Installation Instructions

Pump/C Controller

This water heater must be installed and serviced by a qualified person.
Please leave this guide with a responsible officer.

Notice to Victorian Customers from the Victorian Building Authority.

This water heater system must be installed by a licensed person as required by the Victorian Building Act 1993.

Only a licensed person will give you a Compliance Certificate, showing that the work complies with all the relevant standards. Only a licensed person will have insurance protecting their workmanship for 6 years. Make sure you use a licensed person to install this water heater and ask for your Compliance Certificate.

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PUMP-C CONTROLLER MODEL AQ0200127

WARRANTY – AUSTRALIA ONLY

1. THE RHEEM WARRANTY – GENERAL

1.1 This warranty is given by Rheem Australia Pty Limited ABN 21 098 823 511 of 1 Alan Street, Rydalmere New South Wales.

1.2 Rheem offer a trained and qualified national service network who will repair or replace components at the address of the water heater subject to the terms of the Rheem warranty. Rheem Service, in addition can provide preventative maintenance and advice on the operation of your water heater. The Rheem Service contact number is available 7 days a week on 131 031 with Service personnel available to take your call from 8am to 8pm daily (hours subject to change).

1.3 For details about this warranty, you can contact us on 131 031 or by email at warrantyenquiry@rheem.com.au (not for service bookings).

1.4 The terms of this warranty and what is covered by it are set out in section 2 and 3 and apply to water heaters manufactured after 1st June 2013.

1.5 If a subsequent version of this warranty is published, the terms of that warranty and what is covered by it will apply to water heaters manufactured after the date specified in the subsequent version.

2. TERMS OF THE RHEEM WARRANTY AND EXCLUSIONS TO IT

2.1 The decision of whether to repair or replace a faulty component is at Rheem's sole discretion.

2.2 Where a failed component or cylinder is replaced under this warranty, the balance of the original warranty period will remain effective. The replacement does not carry a new Rheem warranty.

2.3 Where the water heater is installed outside the boundaries of a metropolitan area as defined by Rheem or further than 25 km from either a regional Rheem branch office or an Accredited Rheem Service Agent's office, the cost of transport, insurance and travelling between the nearest branch office or Rheem Accredited Service Agent's office and the installed site shall be the owner's responsibility.

2.4 Where the water heater is installed in a position that does not allow safe or ready access, the cost of that access, including the cost of additional materials handling and/or safety equipment, shall be the owner's responsibility. In other words, the cost of dismantling or removing cupboards, doors or walls and the cost of any special equipment to bring the water heater to floor or ground level or to a serviceable position is not covered by this warranty.

2.5 This warranty only applies to the original and genuine Rheem water heater in its original installed location and any genuine Rheem replacement parts.

2.6 If the water heater is not sized to supply the hot water demand in accordance with the guidelines in Rheem's water heater literature, any resultant fault will not be covered by the Rheem warranty.

2.7 The Rheem warranty does not cover faults that are a result of:

a) Accidental damage to the water heater or any component (for example: (i) Acts of God such as floods, storms, fires, lightning strikes and the like; and (ii) third party acts or omissions).

b) Misuse or abnormal use of the water heater.

c) Installation not in accordance with the Owner's Guide and Installation Instructions or with relevant statutory and local requirements in the State or Territory in which the water heater is installed.

d) Connection at any time to a water supply that does not comply with the water supply guidelines as outlined in the Owner's Guide and Installation Instructions.

e) Repairs, attempts to repair or modifications to the water heater by a person other than Rheem Service or a Rheem Accredited Service Agent.

f) Faulty plumbing or faulty gas or power supply.

g) Failure to maintain the water heater in accordance with the Owner's Guide and Installation Instructions.

h) Transport damage.

i) Fair wear and tear from adverse conditions (for example, corrosion).

j) Cosmetic defects.

k) Ice formation in the waterways of a water heater: where the electricity supply has been switched off or has failed and the water heater has not been drained in accordance with the instructions; or due to an ambient temperature below -20°C (including wind chill factor).

2.8 If you require a call out and we find that the fault is not covered by the Rheem warranty, you are responsible for our standard call out charge. If you wish to have the relevant component repaired or replaced by Rheem, that service will be at your cost.

2.9 Subject to any statutory provisions to the contrary, this warranty excludes any and all claims for damage to furniture, carpet, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the water heater, or due to leakage from fittings and/ or pipe work of metal, plastic or other materials caused by water temperature, workmanship or other modes of failure.

3. WHAT IS COVERED BY THE RHEEM WARRANTY FOR THE CONTROLLER AND PUMP DETAILED IN THIS DOCUMENT

3.1 Rheem will repair or replace a faulty component of your controller if it fails to operate in accordance with its specifications as follows:

What components are covered	The period in which the fault must appear in order to be covered	What coverage you receive
All components	Year 1	Repair and/or replacement of the faulty component, free of charge, including labour.

4. ENTITLEMENT TO MAKE A CLAIM UNDER THIS WARRANTY

4.1 To be entitled to make a claim under this warranty you need to:

4.2 Be the owner of the water heater or have consent of the owner to act on their behalf.

4.3 Contact Rheem Service without undue delay after detection of the defect and, in any event, within the applicable warranty period.

