

Installation - RESERVOIR SENSING

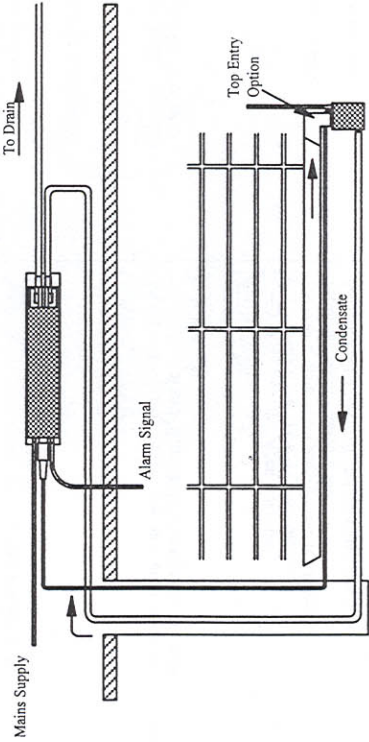
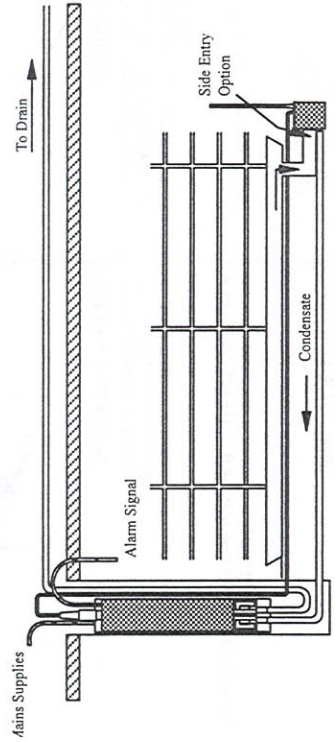
Leave sufficient space around the pump unit to allow for cooling.

The reservoir must be securely fastened in a vertical position.

When all other installation tasks have been completed, connect the mains cable (Live Neutral and Earth) to a suitable mains supply.

The mains supply must be fused to 1A

RESERVOIR SENSING - (Preferred Method)



The reservoir is designed to operate with water at a temperature of 30°C or less.

The pump may be mounted in any position

Installation - HOT AND COLD THERMISTOR SENSING

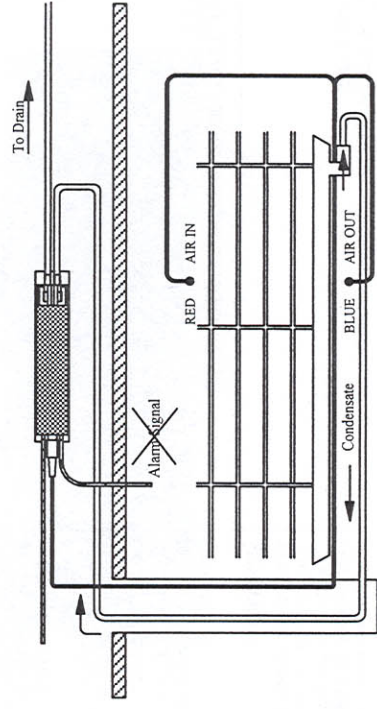
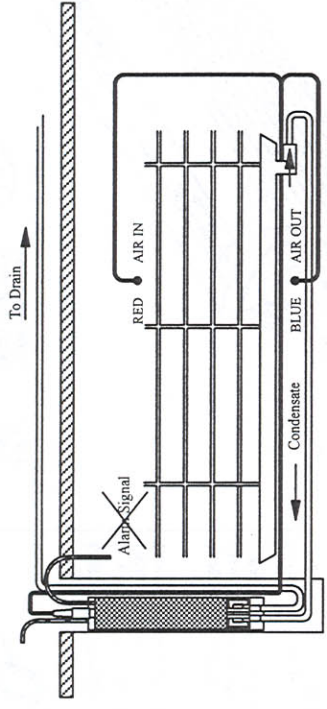
Leave sufficient space around the pump unit to allow for cooling.

When all other installation tasks have been completed, connect the mains cable (Live Neutral and Earth) to a suitable mains supply.

The mains supply must be fused to 1A

HOT AND COLD THERMISTOR SENSING

Alarm Signal NOT available



Blue Diamond

Condensate Removal Pump

Installation Instructions



Charles Austen Pumps Ltd

Warranty

The Blue Diamond is manufactured under Charles Austen Pumps strict quality control system. In the unlikely event of the item failing within 2 years from the date of purchase under normal usage, Charles Austen Pumps will repair the item free of charge subject to the following conditions:-

Two year warranty from delivery date in conjunction with our conditions of sale.

Charles Austen pumps will decline any responsibility if the installation of the Blue Diamond does not conform to our instructions and specifications.

Any modifications to the unit will immediately void the warranty. We reserve the right to alter any specification without prior notification.

