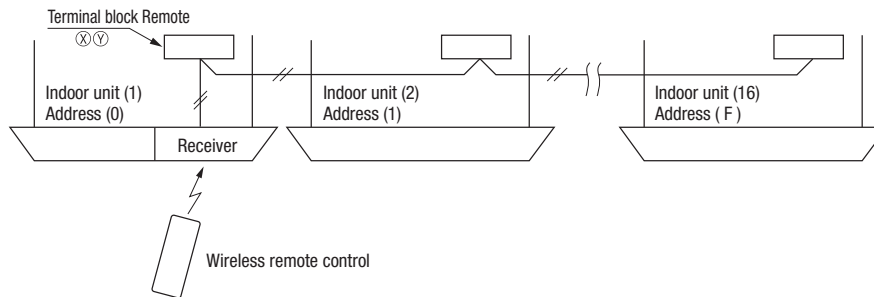
Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
- ② For Single 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
(Maximum total extension 600m.)

Standard	Within 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0 mm ²

③ Remote control



- ③ 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.

Master/Slave setting when using plural remote controls

Up to two receivers can be installed in one indoor unit group.

When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

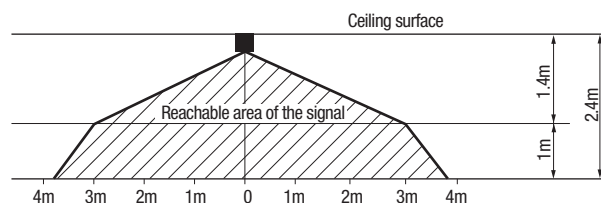
(For the method of switching, please see [Setting on site](#) in the section of **2 How to install the receiver** in this manual.)

Wireless remote control's operable area

- ① Standard reachable area of the signal

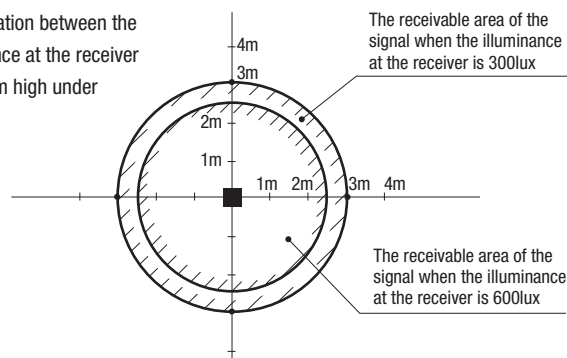
[condition] Illuminance at the receiver: 300lux

(when no lighting is installed within 1m of the receiver in an ordinary office.)



- 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.



- ③ Installation tips when several receivers are installed close

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)

4 How to disable the Auto mode operation

VRF series (except heat recovery 3-pipe systems) cannot be operated in Auto mode. Make sure to set the remote control for the models so as not to be able to choose Auto mode.

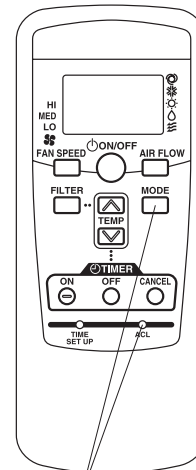
Pressing **ACL** switch with **MODE** button kept pressing or inserting the batteries with pressing **MODE** button will make auto mode operation.

Note

※ When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air-conditioner.)



Auto mode operation setting

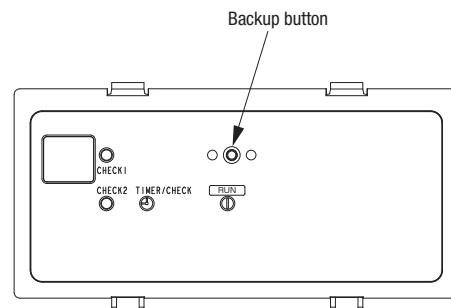
5 Backup button

A Backup button is provided on the receiver.

Even when the operation from the wireless remote control is not possible (due to flat batteries, control lost, or control failure), still it possible to operate as temporary means.

Press the button directly when operating it.

- (1) The air-conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- (2) The air-conditioner stops the operation when the button is pressed when in operation.




6 Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote control, while the backup button on the receiver is pressed.
- If the backup button 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 by consulting with inspection guides on the wiring diagram of outdoor units.







7 Check indication

- "CHECK1"/"CHECK2" LEDs of the inspection LED display flicker for the times indicated with the numbers shown at the "tens place"/"ones place" of error code.











(4) FDTs series (RCN-TS-E)

PJC012D305A 



SAFETY PRECAUTIONS

- First of all, read the "SAFETY PRECAUTIONS" carefully and strictly follow the instruction 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**

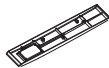







- Installation should be performed by the specialist.
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. 
- Install the system correctly according to these installation manuals.
Improper installation may cause explosion, injury, water leakage, electric shock, and fire. 
- 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. 
- 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. 
- Do not repair by yourself. And consult with the dealer about repair.
Improper repair 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**

- DO NOT install the wireless kit 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
 - (7) Places affected by the direct airflow of the AC unit.
 - (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
- DO NOT leave the wireless kit without the cover. 
 - In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

1 Accessory

Check the following items.

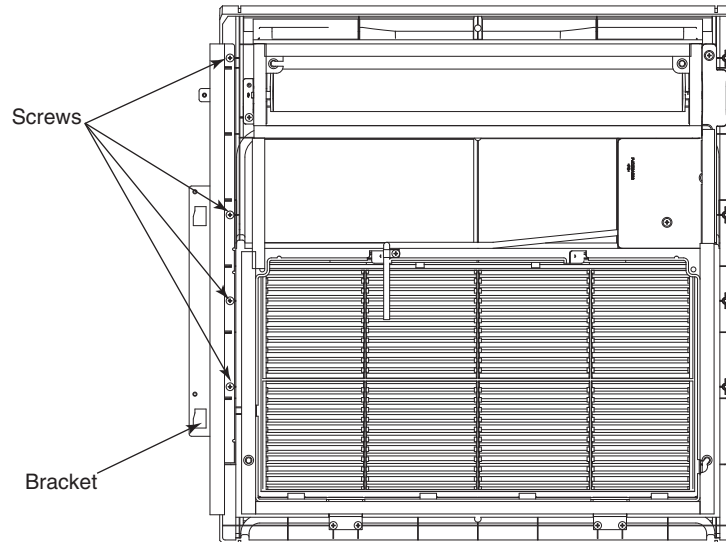
Receiver	Bracket	Tapping screw	Tapping screw (White)	Wireless remote control	Remote control holder	Wood screw for holder	AAA dry cell battery (R03)
							
1	1	4	1	1	1	2	2

② How to install the receiver

Install the receiver of this wireless kit at the refrigerant pipe side.

Preparation before installation

- ① Install the bracket on the panel at the refrigerant pipe side with 4 pieces of screw.
- ② Remove the control box cover on the main unit of air-conditioner by unfastening 2 pieces of screw.



Setting on site

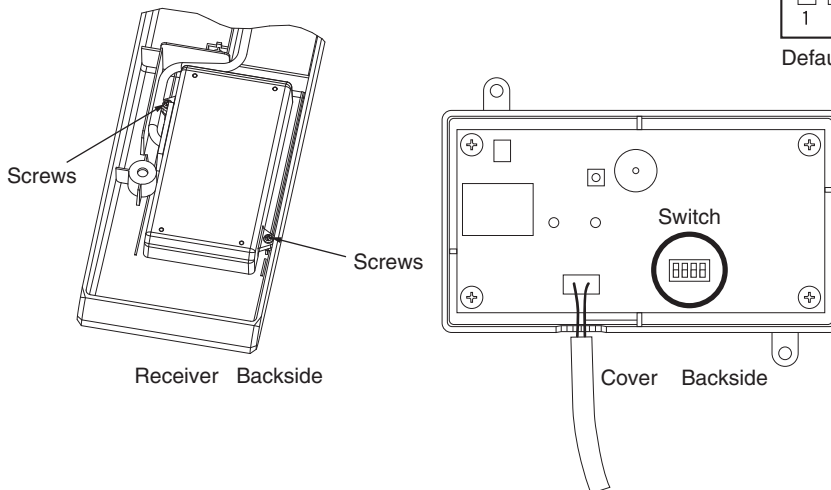
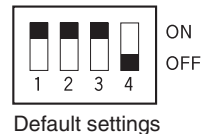
- ① PCB on the receiver has the following switches to set the functions. Default setting is shown with mark.

S W 1	Customized signal setting to avoid mixed communication	<input type="checkbox"/> ON : Normal <input type="checkbox"/> OFF : Remote
S W 2	Receiver master/slave setting	<input type="checkbox"/> ON : Master <input type="checkbox"/> OFF : Slave
S W 3	Buzzer valid/Invalid	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
S W 4	Auto restart	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid

② How to install the receiver

<To change the settings>

- ② Remove the cover by unscrewing two screws from the back of receiver.
- ③ Change the setting by the switch on PCB.



- ④ When SW1 is turned to OFF position, change the corresponding remote control setting as follows:

How to change the remote control setting

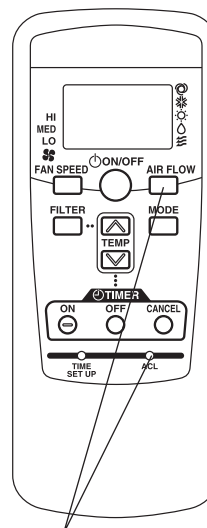
Pressing **ACL** switch with **AIR FLOW** button kept pressing or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Note

- ※ When the batteries are removed, the setting will return to the default setting. Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air-conditioner.)



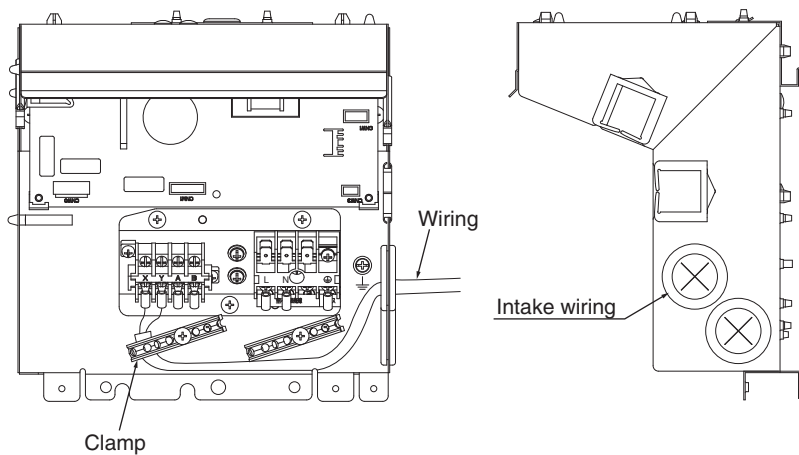
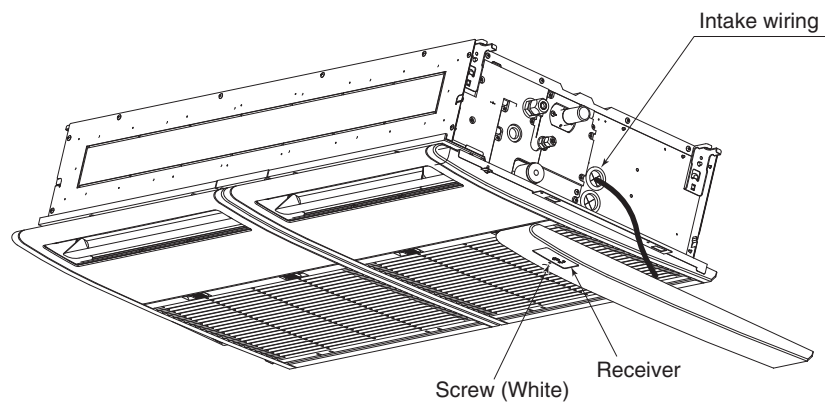
Radio interference prevention mode

② How to install the receiver

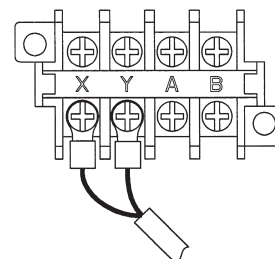
Installation of receiver

- ① Introduce the receiver cable, together with wires arranged at site, into the control box.
- ② Connect the wires to the terminal block (X, Y terminals) in the control box. (No polarity)
- ③ Fix the wires with the clamp as shown below.
- ④ Reinstall the control box cover.
- ⑤ Hook the receiver on the panel and fix with a white screw.

* Caution: Take care not to pinch the wires during installation.



Terminal block (X, Y) in the indoor unit control box

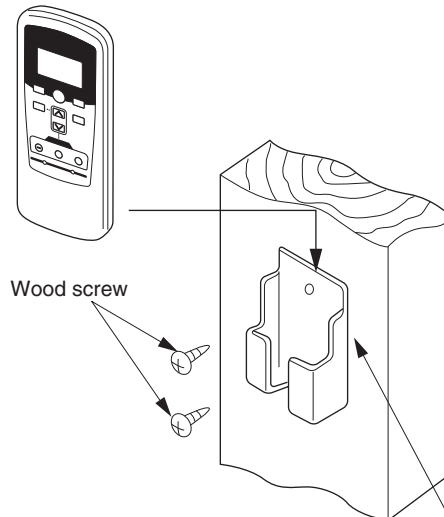


③ Remote control

Installation of the wireless remote control holder

Caution

- DO NOT install it on the following places
- | | |
|--------------------------------------|--|
| 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 |



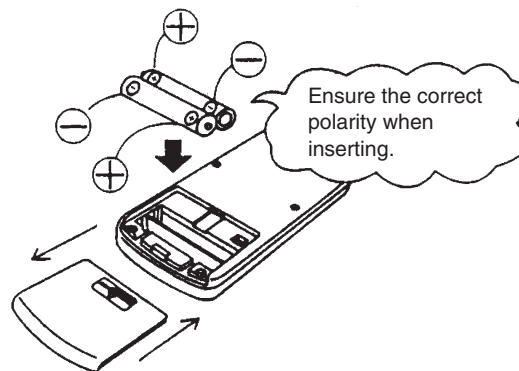
Installation tips for the wireless remote control holder

- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the wireless remote control.
- DO NOT attach the holder on plaster wall.