4.4 You are **not** entitled to make a claim under this warranty if your water heater:

4.5 Does not have its original serial numbers or rating labels.

4.6 Is not installed in Australia.

5. HOW TO MAKE A CLAIM UNDER THIS WARRANTY

5.1 If you wish to make a claim under this warranty, you need to:

5.2 Contact Rheem on 131031 and provide owner's details, address of the water heater, a contact number and date of installation of the water heater or if that's unavailable, the date of manufacture and serial number (from the rating label on the water heater).

5.3 Rheem will arrange for the water heater to be tested and assessed on-site.

5.4 If Rheem determines that you have a valid warranty claim, Rheem will repair or replace the faulty component in accordance with this warranty.

5.5 Any expenses incurred in the making of a claim under this warranty will be borne by you.

6. THE AUSTRALIAN CONSUMER LAW

6.1 Our goods come with guarantees that cannot be excluded under the *Australian Consumer Law*. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

6.2 The Rheem warranty (set out above) is in addition to any rights and remedies that you may have under the *Australian Consumer Law*.

PUMP/C CONTROLLER

DESCRIPTION

The Pump C controller is used in a variety of applications which require either 240V supply or are controlled via a voltage free contact ie pumps, 3-way valves or ancillary equipment.

For example, the controller senses temperature within the storage tank and controls a pump which in turn causes the CFWH to fire or cease firing.

Enclosure

The controller enclosure can be installed indoors or outdoors. It is recommended to not install the controller in direct sunlight in order to minimise glaring and for the controller display to be readily visible.

Operating Thermostat Sensor - The operating thermostat (Eliwell IC902+) senses the storage tank water temperature and operates a device. Adjustments can be made to the thermostat parameters from the front display. The sensor is connected to the thermostat via a grey lead and must be installed in the thermostat well within one of the storage tanks.

Energy Cut Out Thermostat (ECO) – The energy cut out thermostat operates when a condition above the normal temperature requirement has been sensed. It will cut power to the controlled device and requires a manual operation to reset.

Note: if operating a 3-way valve, tripping of the ECO will cause the valve to return to the opposite state to which it was currently in.

The sensing bulb must be installed in a thermostat well within one of the storage tanks. For convenience, it is suggested to first fit the copper capillary then the thermostat sensor within the same thermostat well unless the application advises otherwise.

Pump Control Relay – For a three-phase pump or a single-phase pump with a start current greater than 6 A, pump connections must be made via a suitably rated relay or contactor (not supplied). The relay or contactor must be housed in a suitable enclosure and cannot be installed within the Pump/C enclosure.

CONTROLLER INSTALLATION

⚠ **Warning!** Do not connect the power supply cable to the mains voltage power supply until all connections have been made and the system has been charged with water. Failure to do so can lead to electric shock and/or failure of the pump or heating unit.

Mount the controller onto a storage tank within 300mm of the sensor pocket. This is to allow fitment of both the thermostat and ECO sensors.

A thermostat well is provided as part of the Pump-C controller kit, designed to accommodate both the thermostat sensor and the ECO.

New Thermostat Well (located within tank) | ECO capillary sensing bulb | Thermostat sensor

For 610 series tanks the new thermostat well will replace the existing one fitted behind the plastic cover.

For RT series and any tanks other than 610 series, fit the new thermostat well into a suitable fitting as directed for the application. Typically, this will be at the level of the primary hot water flow connection, or lower, in one of the tanks. Refer to page 23.

MODIFYING PUMP/C THERMOSTAT SETTINGS

The parameters of the operating thermostat (Eliwell IC902+) (and continuous flow water heaters if used as the heat source) may need to be reprogrammed to achieve the desired system operating temperature.

Refer to the table and instructions on page 5 and 6 for instructions on adjusting the temperature setting.

Note: AS 3498 requires that a water heater provides the means to inhibit the growth of Legionella bacteria in potable water. This water heater can satisfy this AS 3498 requirement provided it is operating and the

thermostat setting is 60°C or higher, including when it is used as an in-series booster water heater for a solar water heater.

System Operating Temperature (ºC)	27L CFWH Thermostat Setting (ºC)	Eliwell Thermostat Set Point (ºC)	Eliwell Thermostat Differential (ºC)
60	65	60	3
65	70	65	3
70	75	70	3
75	82	75	3
82	82	80	3

MODIFYING THERMOSTAT SETTINGS

Note: if no buttons are pressed for 15 seconds, settings are not saved and display will revert to show the previous page.

Set Point:

Press and release **set** key. **'SEt'** will be displayed.

Press **set** key again to display the pre-programmed value.

Use ▲ and ▼ arrows to modify set point to the desired temperature.

Press **set** key again to confirm selection.

Press **fnc** key to return to normal operating mode. The current sensed temperature will be displayed.

Differential:

Press and hold **set** key for 5 seconds. **'CP'** will be displayed.

Press the **set** key, **'diF'** will be displayed.

Press **set** key again to display the current differential setting (default 3ºK)

Use ▲ and ▼ arrows to adjust the value to the desired differential.

Press **set** key again to confirm selection. **'diF'** will be displayed.

Press **'fnc'** key **twice** to return to normal operating mode. The current sensed temperature will be displayed.