Charles Austen Pumps Ltd

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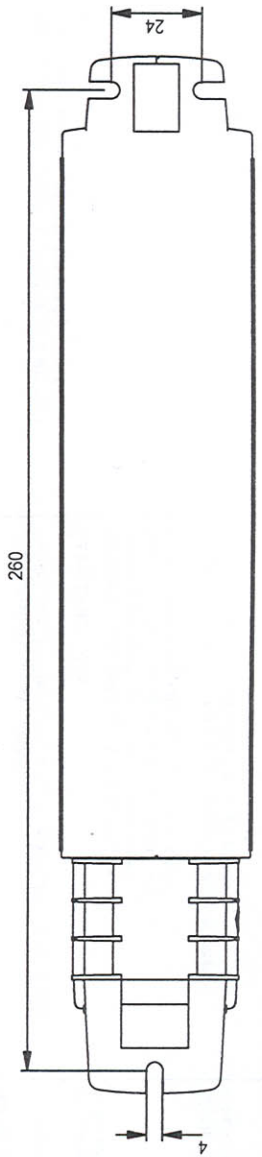
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S30-160/4

Distributed By:



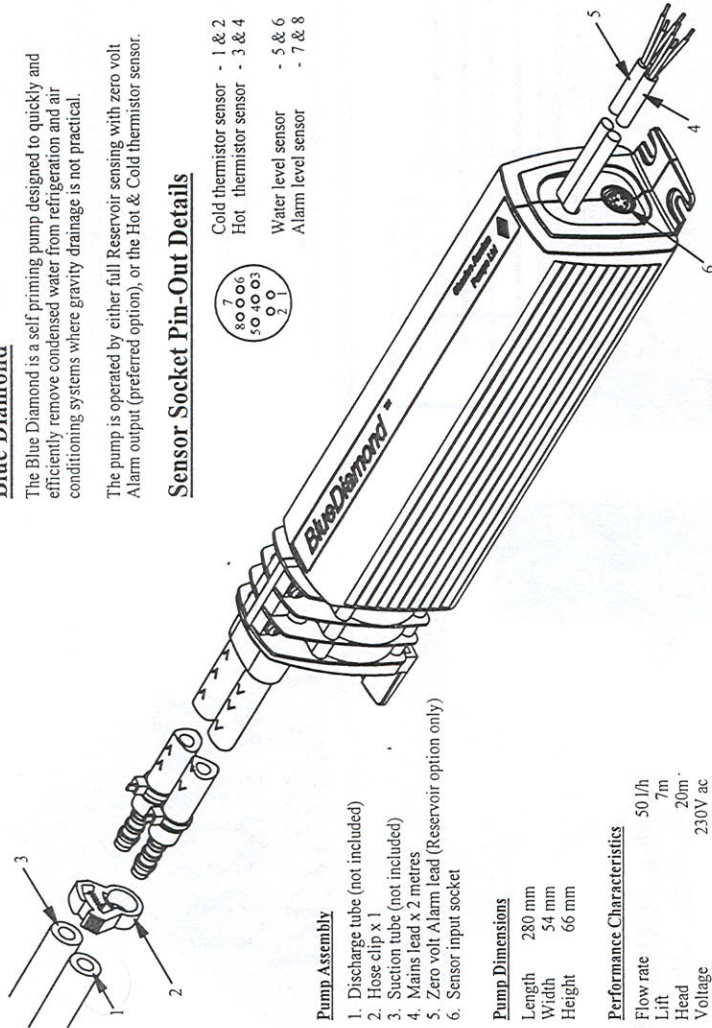
Blue Diamond

The Blue Diamond is a self priming pump designed to quickly and efficiently remove condensed water from refrigeration and air conditioning systems where gravity drainage is not practical.

The pump is operated by either full Reservoir sensing with zero volt Alarm output (preferred option), or the Hot & Cold thermistor sensor.

Sensor Socket Pin-Out Details

- | | |
|------------------------|---------|
| Cold thermistor sensor | - 1 & 2 |
| Hot thermistor sensor | - 3 & 4 |
| Water level sensor | - 5 & 6 |
| Alarm level sensor | - 7 & 8 |



Pump Assembly

- Discharge tube (not included)
- Hose clip x 1
- Suction tube (not included)
- Mains lead x 2 metres
- Zero volt Alarm lead (Reservoir option only)
- Sensor input socket

Pump Dimensions

Length 280 mm
Width 54 mm
Height 66 mm

Performance Characteristics

Flow rate 50 l/h
Lift 7m
Head 20m
Voltage 230V ac
Thermally Protected at 130°C

Safety Warning

Be sure that the power to the unit is disconnected before installing, servicing or removing any component.
Do not store or install the Blue Diamond in a damp environment.
The unit must not be placed outside, immersed in water or exposed to frost. All existing collection elements and fittings should be thoroughly cleaned before installing. Do not install if damaged.

Volt Free Alarm Connection

With reservoir sensing only.

