Commercial Heat Pump System - Installation Overview

INSTALLER: This pictorial guide does not replace the Owner's Guide and Installation Instructions supplied with the Commercial Heat Pump. The installation instructions should be read in full and referred to for details: 'Rheem will not accept any liability for failure to read or install the water heater in accordance with the installation instructions.'
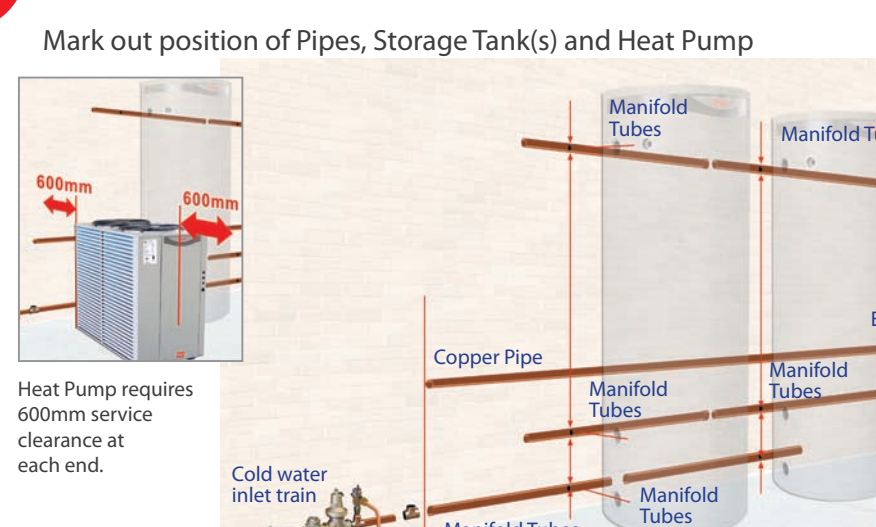
Rheem®

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1 Identify Components

Identify all components

Controller Unit

Storage Tank(s)

Pressure Relief Valve & Tee

Ambient Sensor Lead

Heat Pump

Tank Sensor Lead

Primary Pump

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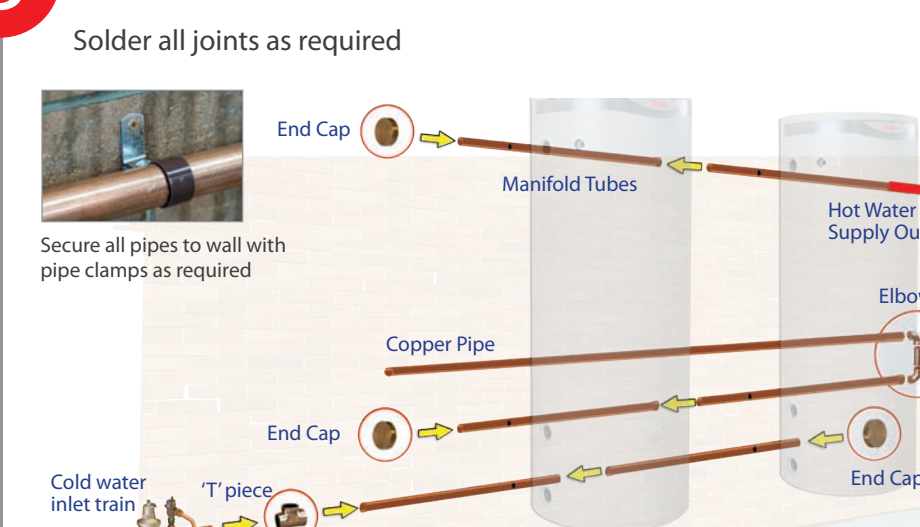
2 Mark Out

Mark out position of Pipes, Storage Tank(s) and Heat Pump

Manifold Tubes

Manifold Tubes

600mm   600mm

Elbows

Copper Pipe

Manifold Tubes

Manifold Tubes

Heat Pump requires 600mm service clearance at each end.