Heat/Cool Mode:

The thermostat should be factory set to heating mode, to check:

Press and hold **set** key for 5 seconds. **'CP'** will be displayed.

Press the **set** key, '**diF'** will be displayed.

Press and release ▲ arrow **3** times. **'HC'** will be displayed.

Press and release **set** button. **'H'** should be displayed to denote that the thermostat is in heat mode.

If **'C'** is displayed, press and release the ▲ arrow to modify setting to **'H'**.

Press **set** key to confirm selection. **'HC'** will be displayed.

Press **'fnc'** key **twice** to return to normal operating mode. The current sensed temperature will be displayed.

TO CHECK OR ADJUST THE PRESET OUTLET TEMPERATURE SETTING OF THE CONTINUOUS FLOW WATER HEATERS (CFWH)

Refer to the instructions supplied with the CFWH for temperature adjustment.

SAFETY, WARNINGS, INSTALLATION NOTES

It is important you read the following safety and warnings information.

SAFETY

For your safety do not operate this water heater before reading this instruction booklet.

This water heater is supplied with a temperature controller, hi-limit control and a temperature and pressure relief valve. These devices must not be tampered with or removed. The water heater must not be operated unless each of these devices is fitted and is in working order.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information consult your Rheem distributor, qualified installer, or Rheem® Service agent.

The Rheem warranty can become void if relief valves or other safety devices are tampered with or if the installation is not in accordance with these instructions.

If the power supply cord or electrical conduit to the water heater is damaged, it must be replaced by an authorised person in order to avoid a hazard. The power supply cord and plug must be replaced with a genuine replacement part available from Rheem. Phone your nearest Rheem Service Department or Accredited service Agent to arrange for an inspection.

Do not use the water heater if any part has been under water. Immediately call Rheem Service or Accredited service Agent to arrange for an inspection.

⚠ WARNINGS

This water heater must be installed in compliance with the Plumbing Code of Australia (PCA).

Warning: – This water heater may deliver water at high temperature. Refer to the Plumbing Code of Australia, local requirements and these installation instructions to determine if additional delivery temperature control is required.

Warning: – For continued safety of this appliance, it must be installed, operated and maintained in accordance with the manufacturer's instructions.

- This water heater is only intended to be operated by persons who have the experience or the knowledge and the capabilities to do so.
- This water heater is not intended to be operated by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. Children should be supervised to ensure they do not interfere with the water heater.
- The water heater uses 240 Volt AC electrical power for operation of the control systems. The removal of the access cover(s) will expose 240 V wiring. They must only be removed by an authorised or qualified person.
- DO NOT modify this water heater.
- DO NOT use or store **flammable materials** in or near this water heater. Flammable liquids (such as petrol), combustible materials (such as newspapers) and similar articles must be kept well away from the water heater and the draught diverter or flue terminal.

- DO NOT spray **aerosols in the vicinity of** the water heater whilst it is operating. Gases from some aerosol sprays corrosive when drawn into a flame.
- DO NOT store **swimming pool chemicals, household cleaners,** etc., near the water heater.
- DO NOT place articles on or against this water heater or in contact with the flue terminal. Ensure the flue terminal is not obstructed in any way at any time.
- DO NOT use Propane / Butane gas mixtures in a Propane model. A Propane model is designed to operate on Propane only. The use of Propane / Butane mixture, such as automotive LPG fuel, in a Propane model is unsafe and can cause damage to the water heater.
- DO NOT operate with panels, covers or guards removed from the water heater.

- DO NOT enclose this water heater (applies to external installations only).

INSTALLATION NOTES
This water heater must be installed:

- by a qualified person,
- in accordance with the installation instructions,
- in compliance with the Plumbing Code of Australia (PCA) and Plumbing Standard AS/NZS 3500.4,
- This water heater is intended to be permanently connected to the water mains and not connected by a hose-set. A braided flexible hose or semi-flexible connector may be used for connection to the water heater, where permitted by AS/NZS 3500.4.
- in compliance with the Gas Installations Standard AS/NZS 5601.1,
- in compliance with all local codes and regulatory authority requirements,
- in New Zealand also conforming to Clauses G11, G12 and H1 of the New Zealand Building Code.

What To Do If You Smell Gas?
DO NOT try to light any gas appliance.

DO NOT touch any electrical switch.

TURN OFF the gas supply at the gas meter immediately, call your gas supplier or licensed gasfitter.

NOTE: Some gases are heavier than air and it may be necessary to check for gas leaks at floor level.

INSTALLATION STANDARDS

This water heater must be installed in compliance with the Plumbing Code of Australia (PCA).
Warning: – This water heater may deliver water at high temperature. Refer to the Plumbing Code of Australia, local requirements and these installation instructions to determine if additional delivery temperature control is required.
Warning: – For continued safety of this appliance, it must be installed, operated and maintained in accordance with the manufacturer's instructions.

The water heater must be installed:

- by a qualified person, and
- in accordance with the installation instructions, and
- in compliance with the Plumbing Code of Australia (PCA), Standards AS/NZS 3500.4, AS 3000 and AS/NZS 5601.1 and all local codes and regulatory authority requirements.
- In New Zealand the installation must also conform with NZS 5261, as applicable under local regulations, and the New Zealand Building Code.

