Owners Guide and Installation Instructions

Gas Heavy Duty Water Heater

265 Litre and 275 Litre Models

Install a Rheem

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

Notice to Victorian Customers from the Victorian Plumbing Industry Commission.

This water heater 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.

Warning: Upon completion of the installation and commissioning of the water heater, leave this guide with the householder or responsible officer. **DO NOT** leave this guide inside of the cover of the water heater, as it may interfere with the safe operation of the water heater or ignite when the water heater is turned on.

PATENTS

This water heater may be protected by one or more patents or registered designs.

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RESPONSIBLE OFFICER - We recommend you read pages 4 - 14.

The other pages are intended for the installer but may be of interest.

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ABOUT YOUR WATER HEATER

MODEL TYPE

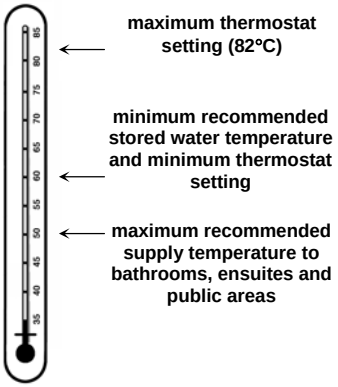
Congratulations for choosing a Rheem® Heavy Duty Gas water heater. The model you have chosen is either a 265 litre or 275 litre indoor or outdoor quick recovery water heater.

HOW HOT SHOULD THE WATER BE?

The water heater has a maximum temperature setting of 82°C and a minimum temperature setting of 60°C. Refer to "Temperature Adjustment" on page 4.

For applications requiring sanitising temperatures, the thermostat should be set at 82°C. **Note:** For temperatures above 80°C, a circulator must be installed.

To meet the requirements of the National Plumbing Standard the temperature of the stored water must not be below 60°C.



If this water heater is installed as an in-series booster water heater as part of a commercial solar water heating system, to maximise solar contribution it is recommended the thermostat is set at 60°C, unless sanitising temperatures are required.

HOTTER WATER INCREASES THE RISK OF SCALD INJURY.

This water heater can deliver water at temperatures which can cause scalding. Check the water temperature before use, such as when entering a shower or filling a bath or basin, to ensure it is suitable for the application and will not cause scald injury.

We recommend and it may also be required by regulations that an approved temperature limiting device be fitted into the hot water pipe work to the bathing and public areas when this water heater is installed. This will keep the water temperature below the maximum permitted by AS/NZS 3500.4 to these areas. The risk of scald injury will be reduced and still allow hotter water to the kitchen, laundry and other areas requiring sanitising temperatures.

TEMPERATURE ADJUSTMENT

The water heater features an electronic adjustable thermostat. We recommend only a licensed tradesperson make any temperature adjustments. We advise the thermostat be adjusted to the lowest temperature setting that meets your needs, especially if there are young children or elderly people in the premises. Refer to "Hotter Water Increases the Risk of Scald Injury" on page 4.

ABOUT YOUR WATER HEATER

WARNING

This water heater is not intended to be operated, adjusted or tampered with by young children or infirm persons. Young children should be supervised to ensure they do not interfere with the water heater.

The removal of the access cover(s) will expose 240 V wiring. They must only be removed by an authorised or service person.

SAFETY

- Do not store **flammable or combustible materials** near the water heater. Flammable liquids (such as petrol), newspapers and similar articles must be kept well away from the water heater and the draught diverter or flue terminal.

- Gases from some **aerosol sprays, stain removers and household chemicals** become corrosive when drawn into a flame. Do not use aerosols and stain removers near the water heater whilst it is working.

- Do not store **swimming pool chemicals, household cleaners, etc.,** near the water heater.

- Do not place anything on top of the water heater or in contact with the draught diverter or 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.

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.

ABOUT YOUR WATER HEATER

This water heater is supplied with a thermostat, an over-temperature cut-out, and a combination temperature 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.

The 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.

TO TURN OFF THE WATER HEATER

If it is necessary to turn off the water heater:

- Switch off the electrical supply at the isolating switch to the water heater(s).
- Close the gas isolation valve(s) at the inlet to the gas control(s).
- Close the cold water isolation valve on the cold water line to the water heater(s) to shut down the entire system, or;
- Close the isolation valves on the cold and hot water branches to shut down an individual water heater in a bank.

