

# Commercial - Air to Water 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.



**!** Note the basic flow.

**1 Identify Components**

Identify all components.

**2 Mark Out**

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

Heat Pump requires service clearance around the unit.

**3 Connect Pipes**

Solder all joints as required.

Secure all pipes to wall with pipe clamps as required.

**4 Connect Cold Water Train**

Connect the cold water inlet train.

Note: Pressure Limiting Valve and Expansion Control Valve are optional.

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

**5 Fit Branch Assemblies**

Place storage tanks in position.

Connect 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.

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

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

**6 Fit TPR Valve and Drain Lines**

Connect TPR Valves and Drain Lines.

TPR Valves can drain into a common tundish.

**7 Connect Hot Water Return Line**

Connect the hot water return line (from building).

**8 Position Heat Pump**

Position Heat Pump.

Note the location of the inlet & outlet pipes and primary pump - relative to the final Heat Pump position.

**9 Connect Cold Water Inlet**

Note the location of the cold water inlet and hot water outlet at the rear of the heat pump.

Connect Cold Water Inlet (cont)

Connect Primary Pump to cold water supply line.

Connect primary pump to 'INLET' at rear of Heat Pump.

Note: An isolation valve must be fitted in line, before the pump. A Non Return Valve is not required after the pump.

**10 Connect Hot Water Outlet**

Connect the Hot water recirculation line to the Hot water 'OUTLET' at the rear of the Heat Pump.

Note: An isolation valve must be fitted.

**11 Connect Main Power**

Remove the front cover panel from the Heat Pump.

Turn the slotted screws 90° anti-clockwise to unlock the panel.

Connect Main Power (cont)

Note the location of the main power connection points.

Connect Main Power (cont)

**WARNING** Isolate mains power before making any connections.

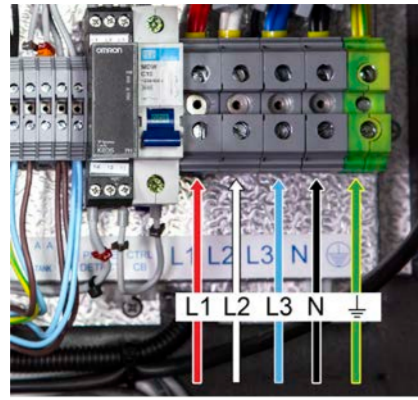
Insert 3 Phase power cable and conduit.

Use a conduit gland.



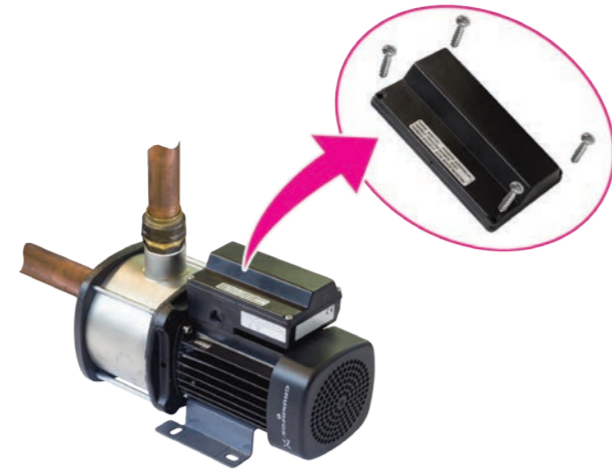
### Connect Main Power (cont)

Secure wires with screws provided in the Terminal Block. Observe correct phase rotation.



### 12 Connect Wiring To Primary Pump

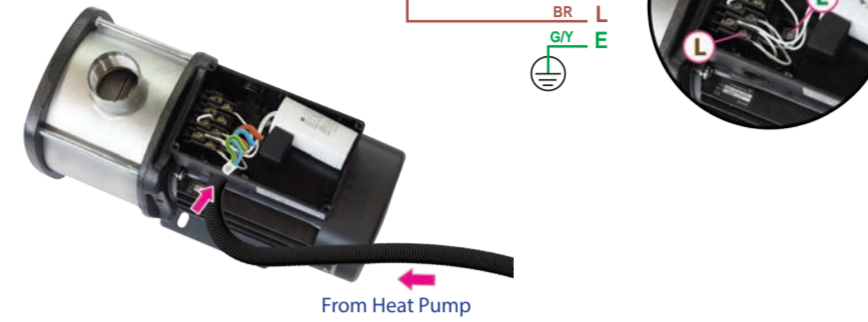
Remove electrical cover from pump.