All packaging materials must be removed from the water heater prior to its installation.

GENERAL

Follow the instructions supplied with the water storage tank and CFGWH for general installation requirements including any fluing, location, water quality and maintenance requirements.

All packaging materials must be removed from the water heater and storage tank prior to its installation.

OPERATION

On a call for heat, the thermostat energises the pump, the flow from which in turn causes the CFGWH to fire. The rate of fire will depend on the thermostat set point, the flow rate from the pump and the incoming water supply temperature. Water at the set temperature of the CFGWH will enter the storage tank and heat the storage tank until a temperature above the controlling thermostat set point is sensed at the thermostat, at

which time the pump will be de-energised and the CFGWH will shut down. Pump run-on is not required for use with CFGWH.

WATER INLET AND OUTLET

All pipe work must be cleared of foreign matter before connection and purged before attempting to operate the water heater. All olive compression fittings must use brass or copper olives. Use thread sealing tape or approved thread sealant on all other fittings.

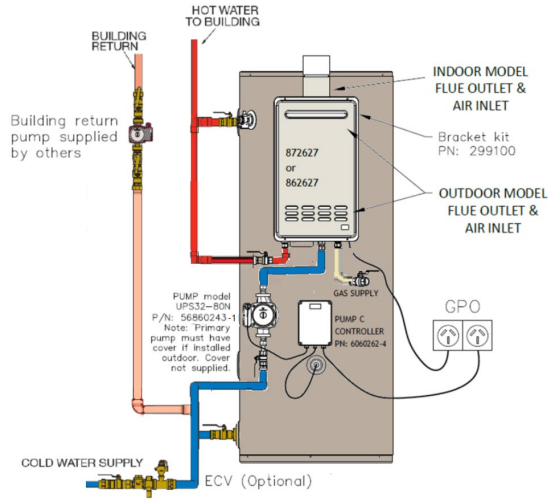
An isolation valve, non return valve and line strainer must be installed on the cold water line to the system. A pressure limiting valve must also be fitted if the water supply pressure exceeds 80% of the storage tank temperature and pressure relief valve or expansion control valve setting, whichever is the lower.

WATER HEATER CONNECTIONS

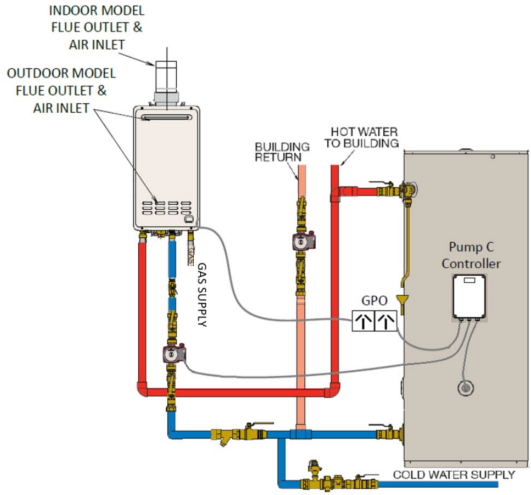
Connect the water heater, pump and storage tank(s) in accordance with the principles shown in the diagram on page 13 with the following in mind:

- Install the storage tanks according to Equa-flow® principles as described in the installation instructions supplied with the storage tanks.
- Install the water heaters according to Equa-flow® principles as shown in the diagram on page 13.
- A disconnection union must always be provided at the cold water inlet, hot water outlet and gas connection on the water heaters to allow for disconnection of the water heaters.

TANK MOUNT CFGHW - FRONT VIEW



WALL MOUNT CFGHW - FRONT VIEW



Typical Installation 610 Series Direct Storage with CFGWH Heat Source

TEMPERATURE AND PRESSURE RELIEF VALVE

A temperature and pressure relief valve (TPR) is supplied with each storage tank. Refer to the instructions supplied with the storage tanks regarding the fitting of the TPR and drain lines.

EXPANSION CONTROL VALVE

Local regulations may make it mandatory to install an expansion control valve (ECV) or expansion vessel (supplementary expansion) in the cold water line to the water heating system. In other areas, supplementary expansion is not required unless the saturation index is greater than +0.4 (refer to 'Water Supplies' in the Instructions supplied with the storage tank). However, supplementary expansion may be needed in a corrosive water area where there are sufficient quantities of silica dissolved in the water.

Supplementary expansion must always be installed after the non-return valve and be the last valve installed prior to the water heater (refer to diagram on page 9). A copper drain line must be run separately from the drain of the relief valve.

RELIEF VALVE DRAIN

Refer to the instructions supplied with the storage tanks regarding the installation of relief valve drain lines.

For multiple installations the drain line from each storage tank can discharge into a common tundish.

⚠ **Warning:** As the function of the temperature pressure relief valve on this water heater system is to discharge high temperature water under certain conditions, it is strongly recommended the pipe work downstream of the relief valve be capable of carrying water exceeding 93°C. Failure to observe this precaution may result in damage to pipe work and property.

GAS INLET

The pipe work must be cleared of foreign matter before connection and purged before attempting to light the water heater. An isolation valve and disconnection union must be used to allow servicing and removal of the water heater. Refer to AS/NZS 5601.1 for the correct pipe sizing.