TO TURN ON THE WATER HEATER

- Open the isolation valves fully on the cold and hot water branches to the water heater(s) installed in a bank.
- Open the cold water isolation valve on the cold water line to the water heater(s). Air will be forced out of the taps.
- Open the gas isolation valve(s) fully at the inlets to the gas control(s).
- Switch on the electrical supply at the isolating switch to the water heater(s).

HOW DO I KNOW THE WATER HEATER IS INSTALLED CORRECTLY?

Installation requirements are shown on pages 22 to 23 and pages 32 to 36. The water heater must be installed by an authorised person and the installation must comply with National Standards AS/NZS 3500.4, AS/NZS 3000, AS 5601 and all local codes and regulatory authority requirements. In New Zealand the installation must conform with NZS 5261 Code of Practice for Installation of Gas Burning Appliances and the New Zealand Building Code.

ABOUT YOUR WATER HEATER

DOES THE WATER QUALITY AFFECT THE WATER HEATER?
The water heater is suitable for most public water supplies, however some water qualities may have detrimental effects on the cylinder and fittings. **If you are in a known harsh water area you must read page 46**. If you are not sure, have your water quality checked against the conditions described on page 46.

HOW LONG WILL THE WATER HEATER LAST?
There are a number of factors that will affect the length of service the water heater will provide. These include the water quality, the water pressure, the water temperature (inlet and outlet) and the water usage pattern. However, your Rheem water heater is supported by a comprehensive warranty (refer to page 48).

ANODE PROTECTION
The anode(s) installed in your water heater will slowly dissipate whilst protecting the cylinder. The life of the water heater cylinder may be extended by arranging for an authorised person to inspect the anode(s) and replace if required.

The suggested time after installation when the anode(s) should be inspected is:

Heavy Duty 7 years.

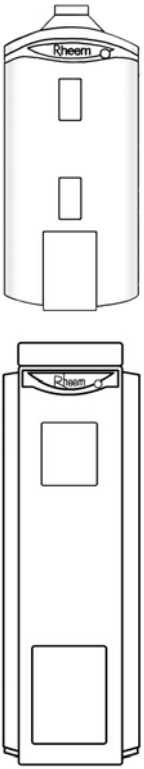
For softened water supplies or in areas of poor water quality, it is recommended the anode(s) be inspected 3 years earlier than shown (refer to "Water Supplies" on page 46).

HOW YOUR WATER HEATER WORKS

Water is stored in a vitreous enamel lined steel cylinder and heated by a gas burner located under the cylinder. The heat produced by the burner is transferred to the water through the base of the cylinder and through the wall of a flue pipe which passes through the centre of the cylinder. A flue baffle in this flue ensures the efficiency of the water heater is correct. The gas supply to the burner is controlled by the thermostat so the water is heated to a constant temperature. Automatic safety controls are fitted to the water heater to provide safe and efficient operation.

MAINS PRESSURE

The water heater is designed to operate at mains pressure by connecting directly to the mains water supply. If the mains supply pressure in your area exceeds that shown on page 18, a pressure limiting valve must be fitted. The supply pressure should be greater than 350 kPa for true mains pressure operation to be achieved.



ELECTRONIC THERMOSTAT

The thermostat automatically operates the gas control by switching its power on and off, so a constant temperature is maintained. The thermostat is mounted externally on the water heater and the protective over temperature cut out is mounted inside the lower front cover of the water heater.

There is no need to switch the water heater off when it is not in use. The thermostat is fully automatic and only allows the gas control to open when the burner requires gas for heating. The thermostat may flash “AH” (alarm high) and the current water temperature, or “AL” (alarm low) and the current water temperature. This is not a cause for concern unless the temperature displayed is more than 10ºC above the set temperature. Refer to “Diagnostic Features of Electronic Thermostat” on page 12. To adjust the thermostat settings refer to “Temperature Control” on page 43.

HOT SURFACE IGNITION

The water heater incorporates an automatic burner ignition system. A hot surface igniter (HSI) probe automatically heats up when the thermostat registers heating of the water is required. When the HSI probe is fully energised, the gas valve opens allowing gas to the burner which in turn is ignited by the HSI probe.

REGULAR CARE

TEMPERATURE PRESSURE RELIEF VALVE

This valve is near the top of the water heater and is essential for its safe operation. It is possible for the valve to release a little water through the drain line during each heating period. This occurs as the water is heated and expands by approximately 1/50 of its volume.