Holder for wireless remote control

How to insert batteries

- ① Detach the back lid.
- ② Insert the batteries. (two AAA batteries)
- ③ Reattach the back lid.



Control plural indoor units with one remote control

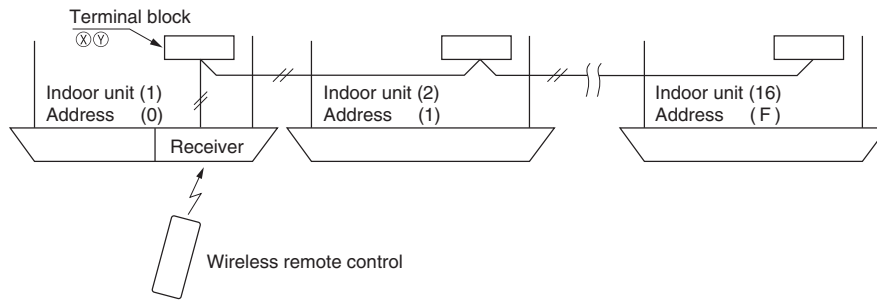
Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
- ② For Single 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 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0 mm ²

③ Remote control



- ③ 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.

Master/Slave setting when using plural remote controls

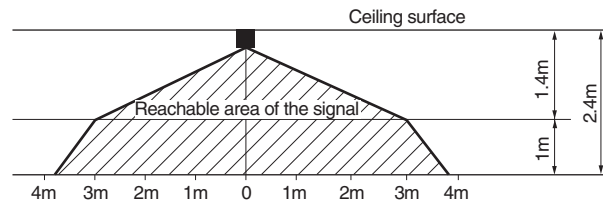
Up to two receivers can be installed in one indoor unit group. When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

(For the method of switching, please see **Setting on site** in the section of

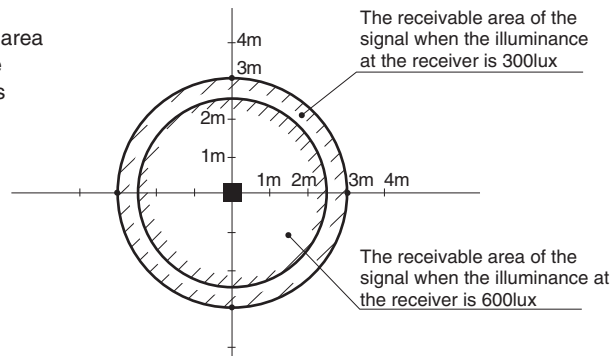
- ② **How to install the receiver** in this manual.)

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.)



- 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.



- ③ Installation tips when several receivers are installed close
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)

④ How to disable the Auto mode operation

VRF series (except heat recovery 3-pipe systems) cannot be operated in Auto mode.
Make sure to set the remote control for the models so as not to be able to choose Auto mode.

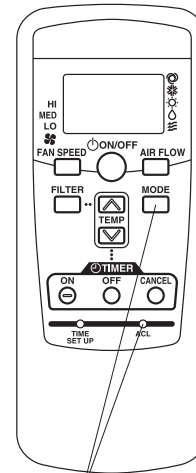
Pressing [ACL] switch with [MODE] button kept pressing or inserting the batteries with pressing [MODE] button will make auto mode operation.

Note

※ When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air-conditioner.)

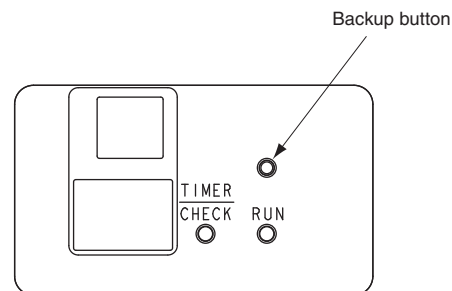


Auto mode operation setting

⑤ Backup button

A Backup button is provided on the receiver. Even when the operation from the wireless remote control is not possible (due to flat batteries, control lost, or control failure), still it possible to operate as temporary means. Press the button directly when operating it.

- (1) The air-conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- (2) The air-conditioner stops the operation when the button is pressed when in operation.



⑥ Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote control, while the backup button on the receiver is pressed.
- If the backup button 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 by consulting with inspection guides on the wiring diagram of outdoor units.

⑦ 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 button 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.

(5) FDK series

• RCN-K-E (FDK22-56), RCN-K71-E (FDK71)

PHA012D038

⚠ WARNING

● **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.



● **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 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) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight.
- (7) Places where the receiver is affected by infrared rays of any other communication devices
- (8) Places where some object may obstruct the communication with the remote control



● **DO NOT leave the wireless kit without the cover.**

In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

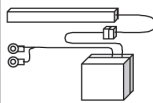
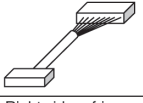
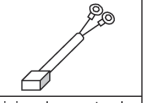









Attention

- 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 you have all of the following accessories.

Control ASSY	Wiring ASSY (A)	Wiring ASSY (B)	Display label	Rubber insulation	Tie	Wireless remote control holder	AAA dry cell battery(RO3)	Wood screw for holder	Wireless remote control
	 Right side refrigerant piping draw out only		 1: RUN TIMER/CHECK 2: CHECK1 CHECK2						
1	1	1	1	1	3	1	2	2	1

② Preparation before installation

Setting on site

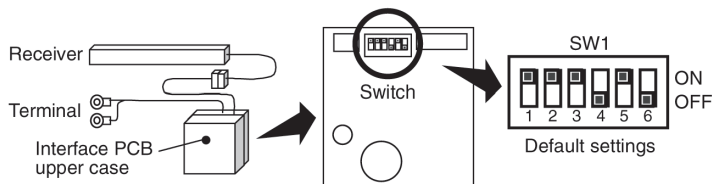
Interface PCB has the following switches to set the function.

Default setting is shown with mark.

SW1-1	Prevents interference during plural setting	ON : Normal (1ch) OFF : Customized (2ch)
SW1-2	Receiver master/slave setting	ON : Master OFF : Slave
SW1-3	Buzzer valid/invalid	ON : Valid OFF : Invalid
SW1-4	Auto restart	ON : Valid OFF : Invalid
SW1-5	Indication for error	ON : Valid OFF : Invalid
SW1-6	Not in use	ON : --- OFF : ---

To change setting

1. Remove the upper case of interface PCB assy.
2. Change the switch setting on PCB.



NOTE

When SW1-1 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** on page 441

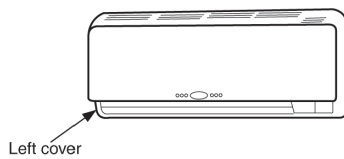
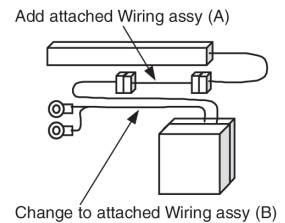
③ How to install the control assy (In case of the pipe routed through the right)

The control assy (Receiver and interface PCB assy) can be installed inside the indoor unit.
After turning off the power and confirming safety, execute as follows.

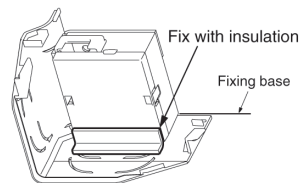
In case of the piping routed from right side

① Preparation before installing Control assy

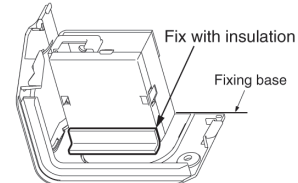
- Disconnect the receiver from the interface PCB assy, and attach on wiring assy (A).
- Change the original wiring (for X, Y) to the attached wiring assy (B).
- Bundle wiring with attached ties.
- Install the interface PCB assy on the left cover of the indoor unit with the attached insulation. (Refer to below figure.)



<FDK22-56>



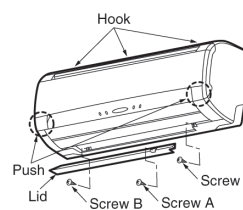
<FDK71>



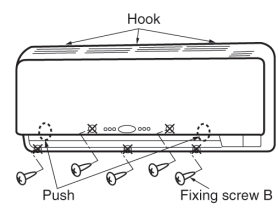
② Remove Panel

- Remove the fixing screw A and detach the unit bottom lid. (only FDK22-56)
- Remove the fixing screw B.
- Pull the lower part of the front panel off the unit toward you. And then, push it up to detach its upper part from the indoor unit. (Disengage 3 hooks located on the top part.)

<FDK22-56>

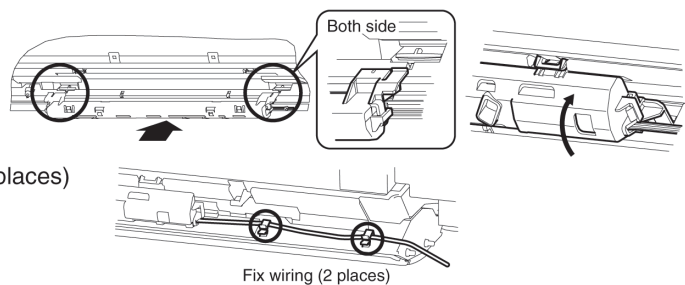


<FDK71>



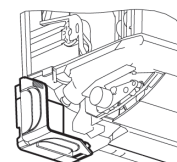
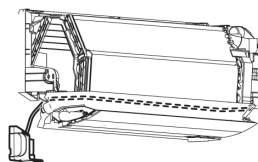
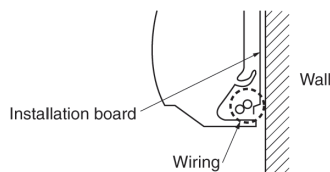
③ Install Receiver on Indoor unit

- Hang the claw of the receiver lower side on the claw of the indoor unit. (2 places)
And snap in the claw of the receiver upper side on the hole of the indoor unit. (2 places)
- Fix the wiring on the clip of the indoor unit. (2 places)



④ Install interface PCB assy on Indoor unit

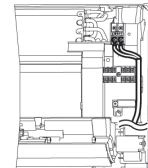
- Route the Wiring assy (A) and (B) through the front of installation board.
- Install the cover in which the interface PCB assy is installed.



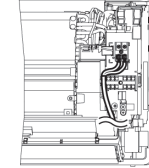
⑤ Fix Wiring assy (for X, Y)

- Fix the terminal of the wiring assy (for X, Y) on the terminal block of the indoor unit. (Non-polarized)
- Route the wiring as shown in figure.
- Bundle wirings with attached ties.

<FDK22-56>



<FDK71>



⑥ Put back Panel and stick Label on Panel

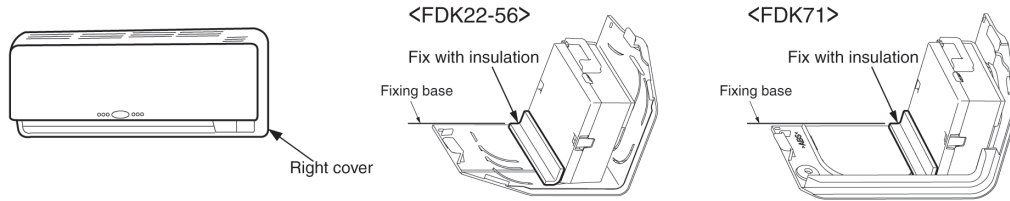
Refer to ③ How to install the control assy (Put back Panel and stick Label) on page 440

③ How to install the control assy (In case of the pipe routed through the left)

In case of the pipe routed through the left

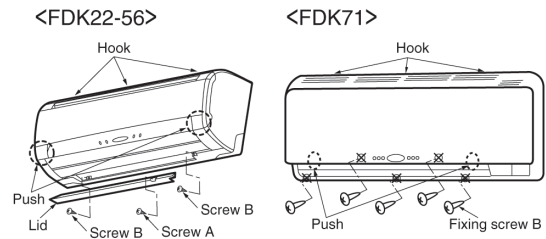
① Preparation before installing Control assy

- a) Install the interface PCB assy on the right cover of the indoor unit with the attached insulation.



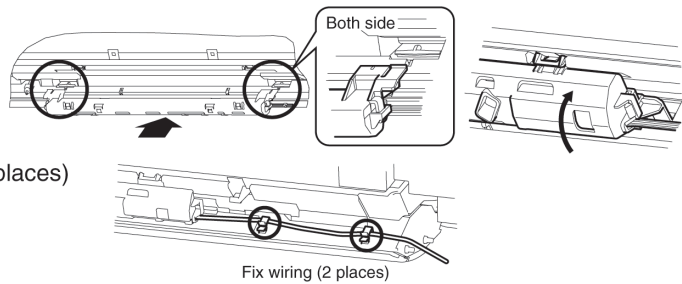
② Remove Panel

- a) Remove the fixing screw A and detach the unit bottom lid. (only FDK22-56)
 b) Remove the fixing screw B.
 c) Pull the lower part of the front panel off the unit toward you. And then, push it up to detach its upper part from the indoor unit. (Disengage 3 hooks located on the top part.)



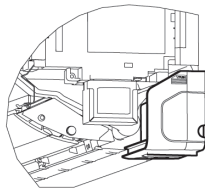
③ Install Receiver on Indoor unit

- a) Hang the claw of the receiver lower side on the claw of the indoor unit. (2 places)
 And snap in the claw of the receiver upper side on the hole of the indoor unit. (2 places)
 b) Fix the wiring on the clip of the indoor unit. (2 places)



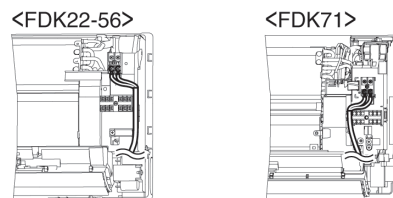
④ Install interface PCB assy on Indoor unit

- a) Install the cover in which the interface PCB assy is installed.