### Connect Wiring To Primary Pump (cont)

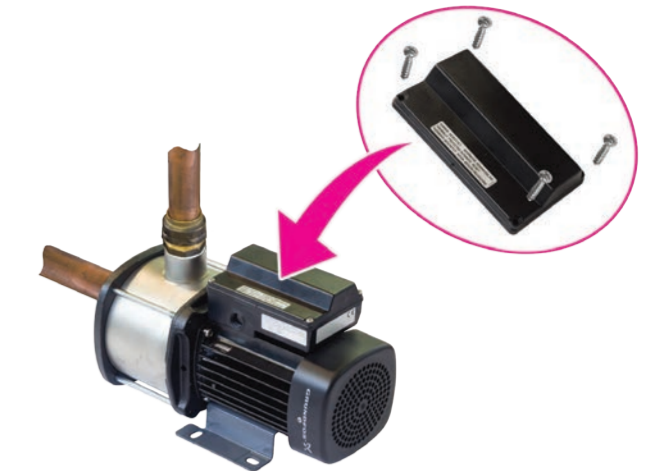
Connect wiring to pump. Use a conduit to protect the electrical cable.

Tighten connecting screws firmly.



### Connect Wiring To Primary Pump (cont)

Replace pump cover and screws.



### 13 Connect Pump Wiring To Heat Pump

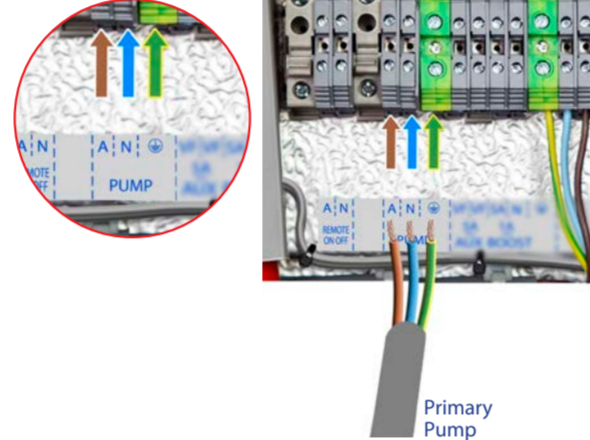
Route the pump wiring and conduit to the Heat Pump. Use a conduit gland. Secure conduit with cable clamps where required.



### Connect Pump Wiring To Heat Pump (cont)

**WARNING** Isolate mains power before making any connections.

Make the connections for the primary pump wiring. Secure wires with screws provided in the Terminal Block.

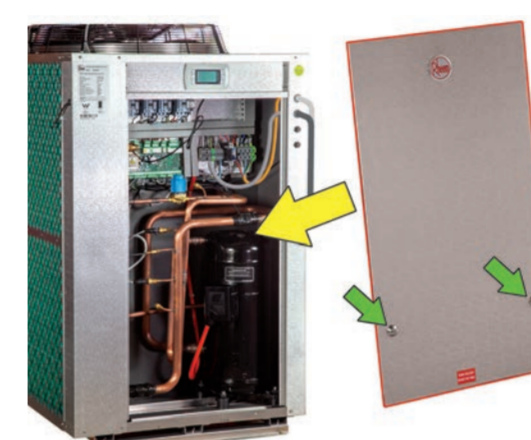


### Connect Pump Wiring To Heat Pump (cont)

Replace the Heat Pump cover panel and secure.



Turn the slotted screws 90° clockwise to lock the panel.



### 14 Connect Storage Tank Sensor

Note the location of the Storage Tank and Building Flow sensor connection points at the rear of the Heat Pump.



### Connect Storage Tank Sensor (cont)

Remove the protective cap from one of the tanks. Make a hole in protective cap. Insert wire through hole, all the way into the sensor well.



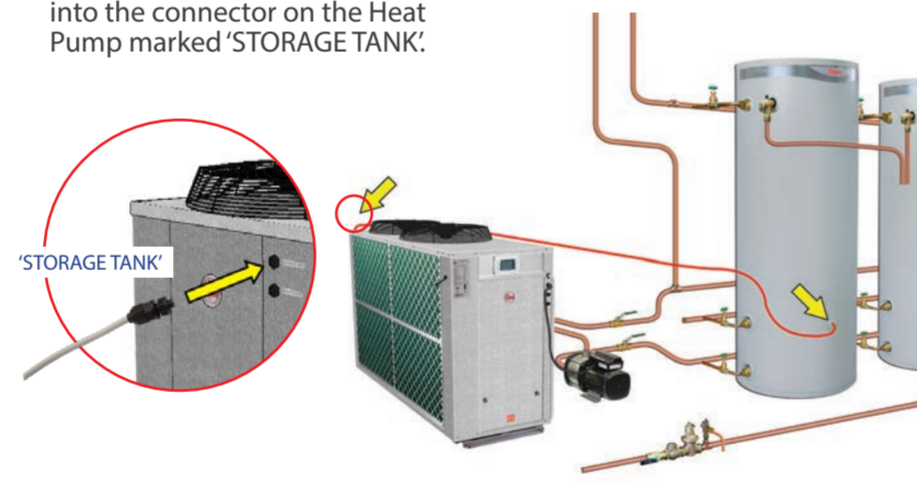
Replace protective cap and seal hole with sealant. Clamp cable to storage tank to prevent movement of sensor.