Cold water inlet train

Manifold Tubes   Manifold Tubes

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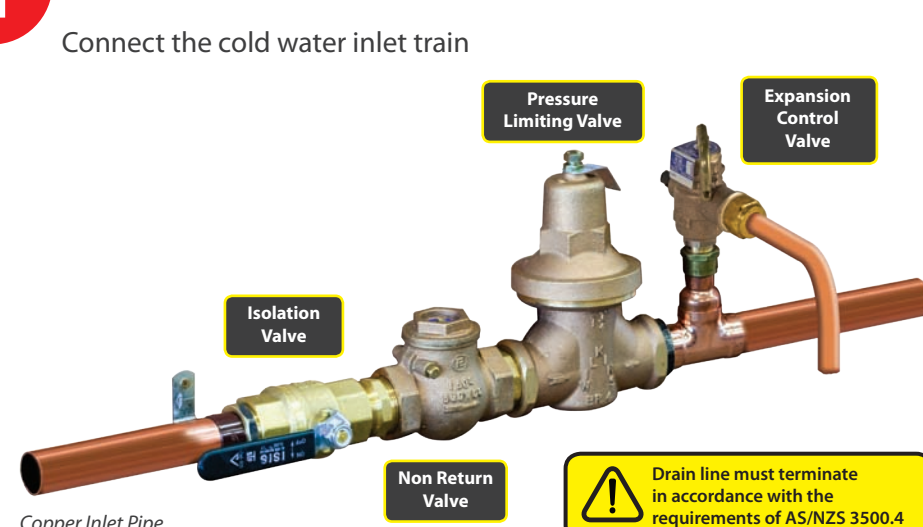
3 Connect Pipes

Solder all joints as required

End Cap

Manifold Tubes

Hot Water Supply Out

Secure all pipes to wall with pipe clamps as required

Elbows

Copper Pipe

End Cap

Cold water inlet train

'T' piece

End Cap

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4 Connect Cold Water Train

Connect the cold water inlet train

Pressure Limiting Valve

Expansion Control Valve

Isolation Valve

Non Return Valve

Copper Inlet Pipe

⚠ Drain line must terminate in accordance with the requirements of AS/NZS 3500.4

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5 Position Storage Tanks

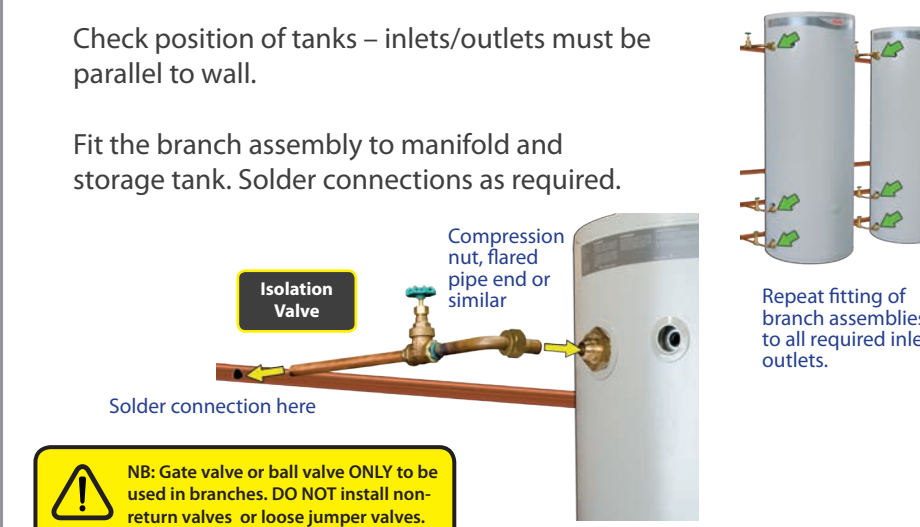Place storage tanks in position

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6 Fit Branch Assemblies

Connect reducer fittings.