⑤ Fix Wiring assy (for X, Y)

- a) Fix the terminal of the wiring assy (for X, Y) on the terminal block of the indoor unit. (Non-polarized)
 b) Route the wiring as shown in figure.
 c) Bundle wirings with attached ties.




⑥ Put back Panel and stick Label on Panel

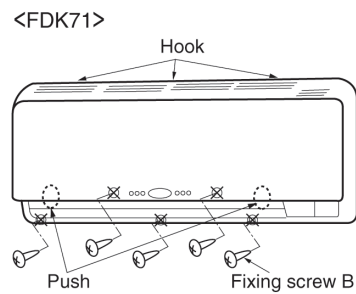
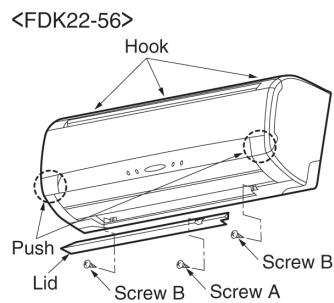
Refer to **③ How to install the control assy (Put back Panel and stick Label)** see next page

③ How to install the control assy (Put back Panel and stick Label)

Put back Panel and stick Label

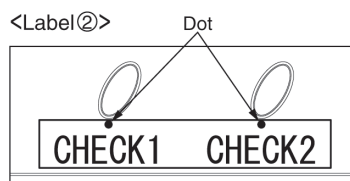
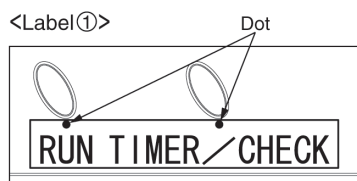
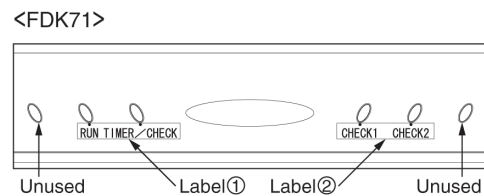
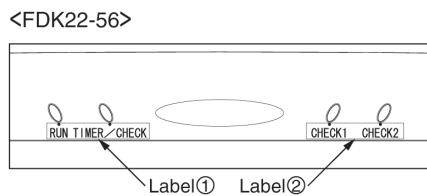
① Put back Panel

- Always remove the air filter beforehand.
- Place the front panel over the indoor unit.
- Engage it onto the indoor unit by pressing the areas marked with  in the figure from the front.
- Fasten the fixing screw B.
- Set the air filter.
- Attach the indoor unit bottom lid and fasten the fixing screw A. (only FDK22-56)



② Stick Label on Panel

- Stick the attached label on the front panel.
- Label ① must be stuck under the left side LED of the front panel.
- Label ② must be stuck under the right side LED of the front panel.



Label ① and ② have 2 dots.
Matched the dot on the label and the bottom of the LED hole.

④ How to install the wireless remote control

⚠ CAUTION DO NOT install it in the following places.

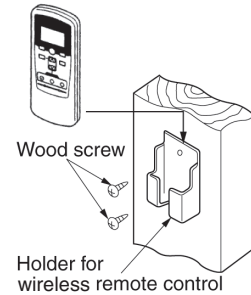
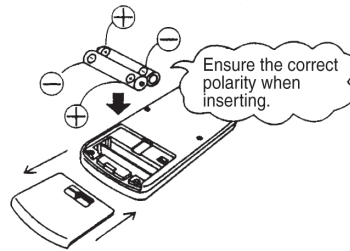
1. Places exposed to direct sunlight
2. Hot surface or cold surface enough to generate condensation
3. Places near heat devices
4. Places directly exposed to oil mist or steam
5. High humidity places
6. Uneven surface

Installation tips for the wireless remote control holder

- Adjust and keep the holder up right.
- Tighten the screw to the end to avoid scratching the wireless remote control.
- 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.



⑤ Function setting of interface PCB and wireless remote control

Master/Slave setting when using plural remote controls

Up to two wireless kit or wired remote control can be installed in one indoor unit group.
When two wireless kit or wired remote control are used, it is necessary to change setting on the PCB to slave.

Switch	Setting	Contents
Wired remote control : SW1	Master	Master remote control
Wireless kit: SW1-2	Slave	Slave remote control

Setting to avoid mixed communication

In case of plural setting, check the operation distance of wireless remote control, and avoid mixed communication.

Refer to **⑦ Wireless remote control unit operation distance** on page 442 about the operation distance.
It is necessary to change setting of interface PCB and wireless remote control.

(1) Interface PCB

Set SW1-1 to "OFF" position.

(2) Wireless remote control

Pressing **ACL** and **AIR FLOW** button at the same time or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Setting to disable the Auto mode operation

VRF system (except heat recovery 3-pipe system) cannot be operated in Auto mode.
Make sure to set the remote control for the models so as not to be able to choose Auto mode.

Pressing **ACL** and **MODE** button at the same time or inserting the batteries with pressing **MODE** button will make auto mode operation.

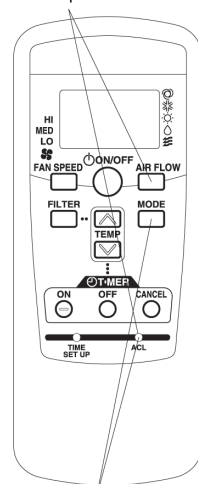
ATTENTION

When the batteries are removed, the setting will return to the default setting. Please make sure to reset it when the batteries are replaced.

⚠ Caution

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air-conditioner.)

Radio prevention mode



Auto mode operation setting

⑥ Wiring

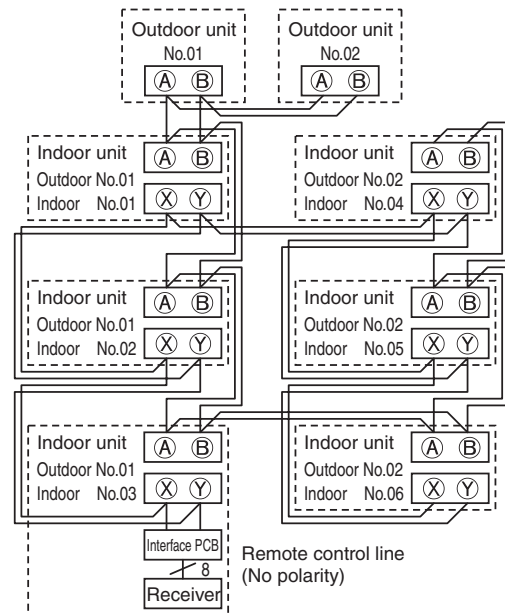
Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- ① Connect indoor units with each other with 2-core wires. As for size, refer to the following note.
- ② The receiver wires must be connected only with the indoor unit that will be operated by the remote control directly.
- ③ Use the rotary SW1 and SW2 provided on the indoor unit PCB (Printed circuit board) to set unique remote control communication address avoiding duplication.

Restrictions on the thickness and length of wire
(Maximum total extension 600m.)

Standard	Within 100m x 0.3mm ²
	Within 200m x 0.5mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0mm ²



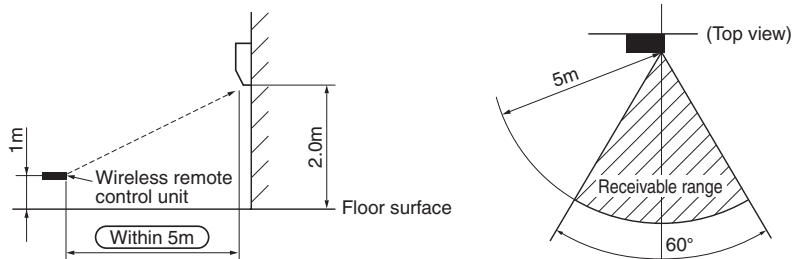
⑦ Wireless remote control operation distance

- ① Standard signal receiving range

[Condition]

Illuminance at the receiver area: 360 lux.

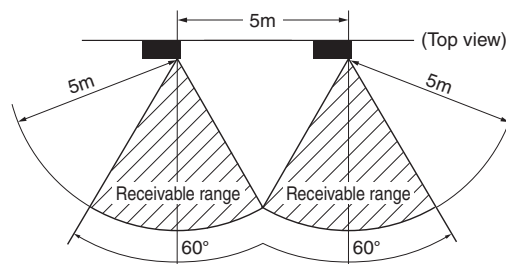
(When no lighting fixture is located within 1m of indoor unit in an ordinary office)



- ② Points for attention in connecting a plural number of indoor units

[Condition]

Illuminance at the receiver area: 360 lux.



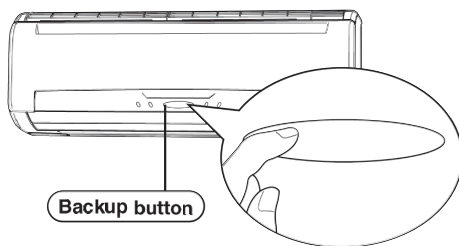
⑧ Trial operation

Backup button

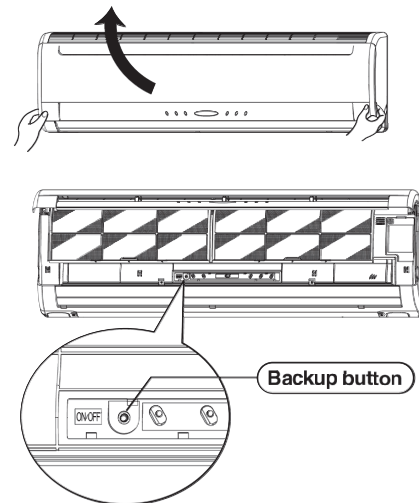
The backup button is provided on the receiver section. It is possible to use the backup button as shown in the figure below. When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), the backup button can be used as an emergency means. The backup button is operated 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).
Fan 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.

<FDK22-56>



<FDK71>




Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control, while the backup button on the receiver is depressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If the air-conditioner can not operate properly during the test run, check wiring according to the trouble shooting guides.




NOTE

1. After over 2 minute from power on, operate the wireless remote control.
The operation is invalid during 2 minute from power on.
2. Check indicator lamp "check1" / "check2" shows error code.
The number of blinking shows the error code number of tens/ones place and check1/check2 corresponds to tens/ones place.

(6) FDE series (RCN-E-E)

PFA012D619A 


⚠ WARNING

- **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. 
- **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

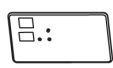




- **DO NOT install it on the following places**

1. Places exposed to direct sunlight	4. Places where the receiver is influenced by the fluorescent lamp or sunlight.
2. Places near heat devices	5. Places where the receiver is affected by infrared rays of any other communication devices.
3. High humidity places	6. 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.

Receiver	Wireless remote control holder	AAA dry cell battery (RO3)	Wood screw for holder	Wireless remote control
				
1	1	2	2	1

② Preparation before installation

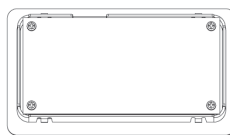
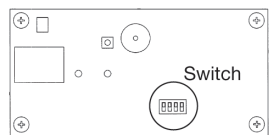
Setting on site

PCB on the receiver has the following switches to set the function.
Default setting is shown with mark.


SW1	Prevents interference during plural setting	ON : Normal (1ch) OFF : Customized (2ch)
SW2	Receiver master/slave setting	ON : Master OFF : Slave
SW3	Buzzer valid/Invalid	ON : Valid OFF : Invalid
SW4	Auto restart	ON : Valid OFF : Invalid

To change setting

- Remove four screws located on the back of the receiver and detach the board.
- Change the setting by the switch on PCB.

SW1



ON OFF

1 2 3 4

Default settings

Receiver backside

- When switch 1 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](#) on page 445)
Refer to [Wireless remote control unit operation distance](#) of **⑤ Receiver** in case of plural setting.

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 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.

② **Connect the wiring**

Connect wiring of the receiver to the wiring in the back.

ATTENTION

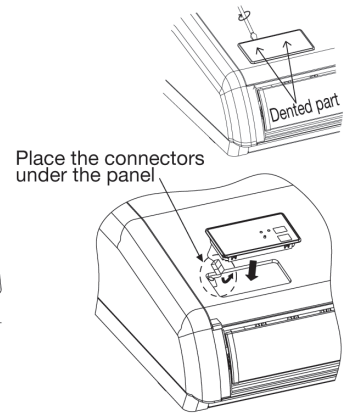
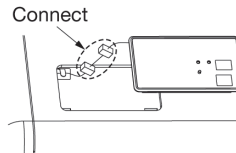
DO NOT remove the clamp fixed the wiring.

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.



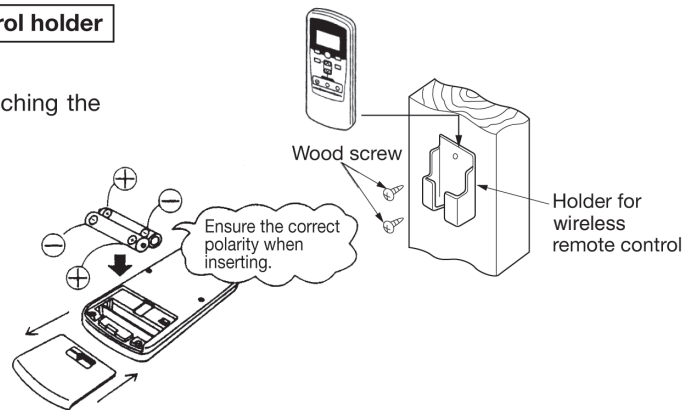
④ Wireless remote control

CAUTION DO NOT install it on the following places.