⚠ Always isolate the water heater before pressure testing the gas supply system. Disconnect the water heater after the isolating cock to prevent the risk of serious damage to the gas train. Warranty does not cover damage of any nature resulting from failure to observe this precaution. Refer to the rating label for gas types and pressures.

⚠ The heater and its gas connection must be thoroughly leak tested before placing in operation. Use soapy water and a manometer for leak test.

DANGER! Do not use an open flame to check for gas leaks.

ELECTRICAL CONNECTIONS

All electrical work and permanent wiring must be carried out by a qualified person and in accordance with the Wiring Rules AS/NZS 3000 and all local codes and regulatory authority requirements.

⚠ **Warning!** Do not connect the power supply cable to the mains voltage power supply until all connections have been made and the system has been charged with water. Failure to do so can lead to electric shock and/or failure of the pump or heating unit.

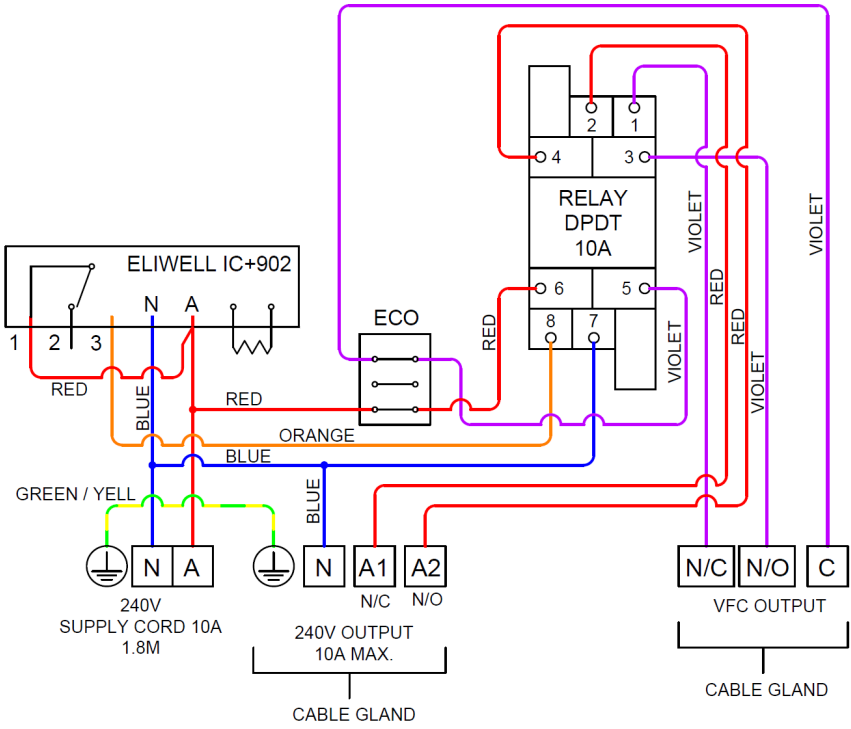
The water heater will only operate on a sine wave at 50 Hz. Devices generating a square wave cannot be used to supply power to the water heater.

If the pump start current exceeds 6 Amps, connect the pump wire to the coil of a suitably rated relay or contactor. The relay or contactor must be housed in a suitable enclosure and cannot be installed within the Pump/C enclosure. This will be required for Grundfos pump models CM 5-2 or larger.