Repeat for all inlets/outlets on each storage tank.
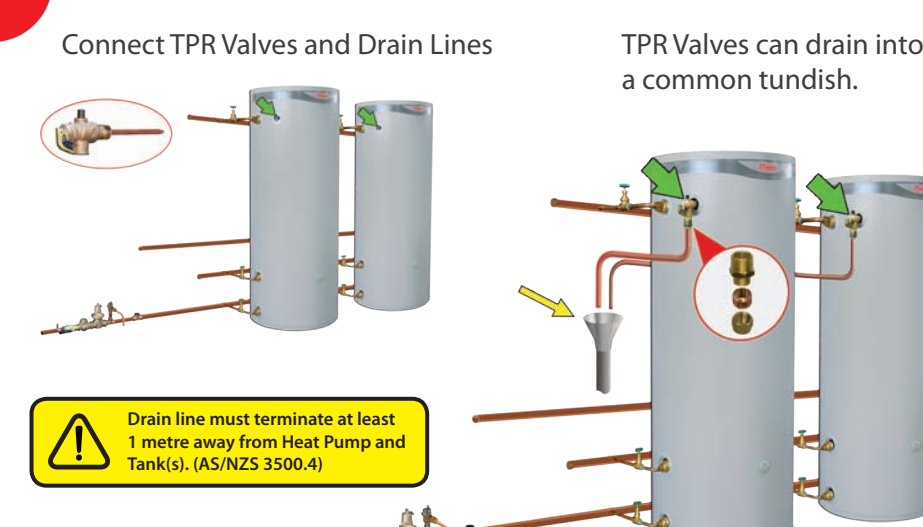

Fit Branch Assemblies (cont)

Check position of tanks – inlets/outlets must be parallel to wall.

Fit the branch assembly to manifold and storage tank. Solder connections as required.
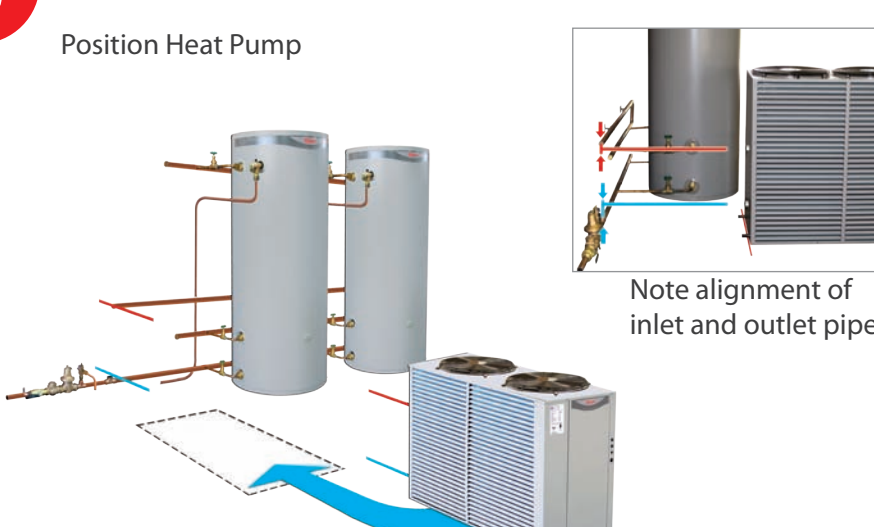
Isolation Valve

Compression nut, flared pipe end or similar

Repeat fitting of branch assemblies to all required inlets/outlets.

Solder connection here

⚠ NB: Gate valve or ball valve ONLY to be used in branches. DO NOT install non-return valves or loose jumper valves.

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7 Fit TPR Valve and Drain Lines

Connect TPR Valves and Drain Lines

TPR Valves can drain into a common tundish.

⚠ Drain line must terminate at least 1 metre away from Heat Pump and Tank(s). (AS/NZS 3500.4)

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8 Position Heat Pump

Position Heat Pump

Note alignment of inlet and outlet pipes
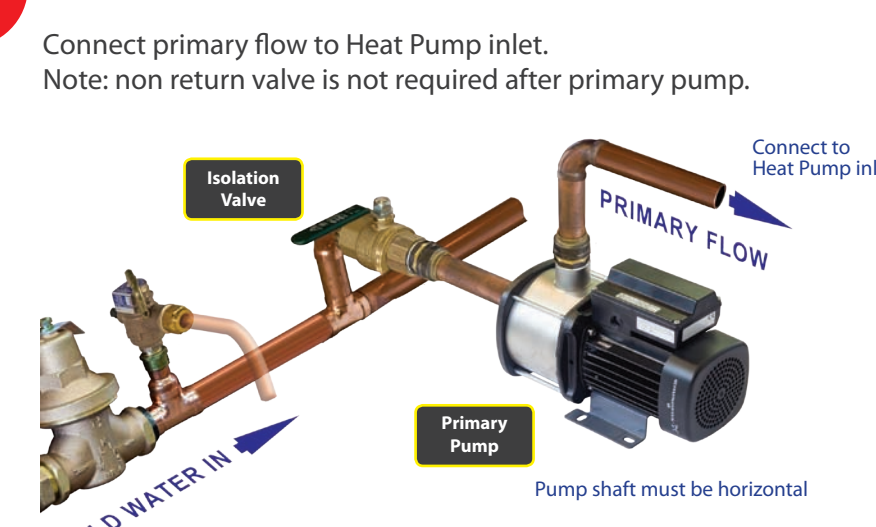