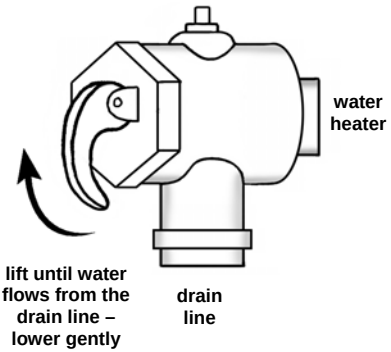
Continuous leakage of water from the valve and its drain line may indicate a problem with the water heater (refer to "Temperature Pressure Relief Valve Running" on page 13).

WARNING: Never block the outlet of this valve or its drain line for any reason.

Operate the easing lever on the temperature pressure relief valve once every six months. **It is very important you raise and lower the lever gently.**

DANGER: Failure to do this may result in the water heater cylinder failing.

If water does not flow freely from the drain line when the lever is lifted, then the water heater should be checked by Rheem Service Department or their Accredited Service Agent.



The temperature pressure relief valve should be checked for performance or replaced at intervals not exceeding 5 years, or more frequently in areas where there is a high incidence of water deposits (refer to "Water Supplies" on page 46).

EXPANSION CONTROL VALVE

In many areas, including South Australia, Western Australia and scaling water areas, an expansion control valve is fitted to the cold water line to the water heater. Water will flow from its drain line during the heating period.

Operate the easing lever on the expansion control valve once every six months. **It is very important you raise and lower the lever gently.** The expansion control valve should be checked for performance or replaced at intervals not exceeding 5 years, or more frequently in areas where there is a high incidence of water deposits.

REGULAR CARE

SERVICING

For efficient operation the water heater should be serviced annually by your nearest Rheem Service Department or their Accredited Service Agent. Only genuine replacement parts should be used on this water heater.

Warning: Servicing of a gas water heater should only be carried out by authorised personnel.

In commercial applications where large volumes of hot water are used, sediment may build up on the bottom of the cylinder and reduce the heating efficiency. In extreme cases, particularly in areas of high water sediment, draining and flushing out may be necessary. Contact your plumber to drain and flush the water heater.

SAVE A SERVICE CALL

Check the items below before making a service call. You will be charged for attending to any condition or fault that is not related to manufacture or failure of a part.

NOT ENOUGH HOT WATER (OR NO HOT WATER)

- **Is the electricity switched on?**
  Inspect the isolating switch adjacent to the water heater and ensure it is turned on.
- **Is there a time clock on the power supply?**
  Check the settings on the time clock and ensure they are suitable to enable heating when it is required.
- **Is the ignition system 'locked out'?**
  Reset the water heater. Refer to "Water Heater Not Operating" on page 12.
- **Is a code displayed on the electronic thermostat?**
  Check the LED display on the electronic thermostat. If a code is displayed, refer to "Diagnostic Features of Electronic Thermostat" on page 12.
- **Are you using more hot water than you think?**
  Are outlets (especially the showers) using more hot water than you think? Very often it is not realised the amount of hot water used, particularly when showering. Carefully review the hot water usage. Have your plumber fit a flow control valve to each shower outlet to reduce water usage.
- **Temperature pressure relief valve running**
  Is the relief valve discharging too much water? (Refer to "Temperature Pressure Relief Valve Running" on page 13).
- **Thermostat setting**
  Ensure the thermostat setting is appropriate. You may choose to have your electrician adjust the thermostats upwards to gain additional hot water capacity.
  Note: Hotter water increases the risk of scald injury.
- **Water heater size**
  Do you have the correct size water heater for your requirements? The sizing guide in the Rheem sales literature and on the Rheem website (www.rheem.com.au) suggests average sizes that may be needed.

SAVE A SERVICE CALL

WATER HEATER NOT OPERATING

The ignition system may have 'locked out'. To reset the water heater, switch the electrical supply off at the isolating switch, wait ten seconds then switch on again. If the water heater fails to light, phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

DIAGNOSTIC FEATURES OF ELECTRONIC THERMOSTAT

This water heater incorporates an electronic thermostat. In the event of a fault occurring a 2-digit code will be displayed on the thermostat LED to diagnose the fault.