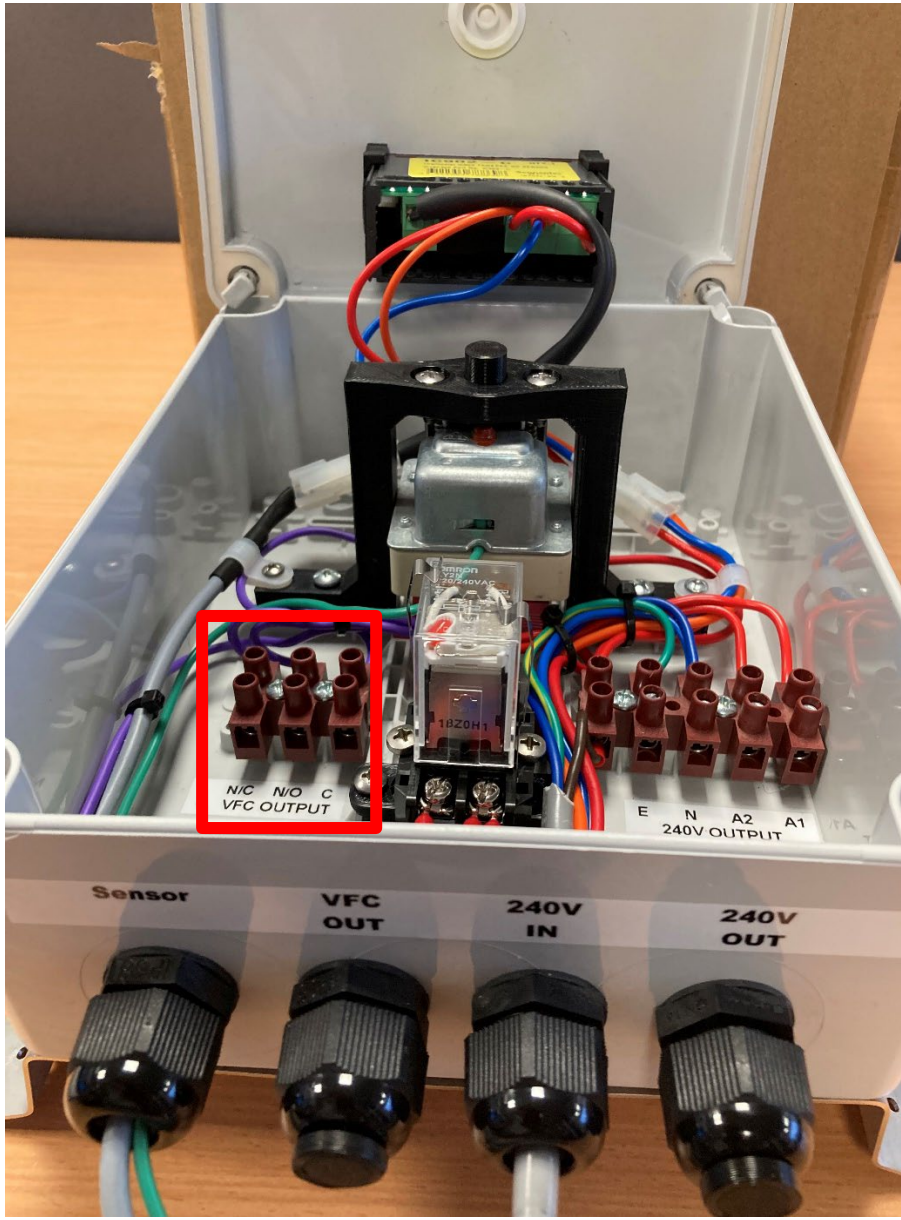
Maximum start current for Grundfos pumps with 240V/50Hz supply voltage are as follows:

UPS32-80N	1.0A
CM 3-2	6.0A
CM 5-2	14.8A
CM 10-1	15.6A

Wiring Diagram – Pump/C Controller



IMPORTANT NOTE:
The terminals block for the VFC Output connection is physically located on the left side of the 10A Relay seen as a


N/C N/O C
VFC OUTPUT
E N A2 A1
240V OUTPUT
Sensor
VFC OUT
240V IN
240V OUT

240V APPLICATIONS

TANKPAK 01 OR OTHER CFGWH

GENERAL

Follow the instructions supplied with Tankpak or CFGWH for general installation requirements including any location, water quality and maintenance requirements.

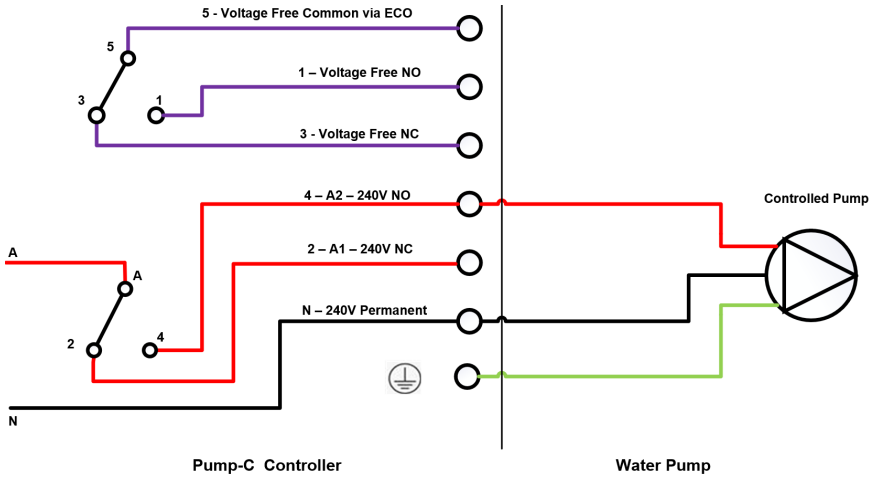
OPERATION

A 240V/50Hz general purpose outlet is required to supply power to the Pump/C controller and to each CFGWH.

Each CFGWH has a maximum current draw of 0.75 Amps.

Connect the pump to the pump terminals marked ‘240V OUTPUT’ A2, N and ⏚ in the Pump/C controller.

If the pump start current exceeds 6 Amps, connect the pump wire to the coil of a suitably rated relay or contactor. The relay or contactor must be housed in a suitable enclosure and cannot be installed within the Pump/C enclosure.



Water Pump

3-WAY VALVE CONTROL

GENERAL

Follow the instructions supplied with 3-way valve for general installation requirements including any location, water quality and maintenance requirements.