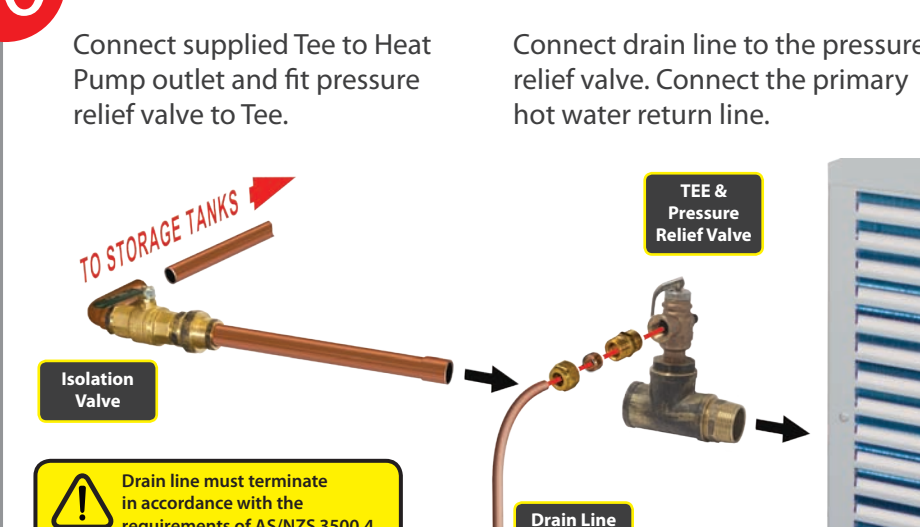## 9 Connect Cold Water Inlet

Connect primary flow to Heat Pump inlet.
Note: non return valve is not required after primary pump.

Isolation Valve

Connect to Heat Pump inlet.

PRIMARY FLOW

Primary Pump

COLD WATER IN
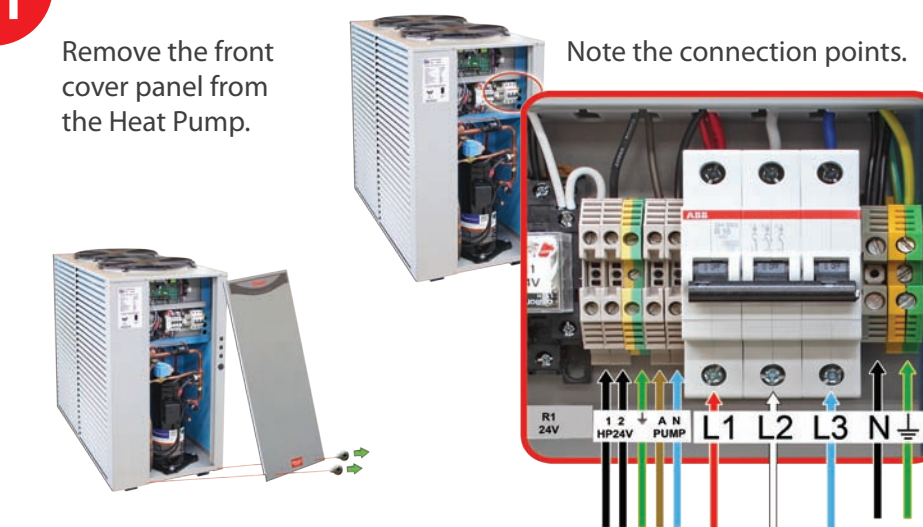
Pump shaft must be horizontal

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10 Connect Hot Water Return Line

Connect supplied Tee to Heat Pump outlet and fit pressure relief valve to Tee.