Code	Fault
AL	Temperature below the minimum set point (60ºC). Refer to "Electronic Thermostat" on page 8.
AH	Temperature above the maximum set point (82ºC). Refer to "Electronic Thermostat" on page 8.
EE	Memory error
E1	Temperature sensor failure

In the event of an "AL" fault, an attempt should be made to reset the electronic control if the burner is not already alight (refer to "Water Heater Not Operating" on page 12).

All other fault conditions should be attended to by your nearest Rheem Service Department or Accredited Service Agent.

BURNER WILL NOT LIGHT

- **Is the fan in the air duct (631 275 model only) operating continuously?**
  Ensure the front cover is securely in position. Switch off the electrical supply at the isolating switch, wait 30 seconds and then switch the electrical supply on again. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection if the water heater burner fails to light.

- **Is there gas to the water heater?**
  Check the gas isolation valve on the gas supply line is open.

- **Is there a normal gas supply to the rest of the premises?**
  Try lighting another gas appliance. If there is no gas call your gas provider.

- **Is the ignition system 'locked out'?**
  Try resetting the water heater. Refer to "Water Heater Not Operating" on page 12.

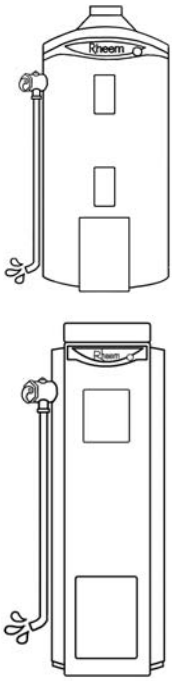
SAVE A SERVICE CALL

TEMPERATURE PRESSURE RELIEF VALVE RUNNING

- **Normal Operation**
  It is normal and desirable that this valve allows a small quantity of water to escape during the heating cycle. However, if the discharge is deemed excessive (more than 2% of hot water used), there may be another problem.

- **Continuous dribble**
  Try gently raising the easing lever on the relief valve for a few seconds (refer to "Temperature Pressure Relief Valve" on page 9). This may dislodge a small particle of foreign matter and clear the fault. Release the lever gently.

- **Steady flows for long period (often at night)**
  This may indicate the mains water pressure sometimes rises above the designed pressure of the water heater. Ask your installing plumber to fit a pressure limiting valve.



NEVER replace the relief valve with one of a higher pressure rating.

- **Heavy flows of hot water until water heater is cold - then stops until water reheats**
  The water heater **must** be switched off at the switchboard. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

EXPANSION CONTROL VALVE RUNNING

If an expansion control valve is fitted in the cold water line to the water heater (refer to page 25) it may discharge a small quantity of water instead of the temperature pressure relief valve on the water heater. The benefit is that energy is conserved as the discharged water is cooler.

SAVE A SERVICE CALL

WATER HEATER APPEARS TO BE LEAKING

When the water heater is first lit or after a large usage of hot water, condensation may form on the burner of the water heater. This is quite normal, especially in winter months and will dry off as the water is heated.

HIGH GAS BILLS

Should you at any time feel your gas account is too high, we suggest you check the following points:

- Is the relief valve running excessively? (Refer to "Temperature Pressure Relief Valve Running" on page 13).

- Are outlets (especially the showers) using more hot water than you think? (Refer to "Not Enough Hot Water" on page 11).

- Is there a leaking hot water pipe, dripping hot water tap, etc? Even a small leak will waste a surprising quantity of hot water and gas. Replace faulty tap washers, and have your plumber rectify any leaking pipe work.

- Consider recent changes to your hot water usage pattern and check if there has been any increase in tariffs since your previous account.

IF YOU HAVE CHECKED ALL THE FOREGOING AND STILL BELIEVE YOU NEED ASSISTANCE, PHONE YOUR NEAREST RHEEM SERVICE DEPARTMENT OR ACCREDITED SERVICE AGENT

INSTALLATION

THIS WATER HEATER IS NOT SUITABLE FOR POOL HEATING

Check the water heater is suitable for the gas type available (refer to the rating label on the water heater)
Note: In Australia, natural gas models can be connected to SNG, however the hourly gas consumption may be reduced (typically by 10%).

WATER HEATER LOCATION
An indoor model must be installed indoors and an outdoor model must be installed outdoors, except where a 631 275 model water heater is installed indoors with a Rheem room sealed installation kit. The water heater should be installed either close to the most frequently used outlets or with a circulated flow and return system and its position chosen with safety and service in mind. Make sure people (particularly children) will not touch the flue outlet. The flue terminal must be clear of obstructions and shrubbery.