OPERATION

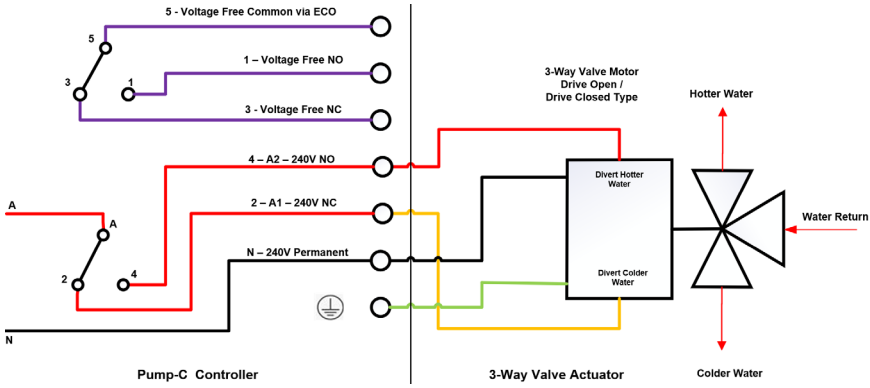
3-way valve operate on the principle of diverting flow based upon a control logic input, as shown in the diagram below.

The change over of the flow direction from “Hotter Water” to “Colder Water” in the diagram below is controlled by 240V power being supplied to directly operate the 3-way valve actuator on a drive open/drive closed basis.

Connect the ‘divert hotter water’ grey wire to terminal marked ‘A1’ - N/C’.

Connect the ‘divert colder water’ red wire to terminal marked ‘A2 - N/O’.

Note: If the plumbing is connected to the wrong ports of the 3-Way valve, simply reverse the wiring as described above.



3 Way Motorised Valve - Drive Open / Drive Closed Type

VOLTAGE FREE APPLICATIONS

REDISET DELUXE THERMOSATIC CONTROL

GENERAL

Follow the instructions supplied with Rediset Deluxe model pump set for general installation requirements including any location, water quality and maintenance requirements.

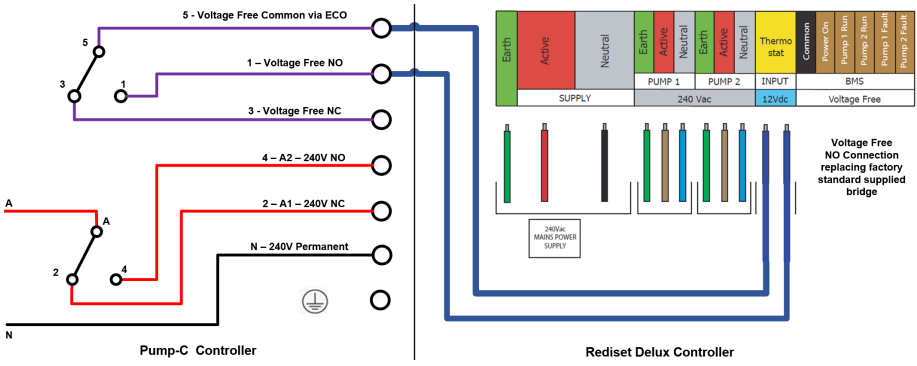
OPERATION

The Rediset Deluxe Controller can be interfaced with the Pump-C Controller to control pump operation on a thermostatic basis.

Remove the bridging wire from the terminals marked ‘Thermostat’ in the Rediset pump controller.
Connect the ‘Voltage Free Common’ and ‘Voltage Free NO’ terminals from the Pump-C Controller into the “Thermostat” terminals of the Rediset Deluxe controller. The wires are not polarity sensitive.

NOTE: Rediset Deluxe Model wiring diagram below.
The max rated input for Rediset Deluxe Controller is 12V dc.

DO NOT connect from the 240V supply side of the Pump-C controller.



Rediset Deluxe Model

HEATING UNIT AUXILIARY CONTROL

GENERAL

Follow the instructions supplied with Commercial Electric Heating Unit for general installation requirements including any location, water quality and maintenance requirements.

OPERATION

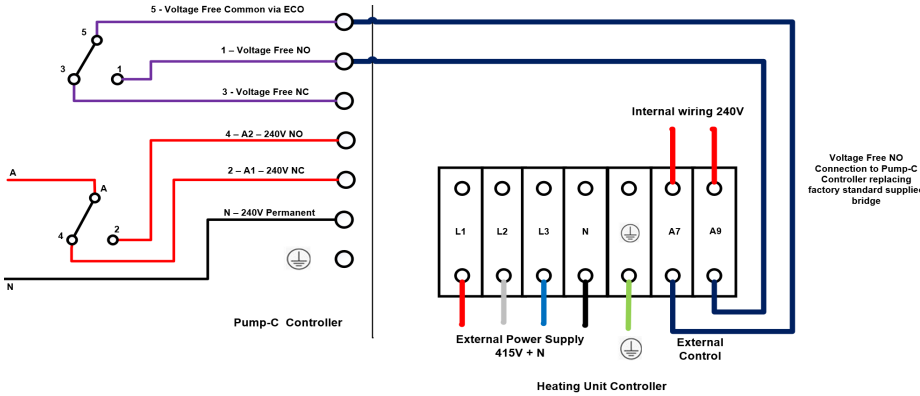
Commercial Heating Unit can be externally interlocked and interface with the Pump-C Controller to control electric elements operation.

Remove the bridging wire from the terminals marked A7 and A9 in the Heating Unit Cabinet.

Connect the ‘Voltage Free NC’ and ‘Voltage Free Common’ terminals from the Pump-C Controller into the “External Control” terminals: A7 and A9. The wires are not polarity sensitive.