- | | |
|--------------------------------------|--|
| 1. Places exposed to direct sunlight | 2. Hot surface or cold surface enough to generate condensation |
| 3. Places near heat devices | 4. Places exposed to oil mist or steam directly. |
| 5. High humidity places | 6. Uneven surface |

Installation tips for the wireless remote control holder

- Adjust and keep the holder up right
- Tighten the screw to the end to avoid scratching the wireless remote control.
- 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

Pressing **ACL** and **AIR FLOW** button at the same time or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Setting to disable the Auto mode operation

VRF system (except heat recovery 3-pipe system) cannot be operated in Auto mode. Make sure to set the remote control for the models so as not to be able to choose Auto mode.

Pressing **ACL** and **MODE** button at the same time or inserting the batteries with pressing **MODE** button will make auto mode operation.

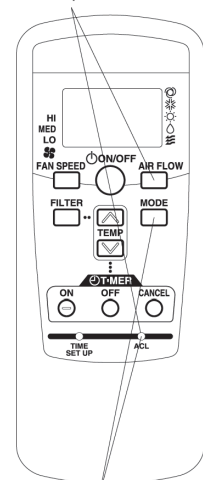
ATTENTION

When the batteries are removed, the setting will return to the default setting. Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air-conditioner.)

Radio prevention mode



Auto mode operation setting

5 Receiver

Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

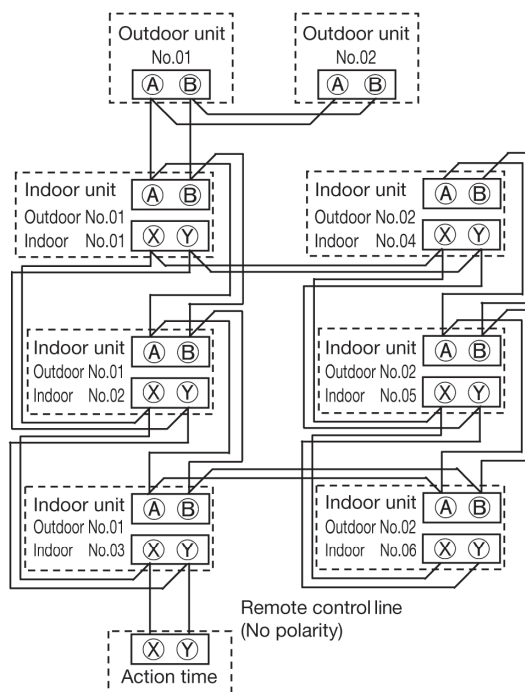
- ① Connect indoor units with each other with 2-core wires. As for size, refer to the following note.
- ② The receiver wires must be connected only with the indoor unit that will be operated by the remote control directly.
- ③ Use the rotary SW1 and SW2 provided on the indoor unit PCB (Printed circuit board) to set unique remote control communication address avoiding duplication.

Restrictions on the thickness and length of wire
(Maximum total extension 600m.)

Standard	Within 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75 mm ²
	Within 400m x 1.25 mm ²
	Within 600m x 2.0 mm ²

After a unit is energized, it is possible to display an indoor unit address by pressing **AIR CON NO** button on the remote control unit.

Press the **▲** or **▼** button to make sure that all indoor units connected are displayed in order.

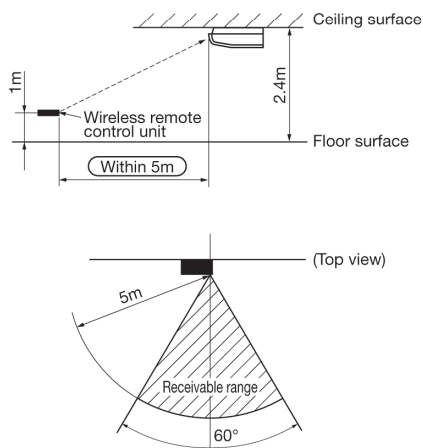


Wireless remote control unit operation distance

- ① Standard signal receiving range

[Condition]

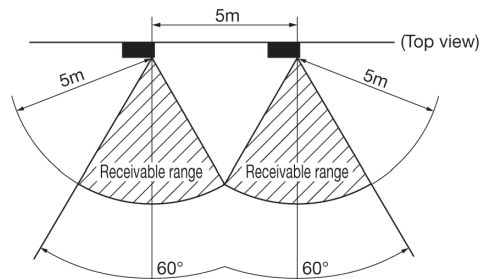
Illuminance at the receiver area: 360 lux.
(When no lighting fixture is located within 1m of indoor unit in an ordinary office)



- ② Points for attention in connecting a plural number of indoor units

[Condition]

Illuminance at the receiver area: 360 lux.



⑤ Receiver (continued)

Backup button

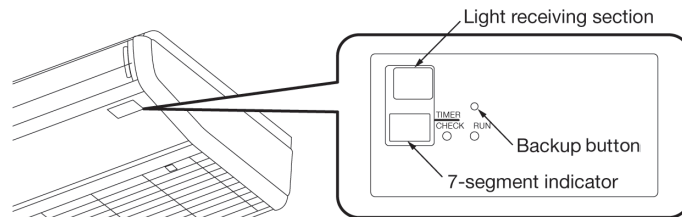
A backup button is provided on the receiver section of the panel surface.

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 backup button 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 button on the receiver is depressed.
- If the backup button 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.

- (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 button is depressed.

(7) FDFW series (RCN-FW-E)

PGF012D002

⚠ WARNING

- **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. !
- **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

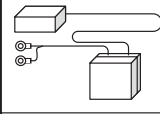
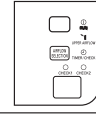





- **DO NOT install it in the following places.**
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to generate condensation
 - (5) Places directly exposed to oil mist or steam
 - (6) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight.
 - (7) Places where the receiver is affected by infrared rays of any other communication devices
 - (8) Places where some object may obstruct the communication with the remote control⊘
- **DO NOT leave the wireless kit without the cover.**
In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust. ⊘

Attention

- 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 you have all of the following accessories.

Control ASSY	Display label	Screw for display	Wireless remote control	AAA dry cell battery (RO3)	Wireless remote control holder	Wood screw for holder
						
1	1	2	1	2	1	2

② Preparation before installation

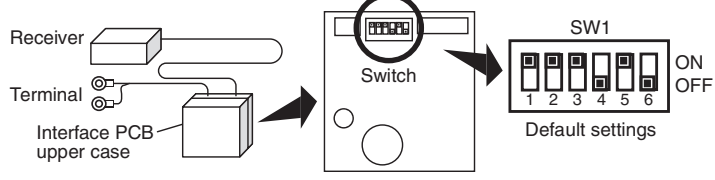
Setting on site

The interface PCB has the following switches to set the function.
Default setting is shown with mark.

SW1-1	Prevents interference during plural setting	<input type="checkbox"/> ON : Normal (1ch) <input type="checkbox"/> OFF : Customized (2ch)
SW1-2	Receiver master/slave setting	<input type="checkbox"/> ON : Master <input type="checkbox"/> OFF : Slave
SW1-3	Buzzer valid/invalid	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
SW1-4	Auto restart	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
SW1-5	Indication for error	<input type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
SW1-6	Not in use	<input type="checkbox"/> ON : --- <input type="checkbox"/> OFF : ---

To change setting

1. Remove the upper case of the interface PCB assy.
2. Change the switch setting on PCB.



Receiver
Terminal
Interface PCB upper case

Switch

SW1

1 2 3 4 5 6 ON OFF

Default settings

NOTE

When SW1-1 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** on page 450

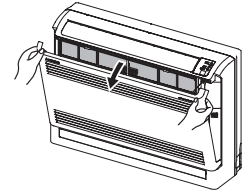
③ How to install the control assy

The control assy (Receiver and Interface PCB assy) can be installed inside the indoor unit. After turning off the power and confirming safety, execute as follows.

① Remove Inlet panel

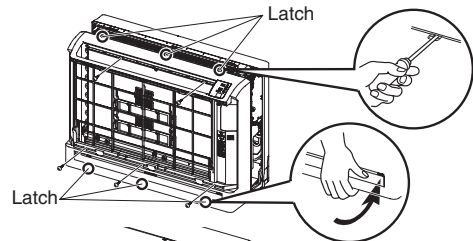
- Pull the inlet panel towards you at the upper side of both sides, and detach the latches.
- Remove the retainer string from the front panel.
- Remove the inlet panel.

CAUTION
When removing the inlet panel, be careful not to drop it on your feet.



② Remove Front panel

- Remove the fixing screw. (5 pieces)
- Detach the latches at the upper side of the front panel. (3 places)
If difficult to remove the latch, detach the latch portion by using straight screw driver, for example.
- Move the lower part of the front panel towards you.
- Detach the latches at the lower side of the front panel. (6 places)



③ Remove Display label and stick on Display label

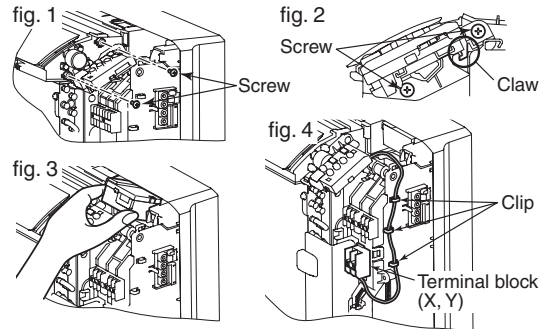
- Peel off the original display label, on the upper side. (★ Mark)
Press the back side of label, then the label floats.
- Stick the attached display label on the same location.

CAUTION MUST change the display label.

If the display label is not changed, the receiver can not receive the signal from the remote control.

④ Install Control assy

- Fix the receiver on the indoor unit, by the attached screw. (2 pieces, refer to figure 1)
Make sure that the claw of the receiver hungs on the claw of the indoor unit control box. (Refer to figure 2)
- Put the interface PCB assy on the indoor unit control box. Put the interface PCB assy securely in the innermost location, when installing the front panel. (Refer to figure 3)
- Fix the wiring on indoor unit control box by the clips. (3 places, refer to figure 4)
- Fix the terminal of the wiring assy (for X, Y) on the lower side terminal block of the indoor unit. (Non-polarity)

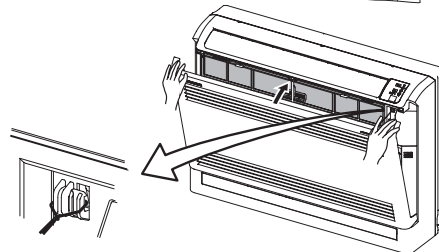


⑤ Put back Front panel

- Place the front panel over the indoor unit.
- Hang the latches on the lower side of the front panel. (6 places)
- Hang the latches on the upper side of the front panel. (3 places)
- Tighten the fixing screw. (5 pieces)

⑥ Put back Inlet panel

- Put the lower side of the inlet panel on the front panel.
- Hang the retainer string on the claw of the front panel.
- Snap the latch of the inlet panel upper side into the front panel.



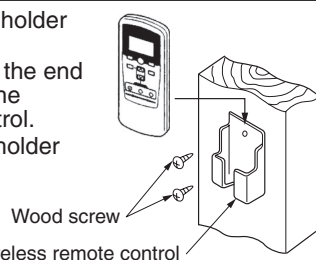
④ How to install the wireless remote control

CAUTION DO NOT install it in the following places.

- Places exposed to direct sunlight
- Hot surface or cold surface enough to generate condensation
- Places near heat devices
- Places directly exposed to oil mist or steam
- High humidity places
- Uneven surface

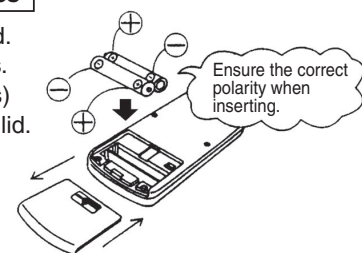
Installation tips for the wireless remote control holder

- Adjust and keep the holder up right.
- Tighten the screw to the end to avoid scratching the wireless remote control.
- DO NOT attach the holder on plaster wall.



How to insert batteries

- Detach the back lid.
- Insert the batteries. (two AAA batteries)
- Reattach the back lid.



⑤ Function setting of interface PCB and wireless remote control

Master/Slave setting when using plural remote controls

Up to two wireless kit or wired remote control can be installed in one indoor unit group.
When two wireless kit or wired remote control are used, it is necessary to change setting on the PCB to slave.

Switch	Setting	Contents
Wired remote control: SW1	Master	Master remote control
Wireless kit: SW1-2	Slave	Slave remote control

Setting to avoid mixed communication

In case of plural setting, check the operation distance of wireless remote control, and avoid mixed communication.

Refer to **⑦ Wireless remote control operation distance** on page 451 about the operation distance.

It is necessary to change setting of interface PCB and wireless remote control.

(1) Interface PCB

Set SW1-1 to "OFF" position.

(2) Wireless remote control

Pressing **ACL** and **AIR FLOW** button at the same time or inserting the batteries with pressing **AIR FLOW** button will customize the signal.

Setting to disable the Auto mode operation

VRF system (except heat recovery 3-pipe system) cannot be operated in Auto mode.
Make sure to set the remote control for the models so as not to be able to choose Auto mode.

Pressing **ACL** and **MODE** button at the same time or inserting the batteries with pressing **MODE** button will make auto mode operation.

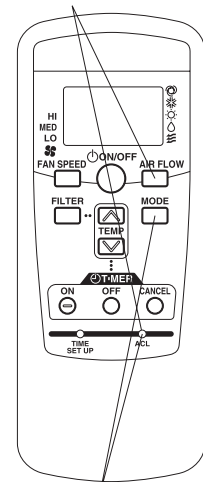
ATTENTION

When the batteries are removed, the setting will return to the default setting. Please make sure to reset it when the batteries are replaced.

CAUTION

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air-conditioner.)