Clearance must be allowed for servicing of the water heater. The water heater must be accessible without the use of a ladder or scaffold. Make sure the temperature pressure relief valve lever is accessible and the front covers or panels, thermostats and burner can be removed for service.

You must be able to read the information on the rating plate. If possible leave headroom of one water heater length so the anode can be inspected or replaced. Remember you may have to take the entire water heater out later for servicing.

The installation must comply with the requirements of AS/NZS 3500.4, AS/NZS 3000, AS 5601 and all local codes and regulatory authority requirements. In New Zealand, the installation must conform with NZS 5261 Code of Practice for Installation of Gas Burning Appliances and the New Zealand Building Code.

The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or where aerosol propellants are released. Remember the air may be safe to breathe, but when it goes through a flame, chemical changes take place which may attack the water heater.

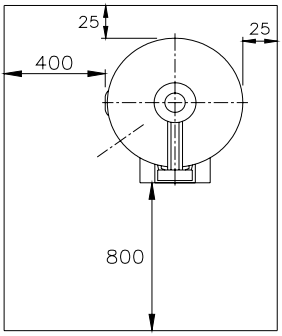
For a single water heater installation, follow the diagrams on pages 22 and 23. For multiple water heater installations, follow the instructions on pages 32 to 36.

INSTALLATION

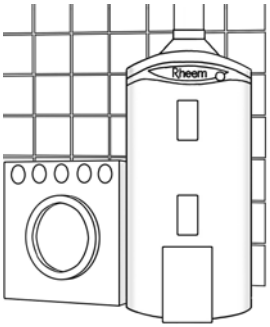
INDOOR INSTALLATION

A secondary flue must be installed with an indoor water heater to discharge combustion products outside the building. The flue must be self supporting and not impose a load on the water heater. Use a slip joint or similar to allow for disconnection. There must be a vertical rise of 600 mm from the draught diverter before changing direction. The flue design and installation must comply with AS 5601. There are particular fluing requirements for a 631 275 model water heater installed with a room sealed installation kit. Refer to the installation instructions supplied with the kit.

For indoor models the distances set out in the diagram should be observed. Keep the water heater and flue at least 25 mm clear of walls, cupboards, timber or any other combustibles and at least 500 mm clear of curtains and furnishings.



The water heater is to be installed at ground or floor level and must stand vertically upright. There are also special requirements in AS 5601 for water heaters installed in a garage, an enclosed space and other locations. Remember all local authorities have regulations about putting water heaters into roof spaces.

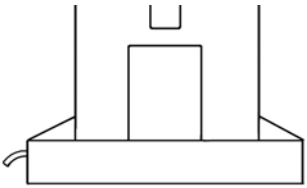


If installed in a cupboard, an adequate air supply must be provided. For efficient water heater operation allow a free open space at both the top and bottom of the access door, each of at least:

- 66,000 mm^2 for each 110 MJ model
- 120,000 mm^2 for each 200 MJ model.

SAFE TRAY

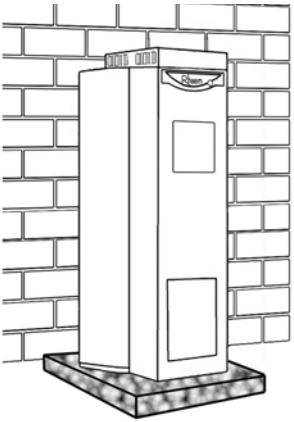
It is a requirement of AS/NZS 3500.4 that for a new installation, a water heater be installed in a safe tray where in the event of a leak, property may otherwise be damaged. Construction, installation and draining of a safe tray must comply with the abovementioned Standard.



INSTALLATION

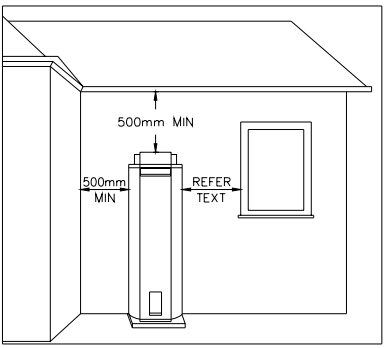
OUTDOOR INSTALLATION

The water heater is to be installed at ground level on a concrete or brick plinth (fire proof base) and must stand vertically upright with the back of the water heater **against an external wall** or alternatively against a fireproof screen extending at least 500mm above, below and either side of the flue terminal. Failure to observe this precaution can cause problems in high wind areas. A secondary flue is not required.