### Connect Storage Tank Sensor (cont)

Route the sensor cable to the rear of the Heat Pump. Insert the plug into the connector on the Heat Pump marked 'STORAGE TANK'.

Curl up any excess cable and secure with cable ties.

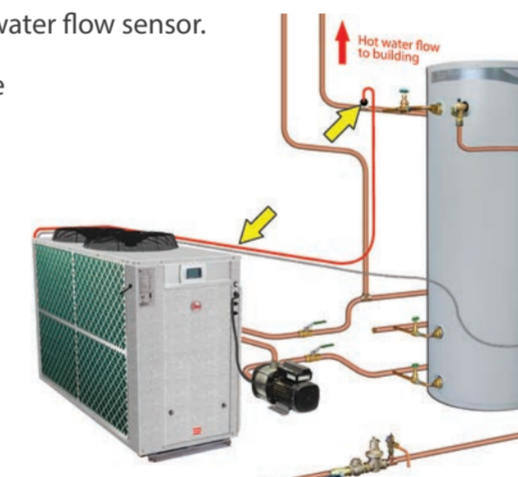


### 15 Connect Building Flow Sensor

Connect the building hot water flow sensor.

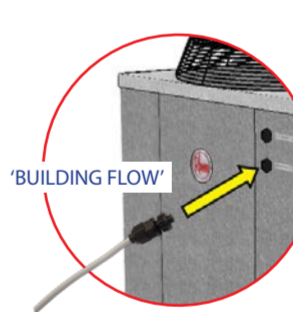
Run the sensor cable to the nearest building flow pipe, after the storage tanks.

Fit a thermostat well (not supplied) in the pipe, ensuring the end of the sensor is in the flow of water. Alternatively, the sensor can be clamped to the pipework prior to insulation being fitted.



### Connect Building Flow Sensor (cont)

Route the sensor cable to the rear of the Heat Pump. Insert the plug into the connector on the Heat Pump marked 'BUILDING FLOW'.

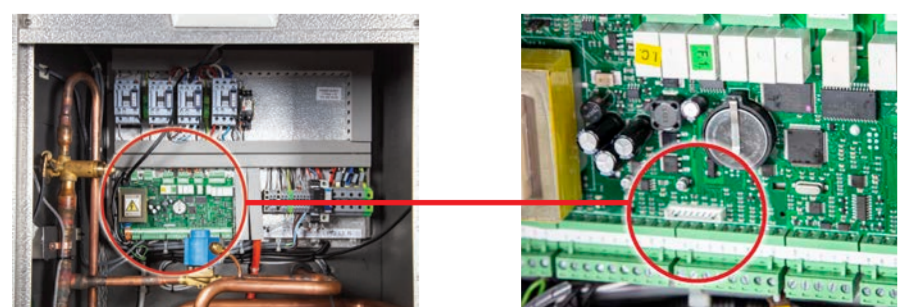


Curl up any excess cable and secure with cable ties.



### 16 BMS Card Setup (Optional)

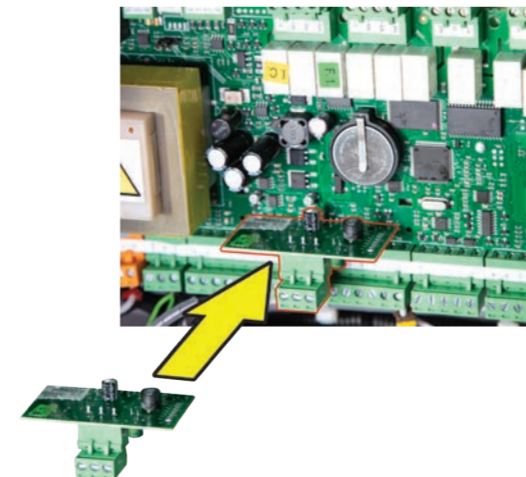
(If the BMS card is provided) Note the location of comms panel and, the BMS card connector / socket.



### BMS Card Setup (cont)

Insert the BMS card into the connector, taking care that the card is firmly placed as shown.

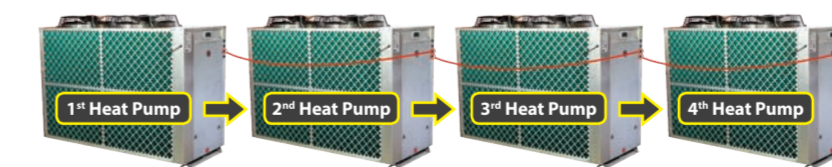
Keep the BMS card packaging, together with its instruction manual in a secure place for building managers/system owners to configure with their BMS system according to the manual.



### 17 Multiple Heat Pump Installation

Multiple Heat Pump Installation - LAN cable connection.

Connect multiple heat pumps using the LAN cable supplied. Up to 4 heat pumps can be connected using the LAN cable.



Refer to the Owners Manual for multiple heat pump installation configuration depending on the number of heat pumps connected.

### 18 Commission Unit

Refer to instructions on commissioning the unit.