Radio prevention mode



Auto mode operation setting

⑥ Wiring

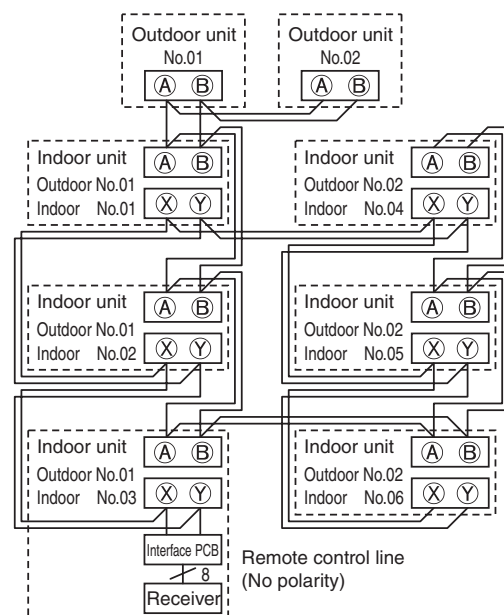
Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- Connect indoor units with each other with 2-core wires. As for size, refer to the following note.
- The receiver wires must be connected only with the indoor unit that will be operated by the remote control directly.
- Use the rotary SW1 and SW2 provided on the indoor unit PCB (Printed circuit board) to set unique remote control communication address avoiding duplication.

Restrictions on the thickness and length of wire
(Maximum total extension 600m.)

Standard	Within 100m x 0.3mm ²
	Within 200m x 0.5mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0mm ²

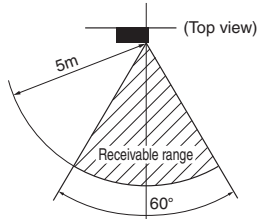
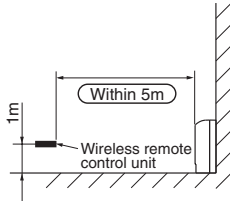


⑦ Wireless remote control operation distance

① Standard signal receiving range

[Condition]

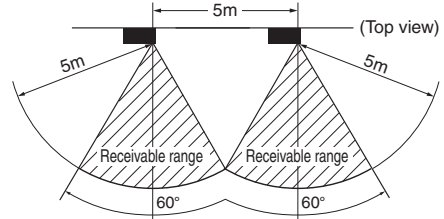
Illuminance at the receiver area: 360 lux. (When no lighting fixture is located within 1m of indoor unit in an ordinary office)



② Points for attention in connecting a plural number of indoor units

[Condition]

Illuminance at the receiver area: 360 lux.



⑧ Trial operation

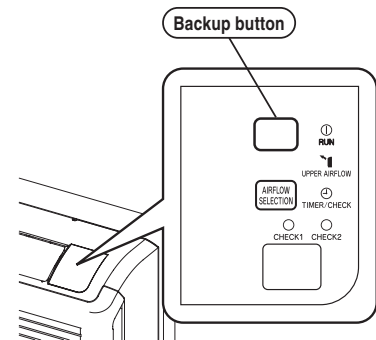
Backup button

The backup button is provided on the display label. It is possible to use the backup button as shown in the figure right. When operation from the wireless remote control is not possible (due to flat batteries, a mislaid unit, a unit failure), the backup button can be used as an emergency means. The backup button is operated 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).

Fan 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, while the backup button on the receiver is depressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If the air-conditioner can not operate properly during the test run, check wiring according to the trouble shooting guides.

NOTE

1. After over 2 minutes from power on, operate the wireless remote control.
The operation is invalid during 2 minutes from power on.
2. Check indicator lamp "check1" / "check2" shows error code.
The number of blinking shows the error code number of tens/ones place and check1/check2 corresponds to tens/ones place.

How to select air flow

AIR SELECTION button can switch the air supply.

(1) Stop the air-conditioner.

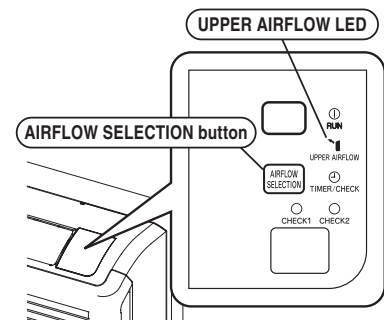
(2) Select the airflow from AIR SELECTION button on the unit display.

① In case of selecting to upper airflow.


Press the AIRFLOW SELECTION button once.
UPPER AIRFLOW LED will light for ten seconds.

② In case of selecting to upper and lower airflow.

When UPPER AIRFLOW LED is lit by pressing AIRFLOW SELECTION button, press AIRFLOW SELECTION button once again.
UPPER AIRFLOW LED will turn off.



(8) Except for FDT, FDTC, FDTW, FDTS, FDK, FDE & FDFW series (RCN-KIT3-E)


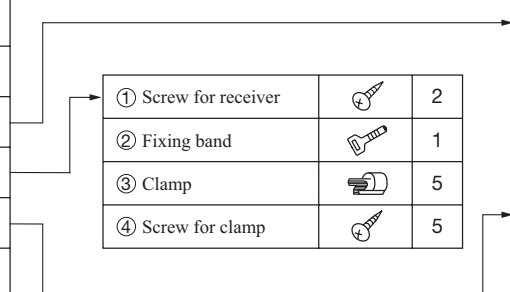













PJZ012D060 

This product is dedicated for heat pump unit. Never install on the unit dedicated for cooling.

(a) Wireless kit model

Model
RCN-KIT3-E

(b) Accessories (Confirm the following accessories).

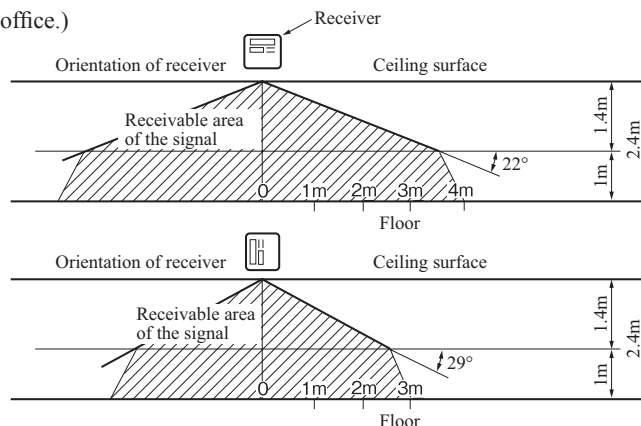
① Light detection adaptor		1		① Wireless remote control holder		1
② Wiring (3m)		1		② Screw for holder		2
③ Parts set (A)		1		③ AAA dry cell battery (R03)		2
④ Parts set (B)		1		① Screw for receiver		2
⑤ Parts set (C)		1		② Fixing band		1
⑥ Wireless remote control		1		③ Clamp		5
⑦ User's manual		1		④ Screw for clamp		5
			① Receiver installation bracket		1	
			② Screw for the bracket		2	
			③ Installation fitting		2	

(c) Wireless remote control's operable area

1) 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.)

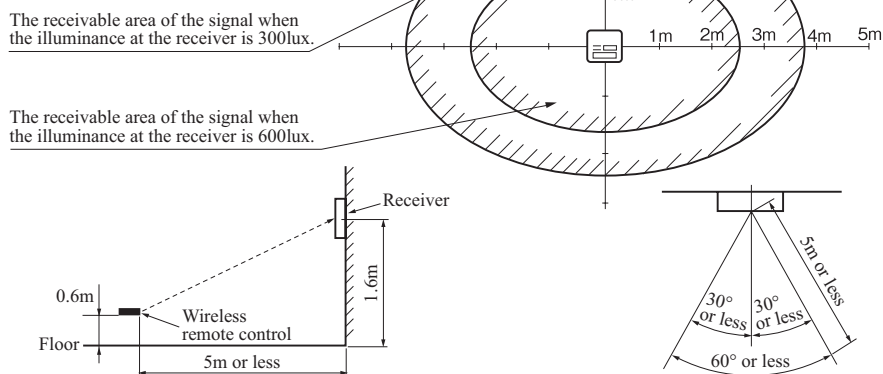


② Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

[Condition] Correlation between the reachable area of the signal and illuminance at the receiver when the remote control is operated at 1.1m high under the condition of ceiling height of 2.5m.
When the illuminance becomes double, the area is narrowed down to two third.

2) When installed on wall

[Condition] Illuminance at the receiver : 800lux.



(d) How to install the receiver

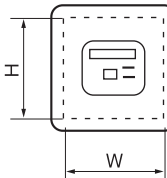
The following two methods can be used to install the receiver onto a ceiling or a wall.
 Select a method according to the installation position.

<Installation position>

- ① Direct installation onto the ceiling with wood screws.
- ② Installation with accessory's bracket

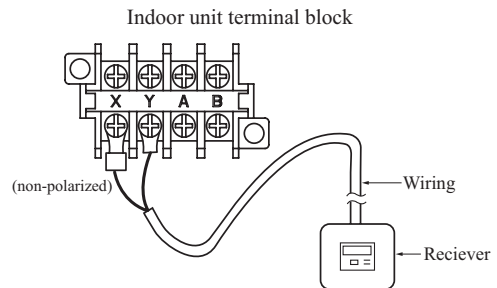
1) Drilling of the ceiling (ceiling opening)

Drill the receiver installation holes with the following dimensions 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.

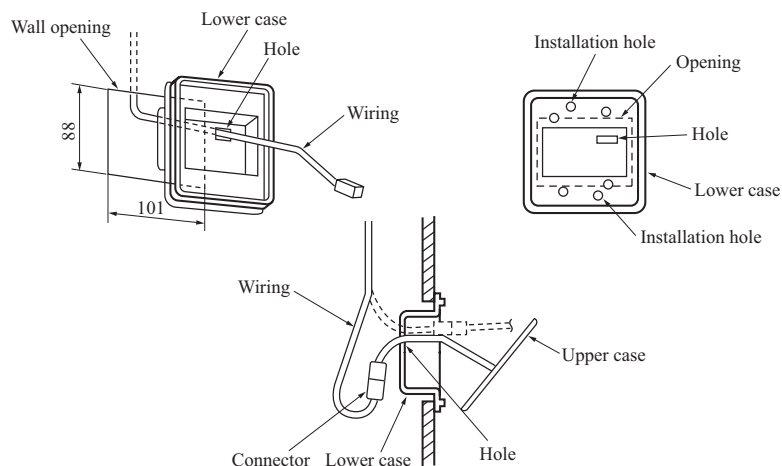


3) Installation of the receiver

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) or (B) shown below.

(I) Direct installation onto the ceiling with screws

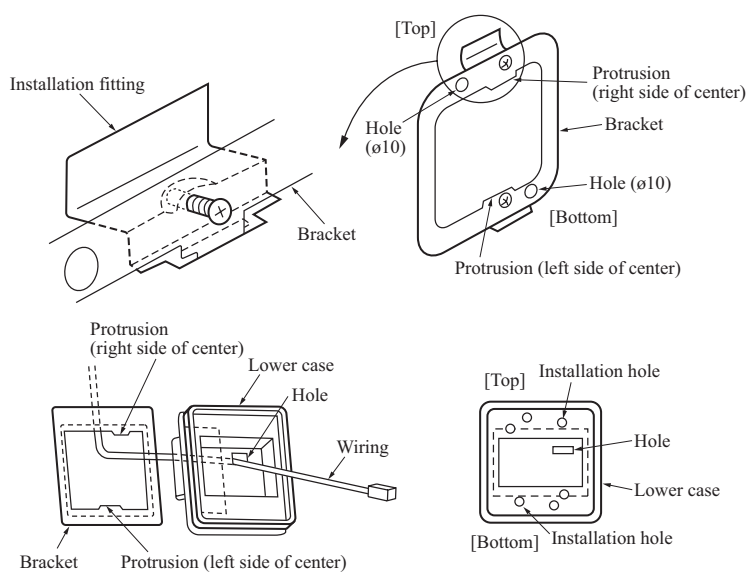
▷ Use this installation method when the ceiling is wooden, and there is no problem for strength in installing directly with wood screws.



- 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 above, 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.
- 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.

(II) 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 up/down and front/back orientation. Confirm the top/bottom 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.

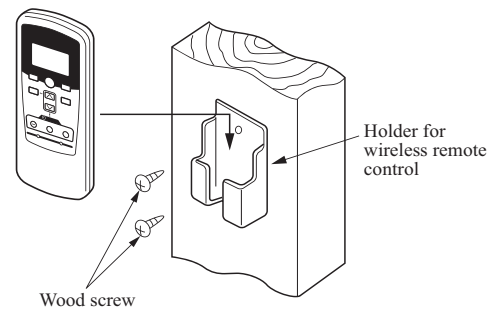
(e) Remote control

Installation of the wireless control holder

Caution

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

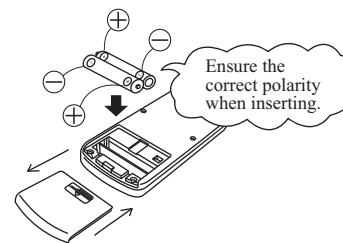


Installation tips for the wireless remote control holder

- Adjust and keep the holder upright.
- Tighten the screw to the end to avoid scratching the remote control.
- DO NOT attach the holder to plaster wall.

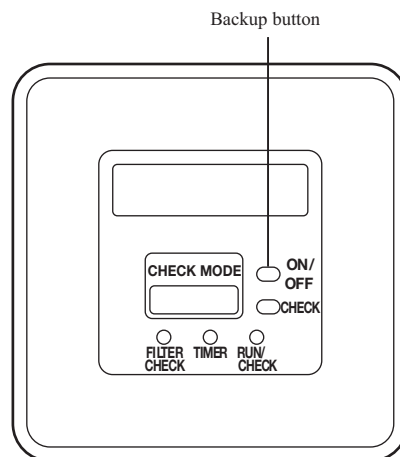
How to insert batteries

- ① Detach the back lid.
- ② Insert the batteries. (two AAA batteries)
- ③ Reattach the back lid.



(f) Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote control, while the backup button on the receiver is pressed.
- If the backup button 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 by consulting with inspection guides on the wiring diagram of outdoor units.