For outdoor models the following distances should be observed:

- At least 500mm between the top of the water heater and the eaves.
- At least 500mm (265) or 1500mm (275) horizontally between the water heater and the edge of any opening into the building.
- At least 1000mm (265) or 1500mm (275) vertically from the top of the water heater to the bottom edge of an openable window.
- At least 500mm measured horizontally along the wall between the water heater and a return wall or external corner.
- At least 500mm clear of any combustibles.

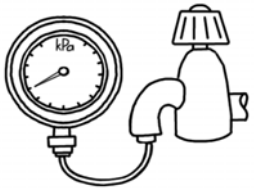


INSTALLATION

MAINS WATER SUPPLY

Where the mains water supply pressure exceeds that shown in the table below, an approved pressure limiting valve is required and should be fitted as shown in the installation diagram (refer to installation diagram on page 25).

Model	265, 275
Relief valve setting	1000kPa
Expansion control valve setting*	850kPa
Max. mains supply pressure	
With expansion control valve	680kPa
Without expansion control valve	800kPa



* Expansion control valve not supplied with water heater

TANK WATER SUPPLY

If the water heater is supplied with water from a tank supply, then the bottom of the supply tank must be at least 1 m above the highest hot water outlet and care taken to avoid air locks. The cold water line to the water heater should be adequately sized and fitted with a full flow gate valve or ball valve.

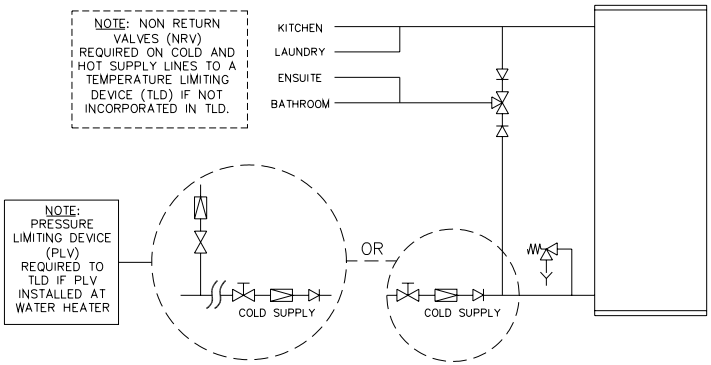
HOT WATER DELIVERY

This water heater can deliver water at temperatures which can cause scalding.

It is necessary and we recommend that a temperature limiting device be fitted between the water heater and the hot water outlets in any ablution and public areas such as bathrooms, ensuites or public amenities, to reduce the risk of scalding. The installing plumber may have a legal obligation to ensure the installation of this water heater meets the delivery water temperature requirements of AS/NZS 3500.4 so that scalding water temperatures are not delivered to a bathroom, ensuite, or other ablution or public area.

Where a temperature limiting device is installed adjacent to the water heater, the cold water line to the temperature limiting device can be branched off the cold water line either before or after the isolation valve, pressure limiting valve and non return valve to the water heater. If an expansion control valve is required, it must always be installed after the non return valve and be the last valve prior to the water heater.

If a pressure limiting valve is installed on the cold water line to the water heater and the cold water line to a temperature limiting device branches off before this valve or from another cold water line in the premises, then a pressure limiting valve may be required prior to the temperature limiting device.



Two Temperature Zones Using a Temperature Limiting Device

CIRCULATED HOT WATER FLOW AND RETURN SYSTEM

If a Rheem water heater is to be installed as part of a circulated hot water flow and return system, a storage water heater able to provide a hot water outlet temperature of at least 60°C must be used. **Note:** The thermostat must always be set to at least 60°C. Refer to the diagram on page 20.

Refer also to "Recirculation System" on page 43.

Temperature Limiting Device

A temperature limiting device cannot be installed in circulated hot water flow and return pipe work unless it is specifically designed to do so, such as the Rheem Guardian warm water system.