NOTE: See Electric Heating Unit wiring connection below. Heating Unit Eliwell IC902 Temperature Controller supplies 240V to terminal A9. Terminal A7 is internally connected to the coil of the Heater Element Contactor.

DO NOT connect from the 240V supply side of the Pump-C controller.



Commercial Electric Heating Unit

MVB ‘H’ MODEL USED FOR HIGH TEMPERATURE DHW

A ‘H’ model MVB must be used for temperatures exceeding 72°C, using Mode 1. Refer to system drawing on the following page and Raypak MVB Owners Guide and Installation Instructions provided.

One 10m NTC sensor cable is supplied with each MVB unit.

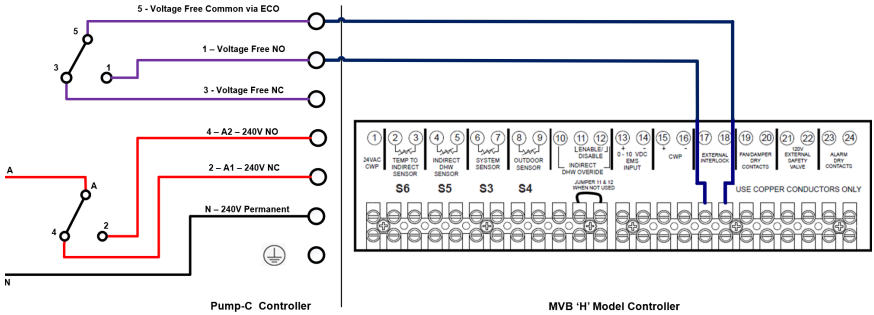
Connect the sensor to terminals **2 and 3** marked **‘Temp to Indirect Sensor’** and fit the sensor into the sensor well of the storage tank, shown as ‘S6’, into the second lowest sensor port on the storage tank. Refer to page 24.

Connect a 10 kOhm resistor to the terminals **6 and 7** marked **‘System Sensor’**, shown as S3.

Fix the Pump C controller (P/No AQ0200127) to the storage tank nearest the master MVB. Fit the temperature sensor into the lowest sensor port on the storage tank. Fit the capillary bulb ECO supplied with the Pump C controller into the highest sensor port on the storage tank.

Remove the jumper wire from terminals **17 and 18** marked **‘External Interlock’** and connect double insulated 2 wire cable to the VFC Output terminals marked **‘N/O and C’** in the Pump C controller.

DO NOT connect from the 240V supply side of the Pump-C controller.

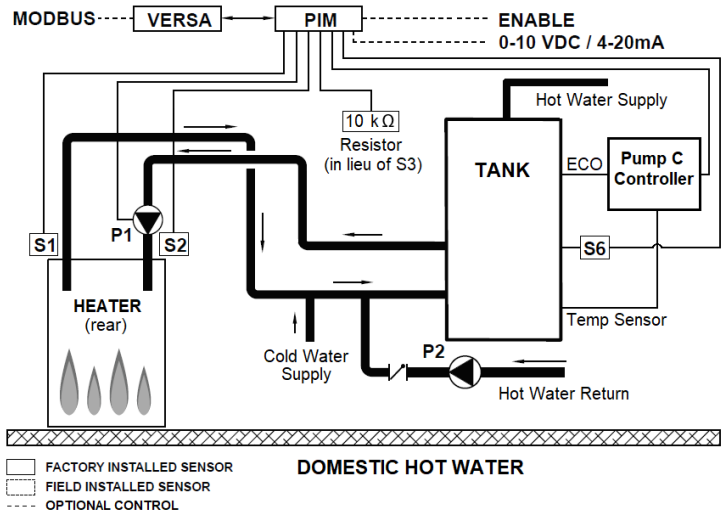


MVB ‘H’ Model used for DHW Sensor and Pump Wiring Between 72°C and 82°C

Connect the primary pump shown as ‘P1’ to the terminals marked **R3 / ‘Water Heater Pump’** located in the Mains Power and Pump electrical connections junction box at the back of the MVB. Refer to Raypak MVB Installation Instructions.

Use an external contactor if a 3 phase pump is used or the pump current exceeds 8A.

A 10kOhm resistor is supplied with the Pump-C controller for use in this application.



MVB ‘H’ Model used for DHW Sensor and Pump Wiring

Between 72ºC and 82ºC

TROUBLE SHOOTING

When a complaint is lodged about the performance of a hot water system there are a number of causes that should be checked and eliminated. In an attempt to pinpoint the most likely cause it is important to discuss with the customer their reasons for the complaint, the duration of the problem, any change in circumstances or usage. This information in conjunction with the following listed common complaints will assist you in locating the most likely cause.

No digital display - Some possible causes are:

1. Power Outage.
2. Loose or open circuit wiring.
3. Thermostat faulty.
4. Direct sunlight on LCD.

Probe Failure - Error message **"**E1" will be displayed if there is a problem with the temperature probe. Reasons for "E1" error message are:

a) Temperature probe lead has been severed.
b) Temperature probe connections at thermostat terminals have broken/disconnected.
c) Temperature probe is damaged/faulty.

Water too hot - Ensure the operating thermostat temperature probe is fully inserted into cylinder temperature sensing well and is unhindered in its ability to accurately sense the cylinder temperature.

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