(g) Setting of wireless remote control and receiver

(I) Methods of avoiding the malfunction due to the mixed communication

Do both procedures ① and ②.

This setting is to avoid the mixed communication with other household electric appliances or the mixed communication when two receivers are located closely.

① **Setting change of the wireless remote control**

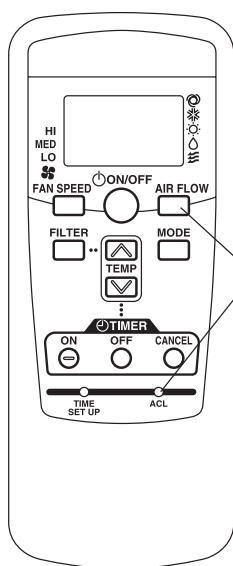
Pressing **ACL** and **AIRFLOW** button at the same time or inserting the batteries with pressing **AIRFLOW** button will customize the signal.

Note *When the batteries are removed, the setting will return to the default setting. Make sure to reset it when the batteries are replaced.

② **Setting the PCB of the receiver**

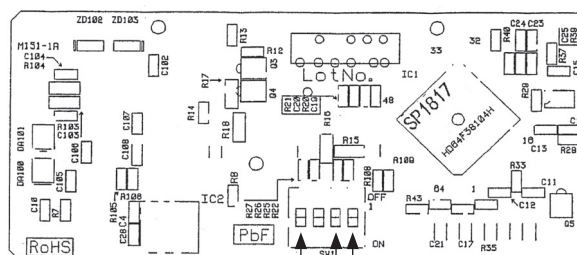
Turn SW1-1 off.

● **Wireless remote control**



Setting to avoid mixed communication.

● **PCB of the receiver**



SW1-4 (Auto restart)
SW1-1 (Customized signal setting to avoid mixed communication)
SW1-2 (Receiver master/slave setting)

SW1-1	Customized signal setting to avoid mixed communication	ON : Normal OFF : Remote
SW1-2	Receiver master/slave setting	ON : Master OFF : Slave
SW1-4	Auto restart	ON : Valid OFF : Invalid

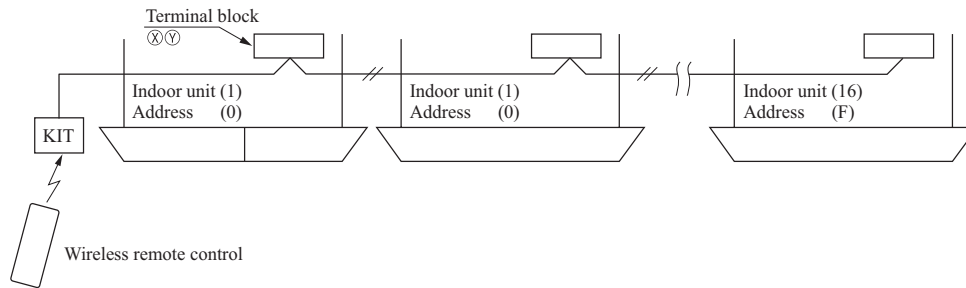
: Default setting

(II) Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core 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.

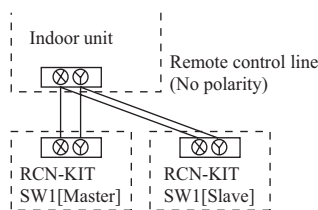
Restrictions on the thickness and length of wire (Maximum total extension 600m.)	
Standard	Within 100m x 0.3 mm ² Within 200m x 0.5 mm ² Within 300m x 0.75mm ² Within 400m x 1.25mm ² Within 600m x 2.0 mm ²



- ③ 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.

(III) Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.



Switch	Setting	Function
SW1-2	ON	Master
	OFF	Slave

(IV) Change setting of auto mode operation

Auto mode operation is prohibited to be selected for KX models (except for KXR models).

Therefore be sure to change setting of remote control to disable the auto mode operation for these models according to the following procedure.

While pressing the **[MODE]** button, press the **[ACL]** switch, or while pressing the **[MODE]** button, insert the batteries to the remote control. Then the auto mode can be invalid.

Attention

When the batteries are removed, it is returned to initial setting (Auto mode becomes valid).

Accordingly when replacing the batteries, be sure to perform the above operation once again.

(V) Change setting of fan speed

While pressing the **[FAN SPEED]** button, press the **[ACL]** switch, or while pressing the **[FAN SPEED]** button, insert the batteries to the remote control. Then the fan speed can be changed from 2-speed setting to 3-speed setting.

When changing fan speed setting of remote control, be sure to perform the same fan speed setting as that of the indoor unit model to be used.

Attention

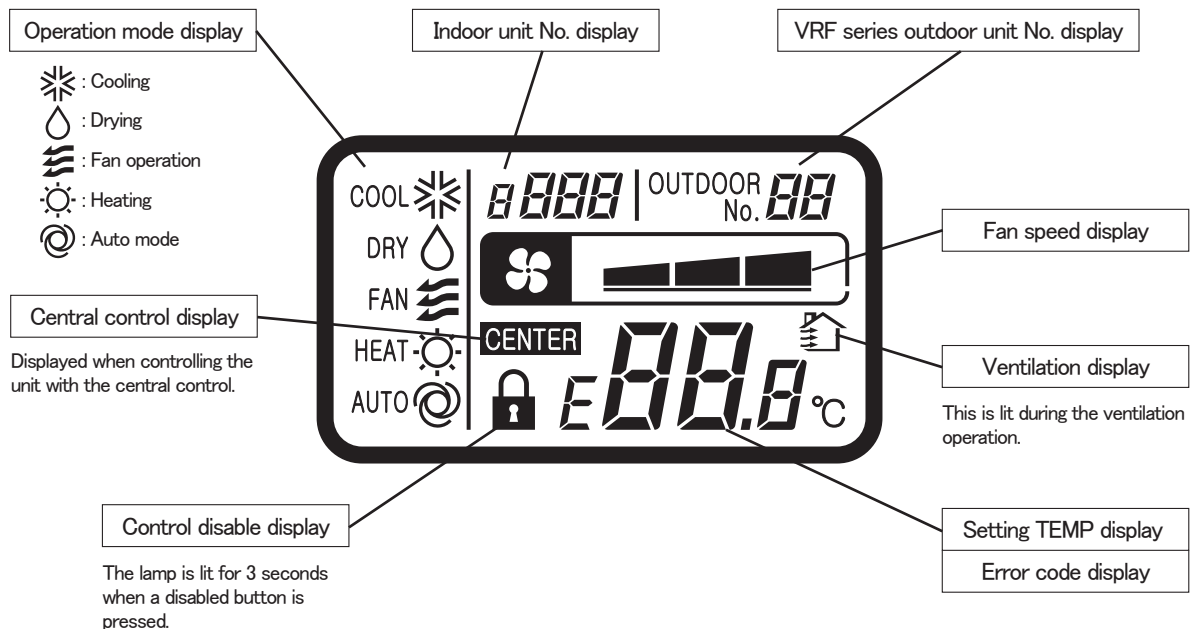
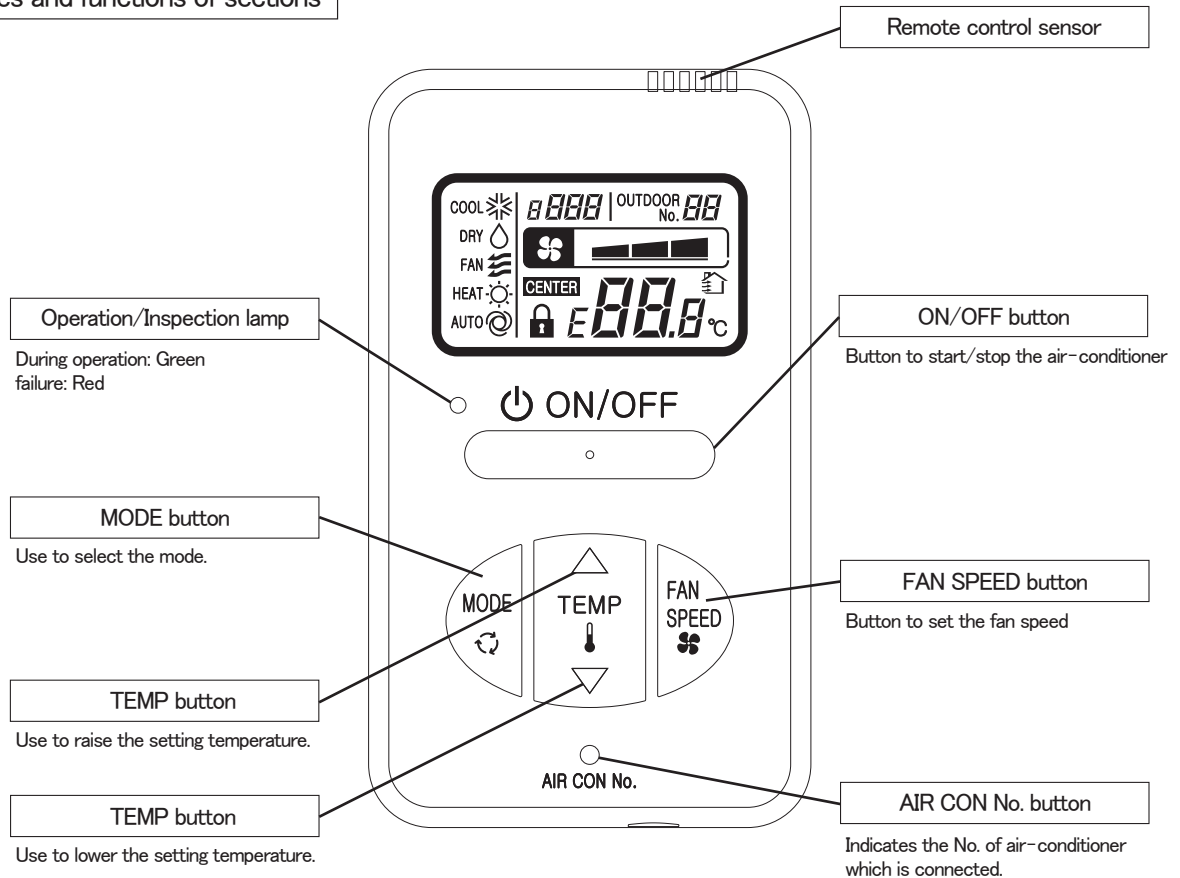
When the batteries are removed, it is returned to initial setting (Fan speed setting is 2-speed).

Accordingly when replacing the batteries, be sure to perform the above operation once again.

12.2 Simple wired remote control (RCH-E3)

PJZ000Z272

Names and functions of sections

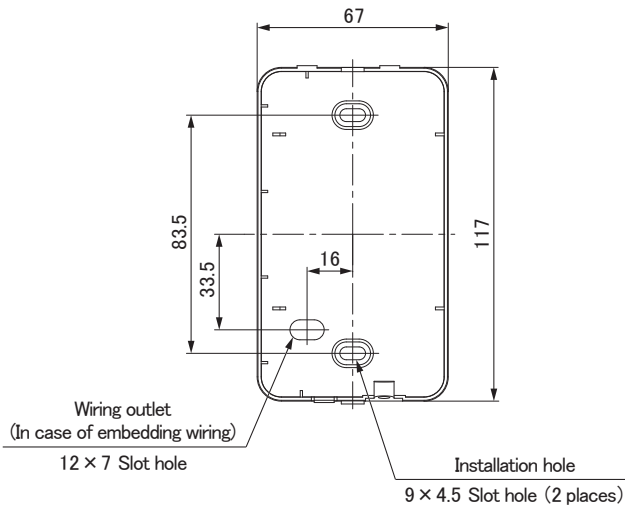


Installation of remote control

DO NOT install the remote control at the following places in order to avoid malfunction.

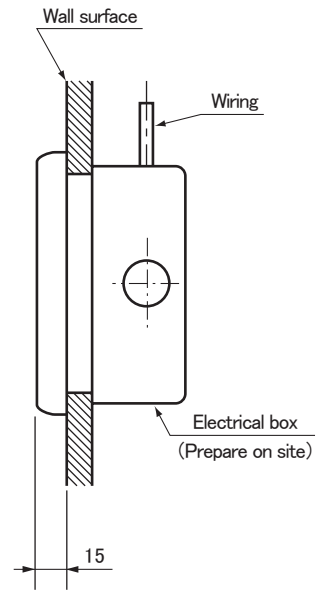
- (1) Places exposed to direct sunlight
- (2) Places near heat devices
- (3) High humidity places
- (4) Hot surface or cold surface enough to generate condensation
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface

Remote control installation dimensions

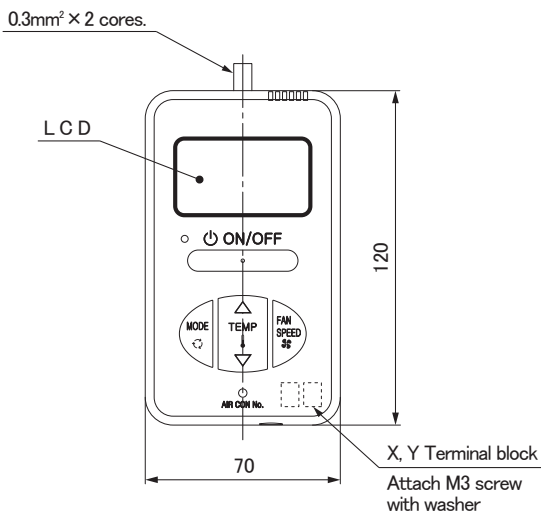


Note: Installation screw for remote control
M4 Screw (2 pieces)

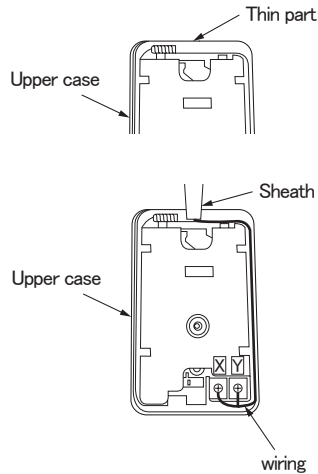
In case of embedding wiring



In case of exposing wiring

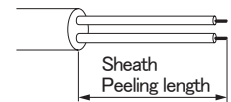


The remote control wiring can be extracted from the upper center. After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.