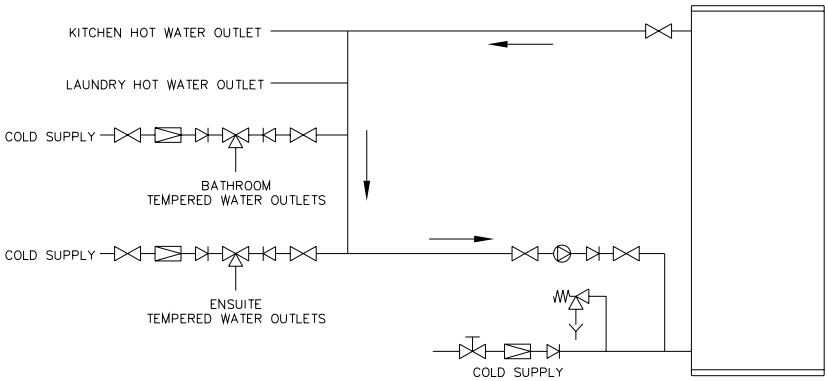
The tempered water from a temperature limiting device cannot be circulated. Where a circulated hot water flow and return system is required in a building, a temperature limiting device can only be installed on a dead leg, branching off the circulated hot water flow and return pipe.

If circulated tempered water were to be returned back to the water heater, depending on the location of the return line connection on the water supply line to the water heater, then either:

- water will be supplied to the cold water inlet of the temperature limiting device at a temperature exceeding the maximum recommended water supply temperature, or

- when the hot taps are closed no water will be supplied to the cold water inlet of the temperature limiting device whilst hot water will continue to be supplied to the hot water inlet of the temperature limiting device.

These conditions may result in either water at a temperature exceeding the requirements of AS/NZS 3500.4 being delivered to the hot water outlets in the ablution areas, or the device closing completely and not delivering water at all, or the device failing. Under either condition, the operation and performance of the device cannot be guaranteed.



Circulated Hot Water Flow and Return System – Gas Water Heater

REDUCING HEAT LOSSES

The cold water line to and the hot water line from the water heater must be insulated in accordance with the requirements of AS/NZS 3500.4. The insulation must be weatherproof and UV resistant if exposed.

Keep temperature settings down. Lower temperatures reduce heat losses and prolong cylinder life. Do not set the controlling electronic thermostat above 70°C unless it is necessary. A time clock to control the electrical supply can be used to switch off the water heater during hours or days when it is not in use.

ANODE TYPES

The correct anode type for the water supply being used must be fitted in the water heater (refer to "Water Supplies" on page 46). The black anode is fitted as standard.

Total Dissolved Solids in water supply to the water heater	Anode colour code
0-40 mg/L	Green
40-600 mg/L	Black
600-2500 mg/L	Blue