Connect drain line to the pressure relief valve. Connect the primary hot water return line.
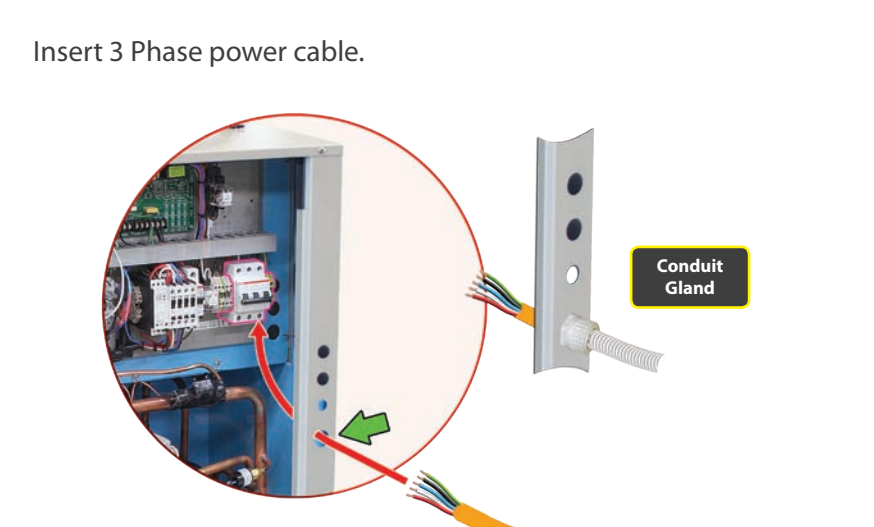
TO STORAGE TANKS

TEE & Pressure Relief Valve

Isolation Valve

⚠ Drain line must terminate in accordance with the requirements of AS/NZS 3500.4

Drain Line

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11 Connect Main Power

Remove the front cover panel from the Heat Pump.
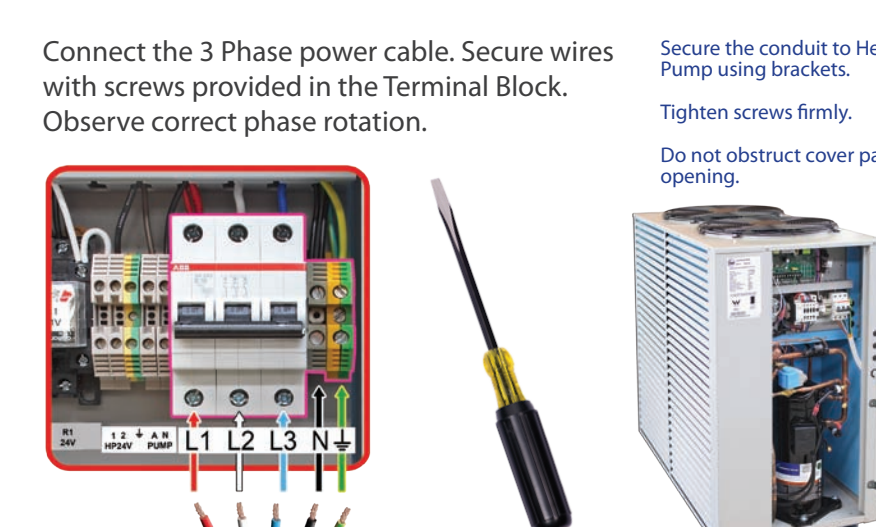
Note the connection points.

Connect Main Power (cont)