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 core 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.

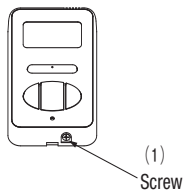


Accessories	Remote control, wood screw (φ 3.5 × 16) 2 pieces
Prepare on site	Remote control cord (2 cores) (Refer to [2. Installation and wiring of remote control]) [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

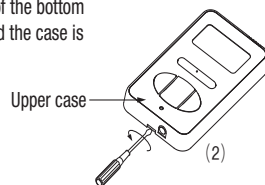
1. Installation procedure

In case of embedding cord

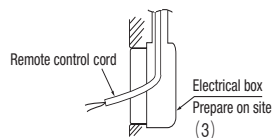
- (1) **Make certain to remove** the screw on the bottom surface of the remote control.



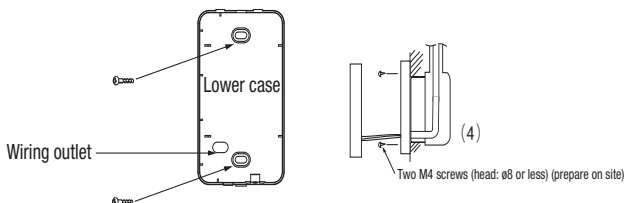
- (2) Remove the upper case of the remote control.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.



- (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.

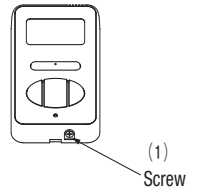


- (5) Connect the remote control cord to the terminal block.
Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)

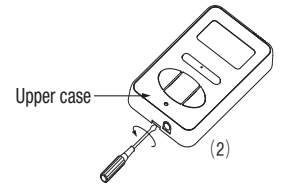
- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.

In case of exposing cord

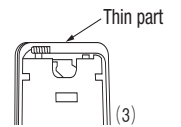
- (1) **Make certain to remove** a screw on the bottom surface of the remote control.



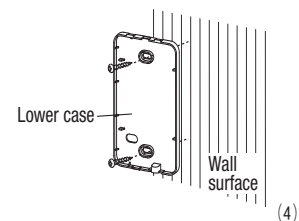
- (2) Remove the upper case of the remote control.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.



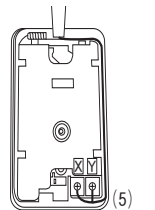
- (3) The remote control cord can be extracted from the upper center.
After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.



- (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.

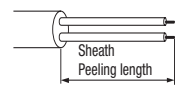


The wiring in the remote control case should be 0.3 mm² (recommended) to 0.5 mm² at maximum.

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 core 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

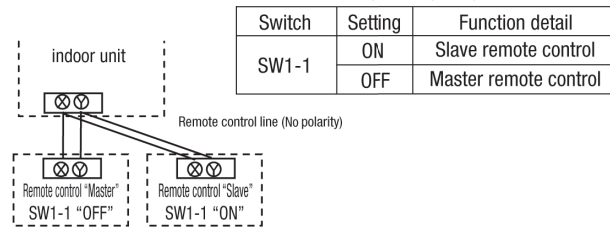
Under 300m ······ 0.75mm² × 2 cores

Under 400m ······ 1.25mm² × 2 cores

Under 600m ······ 2.0mm² × 2 cores

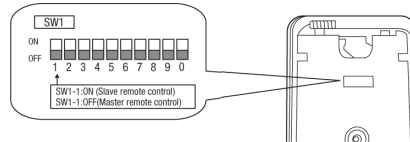
3. Master/ slave setting when more than one remote control are used

- (1) Up to two remote controls can be connected to one unit (or one group) of indoor unit.



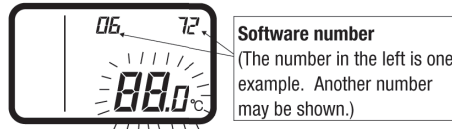
- (2) Set the switch SW1-1 of the slave remote control is "Slave" (ON). The factory default is set as "Master" (OFF).

- (Note) • The remote control thermistor 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 thermistor is effective, detected temperature by the remote control thermistor is displayed.

- (2) Press **ON/OFF** button.
 End.

[In the case that the remote thermistor 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 Δ** 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.

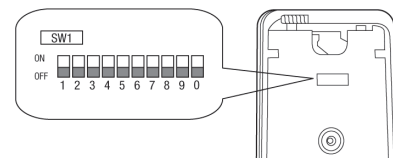
6. Function setting

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 thermistor enabled	
	OFF	Remote control thermistor 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 thermistor: no offset	○	
			02	Remote control thermistor: +3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
			03	Remote control thermistor: +2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
			04	Remote control thermistor: +1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +1.0°C.
			05	Remote control thermistor: -1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -1.0°C.
			06	Remote control thermistor: -2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -2.0°C.
			07	Remote control thermistor: -3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -3.0°C.
	04	Remote control thermistor at the time of heating	01	Remote control thermistor: no offset	○	
			02	Remote control thermistor: +3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
			03	Remote control thermistor: +2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
04			Remote control thermistor: +1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +1.0°C.	
05			Remote control thermistor: -1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -1.0°C.	
06			Remote control thermistor: -2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -2.0°C.	
07			Remote control thermistor: -3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -3.0°C.	
05	Ventilation 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	
Indoor unit function	07	Operation permission/prohibition	01	Disabled	○	
			02	Enabled		Operation permission/prohibition controller 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 thermistor.	
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
		Fan speed: two steps (Hi-Me)	
		Fan: one step	Product model whose indoor unit fan speed is only one step
Remote control function 06	"Auto" operation setting	"Auto" operation enabled	Product model where "Auto" mode is selectable
		"Auto" operation disabled	Product model without "Auto" mode
Indoor unit function 13	Heating fan control	Low fan speed	Product model except FDUS
		Intermittent operation	FDUS

Note 2: Fan speed of "High speed" setting

Fan speed setting	Indoor unit fan speed setting		
	■■■ - ■■ - ■	■■■ - ■	■■■ - ■■
Standard	Hi - Mid - Lo	Hi - Lo	Hi - Mid
High speed 1 + 2	UHi - Hi - Mid	UHi - Mid	UHi - Hi

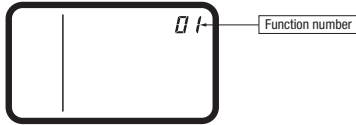
Initial setting of some indoor unit is "High speed".

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-conditioning, 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.

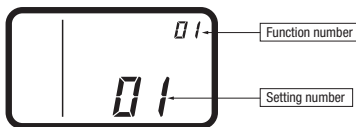


- (2) Press **TEMP▲** or **TEMP▼** button.
Select the function number.

- (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)



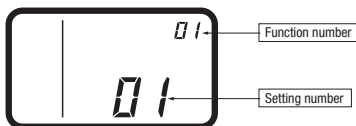
- ② Press **TEMP▲** or **TEMP▼** button.
Select the setting number.

- 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.

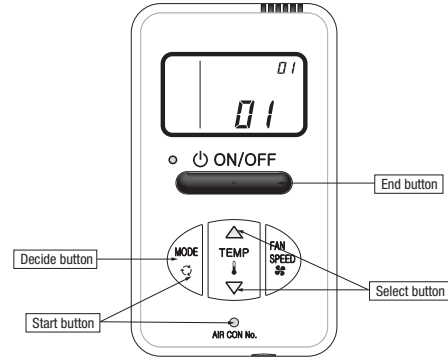
(Example)

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.



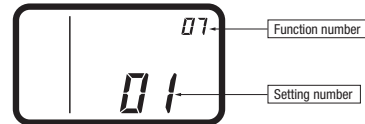
[In the case of selecting the indoor unit function (07-14)]

- ① "88" blinks on the temperature setting indicators.
(blinking for approximately 2 to 10 seconds while data is read)



After that, the current setting number of the selected function number blinks.
(Example)

Function number: "07" (lighting)
Setting number: "01" (blinking)



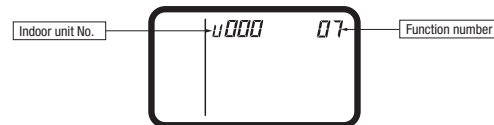
Proceed to ②.

[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.

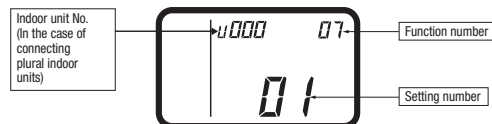
Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(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).

- 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 controller, 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.)

12.3 Filter kit (FDUM, FDUH series)

PJZ012D076A

(1) FDUM series

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.

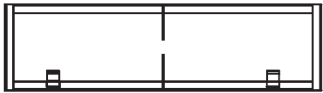
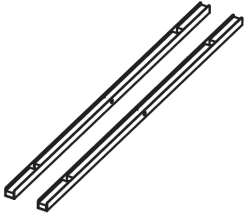
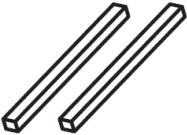



CAUTION

- 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

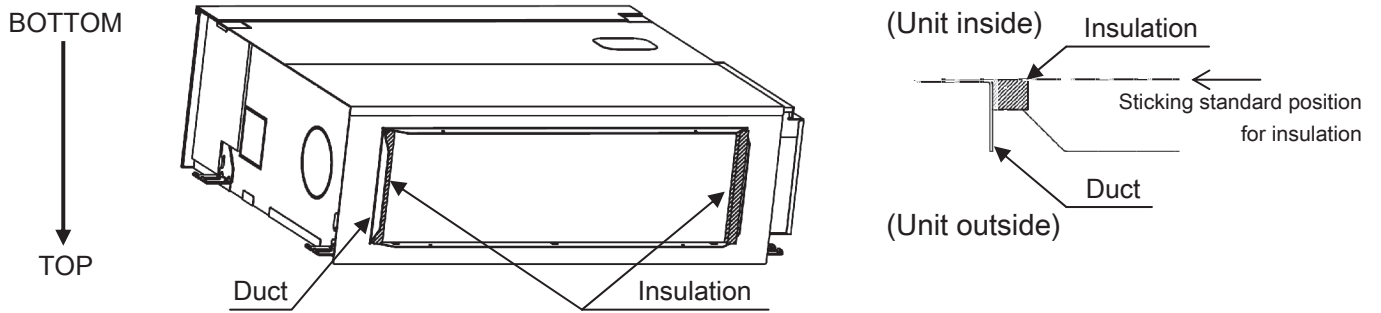
	Small model	Medium model	Large model
Single type	40, 50	60, 71	100 - 140
Multi type	22 - 56	71, 90	112 - 160
Filter Kit	UM-FL1EF	UM-FL2EF	UM-FL3EF

2) Parts list of filter kit

Filter	Rail	Insulation
		
1pc	2pcs	2pcs
Bracket	Parts set (screw)	
		
1pc	(small and medium model : 5pcs.)	(large model : 7pcs.)
	1pc	

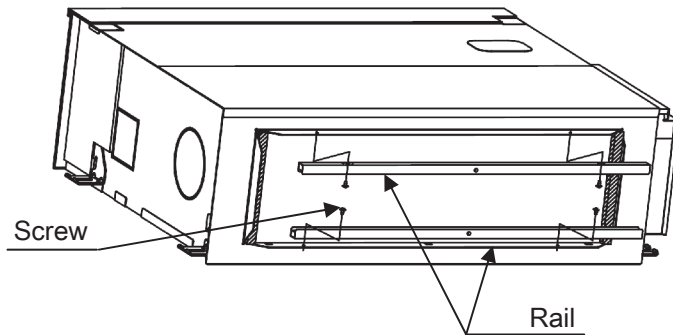
3) Installation points

i) Stick the insulation on both inner sides of the duct, leaving no space up and down.

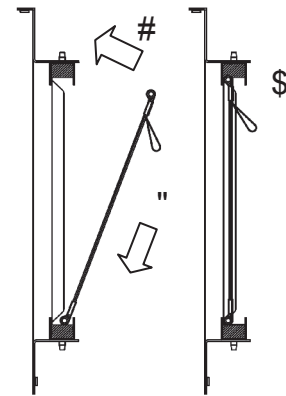
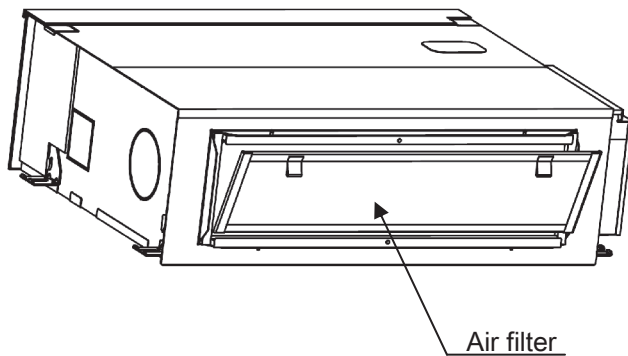


(*) After unpacking, bottom side of the unit is located at the upper side.

ii) Install the rail on both inner sides of the duct with the screw.

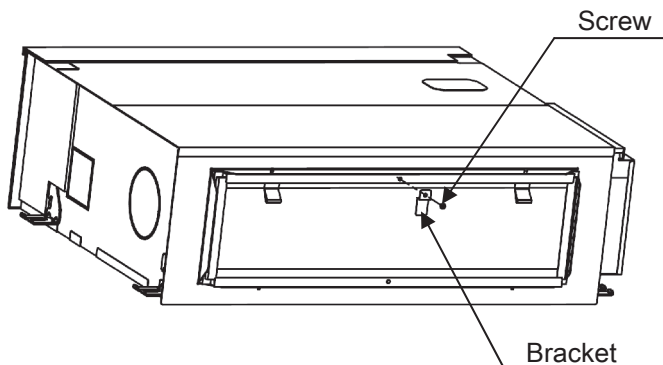


iii) Install the air filter on the rails.