The Alarm cable is connected to volt free changeover relay contacts housed within the pump. This may be used to warn the cooling equipment of a high reservoir water level fault.

The contacts are rated at 230V 3A.

BLACK = COMMON
YELLOW = CLOSED DURING STANDBY OR MAINS OFF
RED = CLOSED DURING ALARM CONDITION - MAINS ON

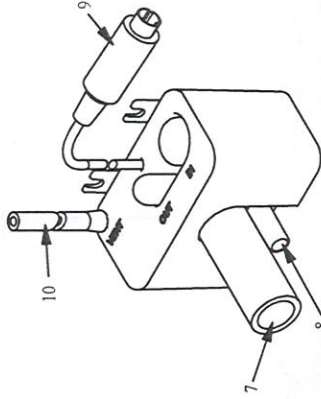
Push the reservoir sensor plug (9) fully home into the sensor socket (6).

Alarm Relay Operation

In the event of the reservoir detecting an abnormally high water level, a signal is sent to the ALARM RELAY causing the contacts to change over. When the high water level problem has been corrected, and after a short time delay, the alarm relay drops out and the contacts will return to their standby state.

Note - the Alarm Relay will only operate if there is power to the pump and the reservoir sensor is plugged into the pump.

Reservoir Sensor (preferred) Option



Reservoir Specification

W x D x H 70 x 40 x 50 mm
Fixing hole centres 35 mm
Thermistor sensing at < 30°C

Reservoir Assembly

- Condensate inlet tube Ø1.4mm ID
- Condensate outlet spout Ø8mm OD
- Level sensor plug + 2 metre lead
- Vent tube

Reservoir Installation

Choose to use either the top or side IN & OUT connections and move the blanking plugs to the unused ports.

The reservoir must be securely fastened in the vertical position as shown. Screws & wall plugs are provided.

Connect the reservoir outlet (8) to the inlet of the pump.

Connect the flexible condensate inlet (7) to the condensate tray hose. The reservoir is fitted with a vent tube (10). This must remain unblocked and the free end must be secured vertically above the reservoir and in a position higher than the full level of the condensate tray.

Avoid swan necks as this could cause an air lock in the vent tube.

Plug the Level sensor plug (9) into the sensor input socket (6) at the rear of the Blue Diamond.

Condensate Discharge

Connect the discharge tube (1) to the outlet of the pump and secure using hose clip (2) provided. Then run the discharge tube to a suitable drainage system.

Commissioning

Before running operational test ensure that :-

- The condensate tray is free from any debris.
- The inlet & outlet of the pump are connected correctly.
- The mains supply to the pump is fused to 1A.
- All tubing has a watertight seal and is free from kinks.

The operational test will ensure that:-

- The pump responds to the water level.
- The pump switches off after approximately 20 seconds when dry.

Operational Test

Slowly pour cold water into the tray until the pump switches on.

Allow the pump to run and switch off.

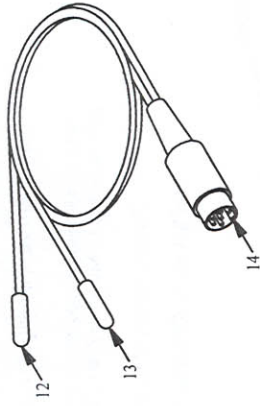
The pump should run for approximately 20 seconds after the tray is empty.

Cleaning and Servicing

The Blue Diamond condensate removal pump is reasonably tolerant of dust and sludge. However if the reservoir should need cleaning, it is best to use warm soapy water for the purpose, taking care not to damage the sensors.

IMPORTANT NOTE:- After any maintenance work it is important to carry out the operational test before using the pump.

Hot & Cold Sensor Option



Hot & Cold Sensor Assembly

- Hot Thermistor sensor (red)
- Cold Thermistor sensor (blue)
- Sensor plug + 2 metre lead

WARNING:- Since there is no water level sensing, the Alarm relay will NOT OPERATE with Hot & Cold Sensing.

Hot & Cold Sensor Installation

Position the red sensor (12) in the path of the air flow into the air conditioning unit and the blue sensor (13) in the air flow out of the unit.

Plug the Sensor plug (14) into the sensor input socket (6) at the rear of the Blue Diamond.

Condensate Discharge

Connect the discharge tube (1) to the outlet of the pump and secure using hose clip (2) provided. Then run the discharge tube to a suitable drainage system.

Commissioning

Before running operational test ensure that :-

- The condensate tray is free from any debris.
- The inlet & outlet of the pump are connected correctly.
- The mains supply is fused to 1A.
- All tubing has a watertight seal and is free from kinks.

The operational test will ensure:-

- The pump responds to the temperature change.

The Operational Test

Gently warm the RED sensor until it is approximately 8°C warmer than the BLUE sensor and the pump turns on.

Allow the RED sensor to cool.

The pump will turn off again when the RED & BLUE sensors are within 2°C of each other. This could take several minutes.

IMPORTANT NOTE:- After any maintenance work it is important to carry out the operational test before using the pump.