Insert 3 Phase power cable.
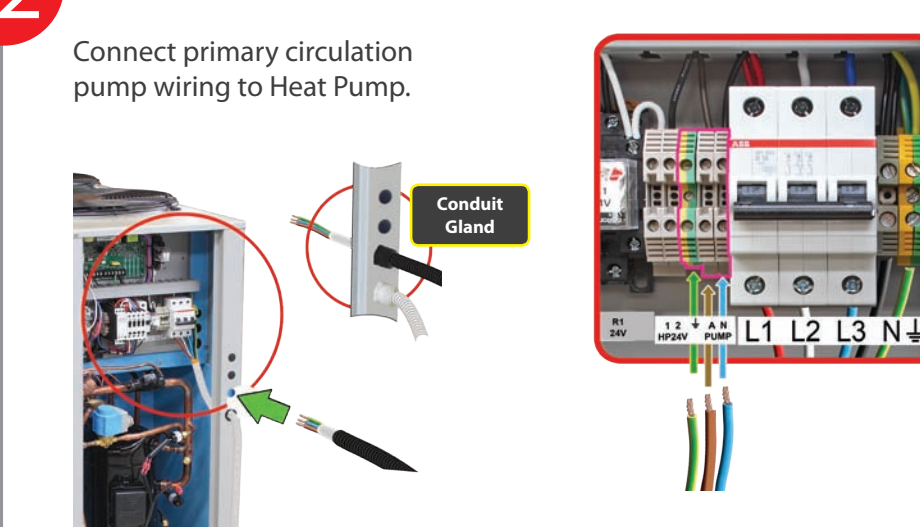
Conduit Gland

Connect Main Power (cont)

Connect the 3 Phase power cable. Secure wires with screws provided in the Terminal Block. Observe correct phase rotation.

Secure the conduit to Heat Pump using brackets.

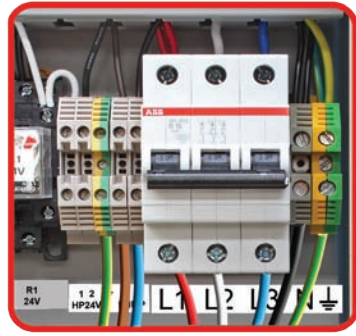Tighten screws firmly.

Do not obstruct cover panel opening.

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12 Connect Wiring To Primary Pump

Connect primary circulation pump wiring to Heat Pump.

Conduit Gland

Connect Wiring to Primary Pump (cont)

Secure wires with screws provided in the Terminal Block.

Connect Wiring to Primary Pump (cont)

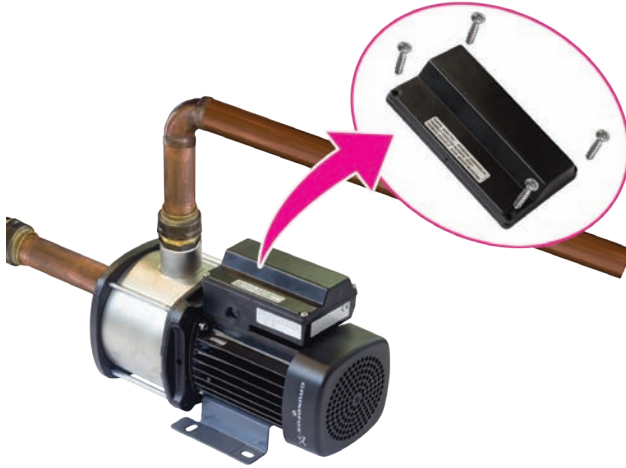Secure the conduit to Heat Pump using brackets or cable ties.

Run conduit to primary pump.
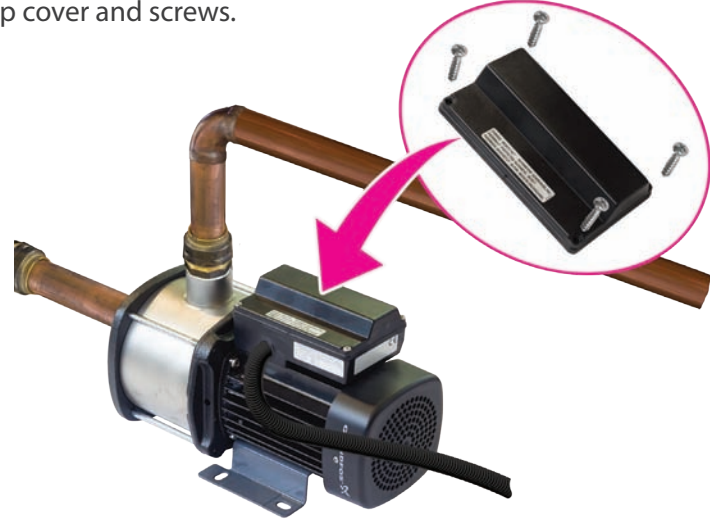
Run conduit to primary pump

Connect Wiring to Primary Pump (cont)

Remove electrical cover from pump.