Installation procedure

iv) 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.

(2) FDUH series

PJC012D017A 

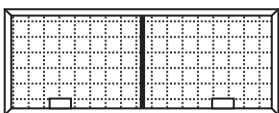
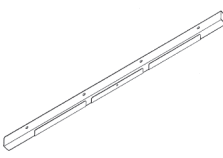

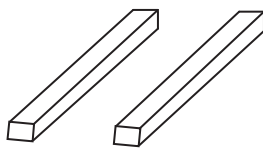
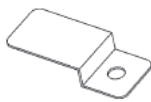

This manual contains installation points and operating instructions for the filter kit manufactured by MHI. Carry out the work following the instructions below.

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.

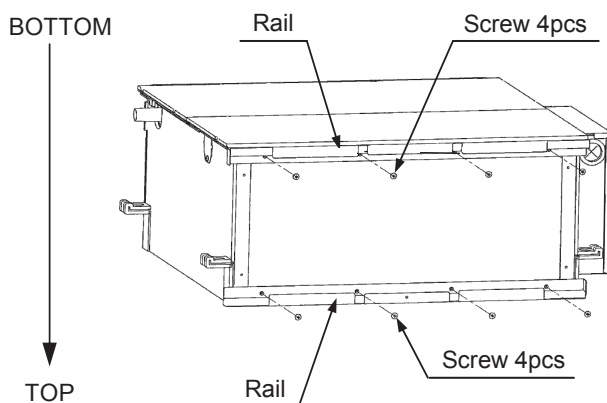
1) Parts list of filter kit

Filter  1pc	Rail  2pcs section shape 	Insulation  2pcs
Bracket  1pc	Parts set  (Screw : 9pcs) 1pc	

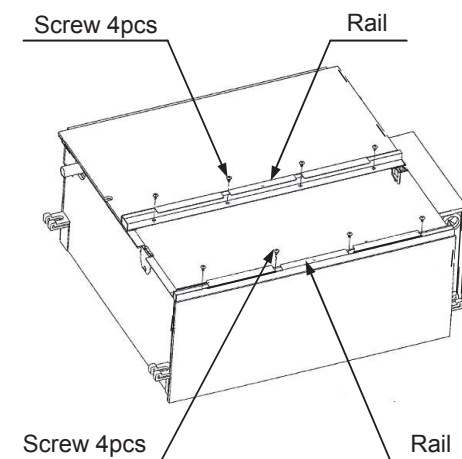
2) Installation points

a) Install the upper rail and lower rail with the screw.

<In case of rear air return>



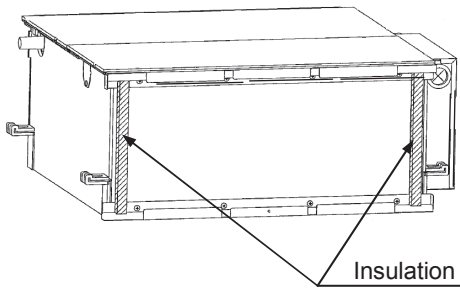
<In case of bottom air return>



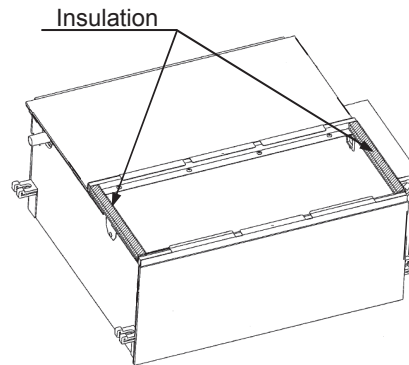
(*) After unpacking, bottom side of the unit is located at the upper side.

b) Stick the insulation on the both sides, leaving no space up and down.

< In case of rear air return >

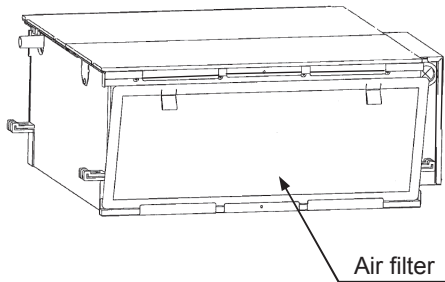


< In case of bottom air return >

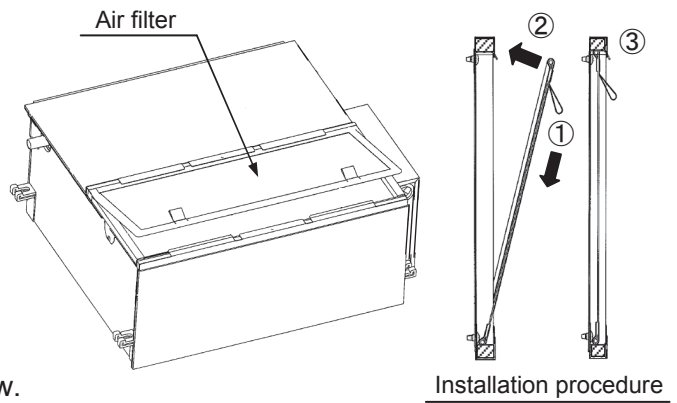


c) Install the air filter on the rails.

< In case of rear air return >

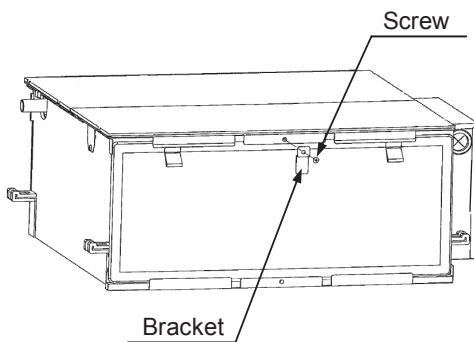


< In case of bottom air return >

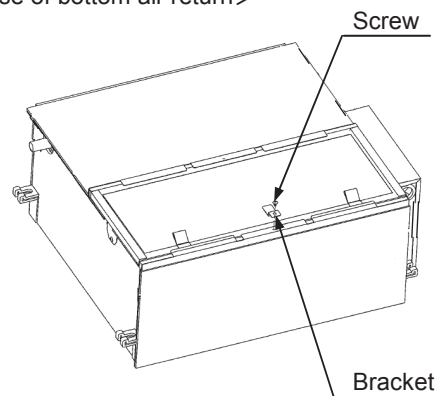


d) Install the bracket on the rail with the screw.

< In case of rear air return >



< In case of bottom air return >



(**) When the unit is installed, bottom side of the unit is located at the lower side.

12.4 FDUT series

PJZ012D081

(1) Outlet duct plate

Use this kit for a direct -blow and duct-less installation.

Replace the plate at the blow outlet of unit and connect the blowout duct according to the following procedure.

The blow outlet assembled on the unit at the shipping from factory, is for connecting duct which produces static pressure of 10Pa or more at the outside of unit.

CAUTION

- (1) Install the kit while the unit is placed on the floor.
It should not be attempted to install it after installation of the unit in place. Otherwise, it will become very difficult to install it because related sections could be deformed by the weight of unit.
- (2) Do not supply the electric power to the unit during the installation of the kit.
There is the risk of electrical shock or injury be being caught up with revolving parts.

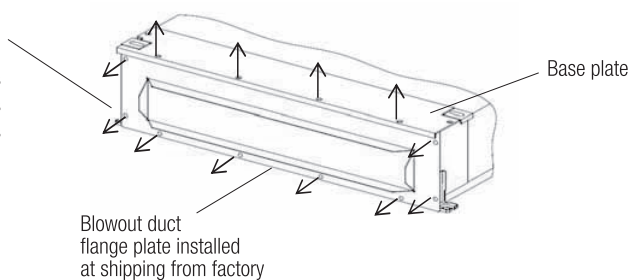
1. Applicable model of unit and type of blowout duct flange plate kit

Type of blowout duct flange plate kit	UT-SAT1EF	UT-SAT2EF	UT-SAT3EF
Model	15, 22, 28, 36	45, 56	71

(Figure shows the state that the unit is placed on a floor. Top and bottom are inverted after installing the unit.)

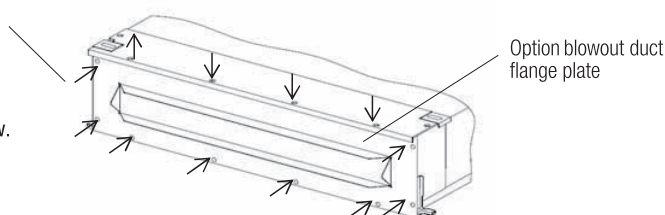
- (1) Place the unit as shown below.
- (2) Remove the blowout duct flange plate from the unit. Keep the removed tapping screws to reuse later.

- ◆ Location of tapping screws to be removed
- 15, 22, 28, 36 : 12 places
- 45, 56 : 14 places
- 71 : 12 places
- Tapping screw size:



- (3) Install the option blowout duct flange plate using the tapping screws removed at the step (2) above.
Take care not to damage the insulation when tightening the tapping screws.

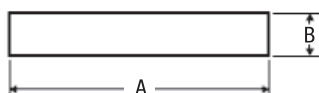
- ◆ Location of tapping screws to be tightened
- 15, 22, 28, 36 : 12places
- 45, 56 : 14 places
- 71 : 12 places
- Reuse removed tapping screw.



2. Instruction

- (1) Dimensions of the blowout duct flange of the kit are as shown below.

Dimensions in the following table show the outside measurements of the flange.



	A	B
15,22,28,36	600	70
40,56	860	70
71	1060	70

(2) Filter set

PJZ012D089

This manual contains installation points for FILTER SET manufactured by MHI.

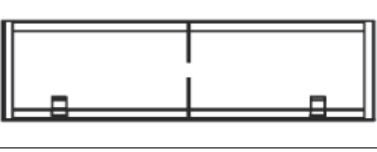
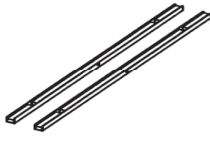



CAUTION

- 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.
- Be sure to cut off the power and stop the unit before maintenance.

1. Applicable model of unit and type of filter set

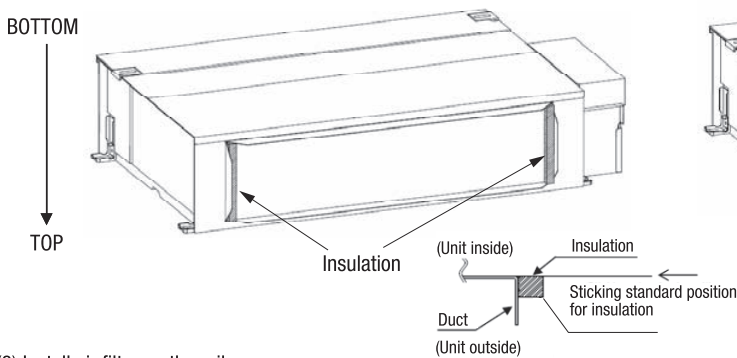
Type of FILTER SET	UT-FL1EF	UT-FL2EF	UT-FL3EF
Model	15, 22, 28, 36	45, 56	71

2. Parts list of FILTER SET

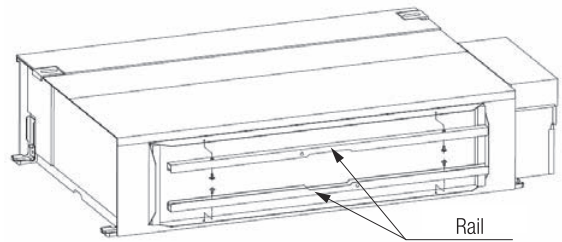
Filter	Rail	Insulation	Bracket	Parts set (screw)
 1pc.	 2pcs.	 2pcs.	 1pc.	 UT-FL1EF 5pcs. UT-FL2EF 5pcs. UT-FL3EF 7pcs.

● Following procedure (1) to (4) is needed when filter is installed on suction duct flange of unit.

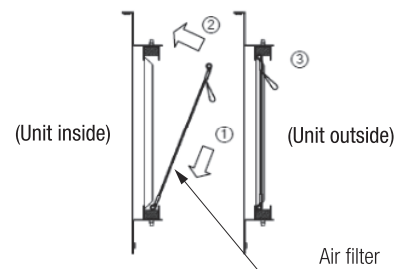
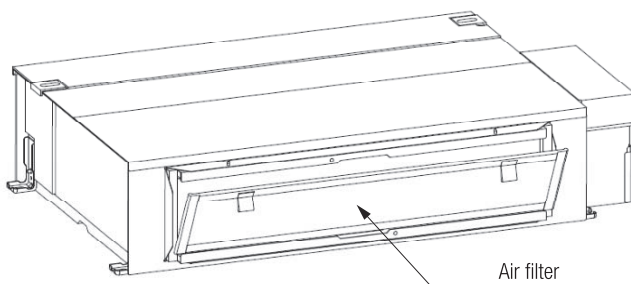
(1) Stick the insulation on both inner sides of the duct flange.



(2) Install the rail on both inner sides of the duct with the screw.

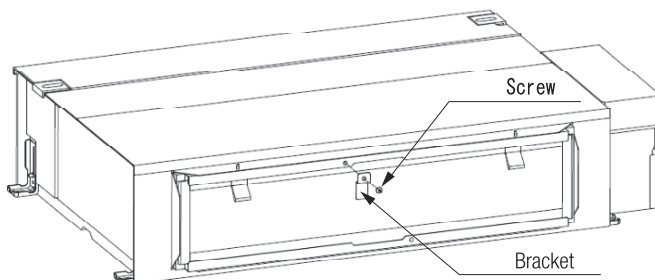


(3) Install air filter on the rail.



Filter installation procedure

(4) Install bracket on the rail with screw.



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