Connect Wiring to Primary Pump (cont)

Connect wiring to primary pump.

| Z2 | W2 | U2 | V2 |
| Z1 | U1 | V1 | W1 |

BL — N
BR — L
G/Y — E

From Heat Pump

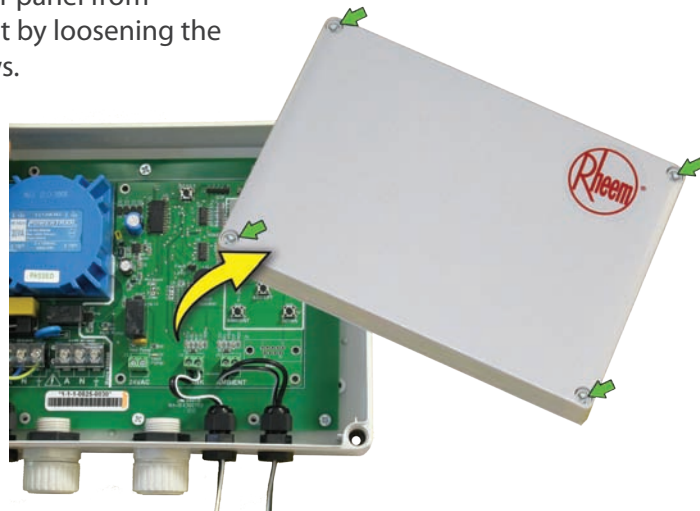Tighten connecting screws firmly

Connect Wiring to Primary Pump (cont)

Replace pump cover and screws.

13 Connect Wiring To Controller

Remove cover panel from controller unit by loosening the captive screws.

Connect Wiring To Controller (cont)

Position controller unit in a suitable location.

Place unit against wall and mark out position of mounting holes. Secure to wall using suitable fixings.

14 Fit Tank Sensor

Run the cable marked "tank sensor" from the controller to the tank.
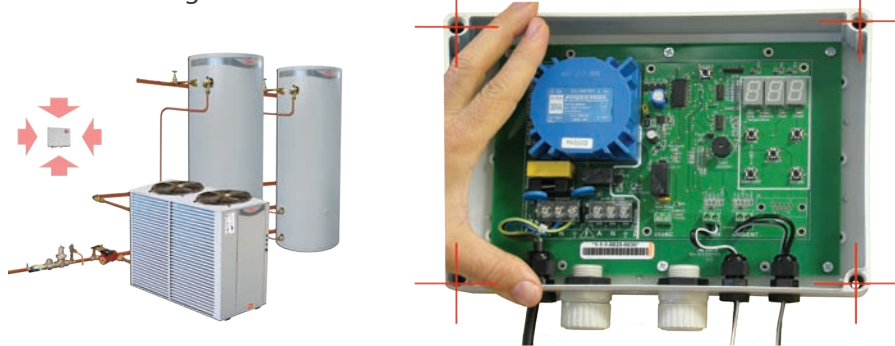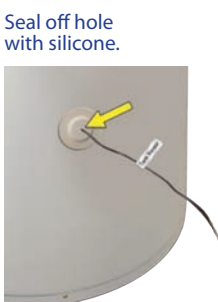
Tank Sensor

Fit Tank Sensor (cont)

Remove the protective cap from one of the tanks. Make a hole in protective cap. Insert sensor wire through hole all the way into the sensor well.
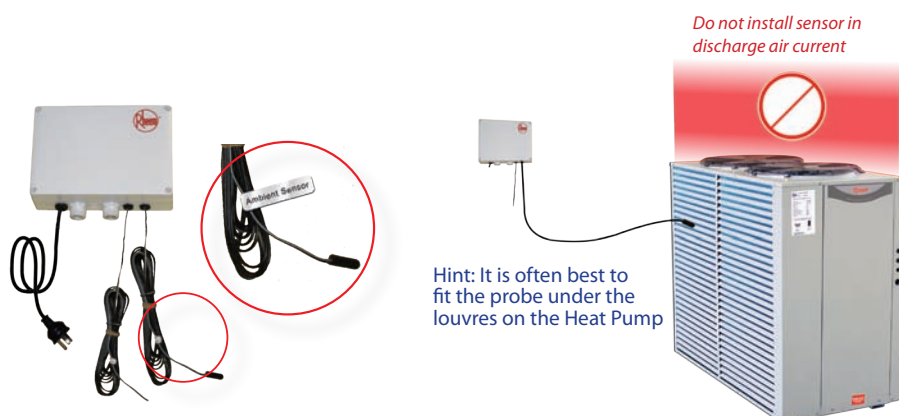
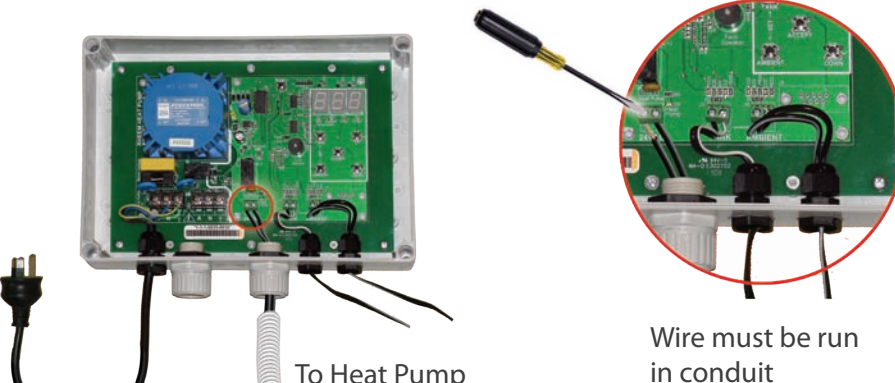Replace protective cap and seal hole. Cable tie and curl up excess cable.

Seal off hole with silicone.

15 Connect Ambient Sensor Cable

Position cable marked "ambient sensor" in a position that represents local conditions.

Do not install sensor in discharge air current

Hint: It is often best to fit the probe under the louvres on the Heat Pump

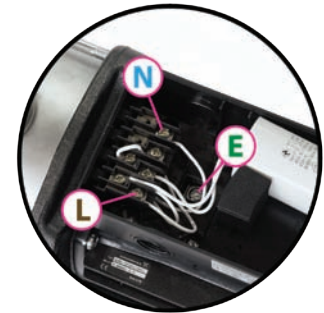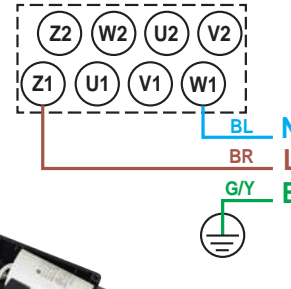## 16 Connect Controller Unit Wiring

Connect 2 core control cable (not supplied) to the terminal marked 24VAC in the controller.

To Heat Pump

Wire must be run in conduit

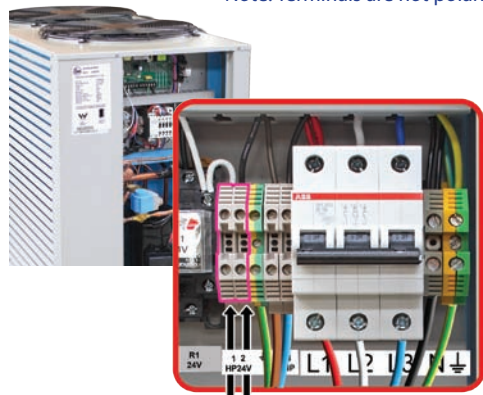## Connect Controller Unit Wiring (cont)

Use a conduit gland

Fit a cable gland to the hole located above the other conduits.

Feed the controller wire through the cable gland.

Connect Controller Unit Wiring (cont)

Connect the control cable to the 24V HP terminals 1 and 2

Note: Terminals are not polarised.

Note: If more than one heat pump is being installed; daisy chain 24V cable to terminals between all heat pumps.

Refer to installation instructions.

Connect Controller Unit Wiring (cont)

Replace Heat Pump cover panel.

Secure conduit. Do not obstruct control panel opening.

Connect Controller Unit Wiring (cont)

Replace cover panel, replace screws and tighten firmly.

Connect AC mains power cable to outlet.

To AC Mains Outlet

17 Commission Unit

Refer to instructions on commissioning the unit.