INSTALLATION

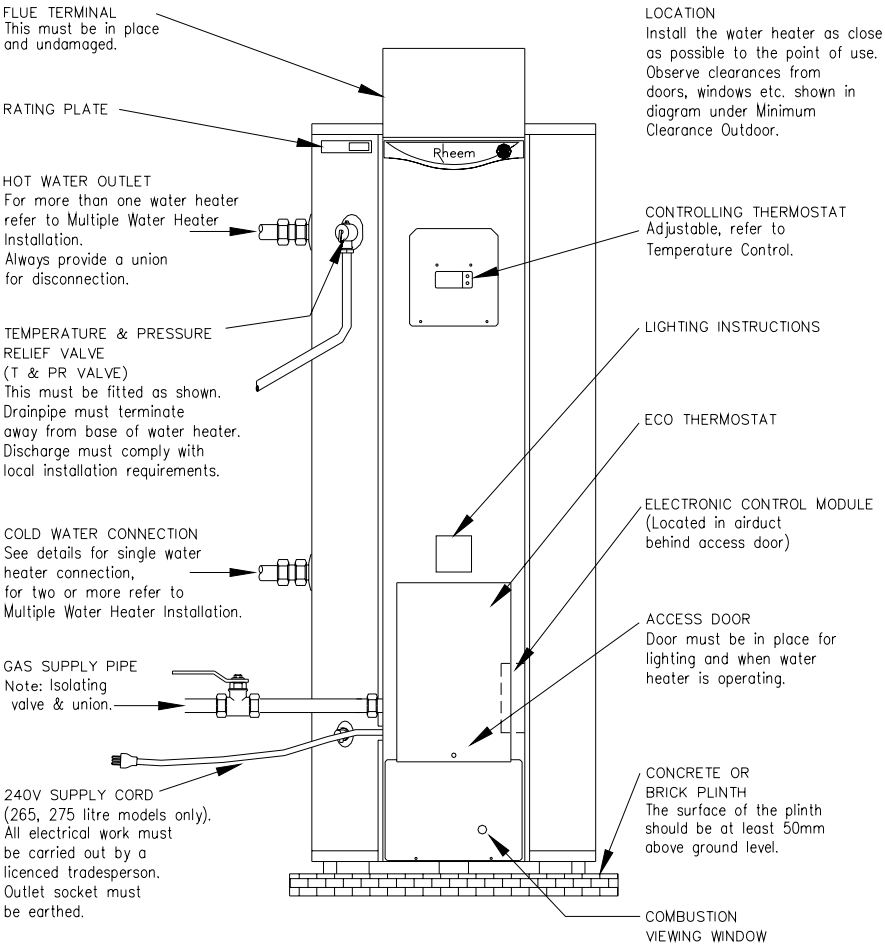
SADDLING PIPE WORK

To prevent damage to the cylinder when attaching pipe clips or saddles to the water heater jacket, we recommend the use of self drilling screws with a maximum length of 12 mm. Should pre drilling be required, extreme caution must be observed when penetrating the jacket of the water heater.

Note: Damage to the cylinder as a result of saddling to the jacket will void the warranty.

INSTALLATION

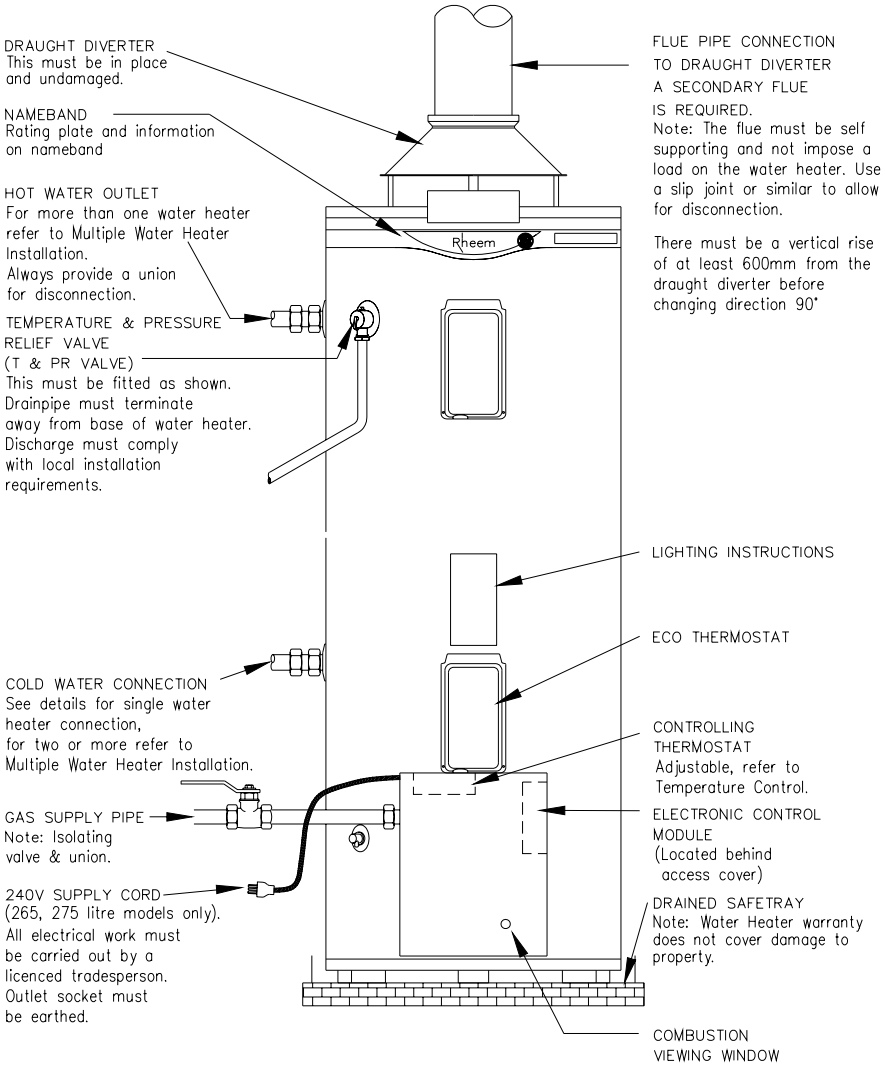
TYPICAL INSTALLATION – OUTDOOR LOCATION



631 275 model shown

INSTALLATION

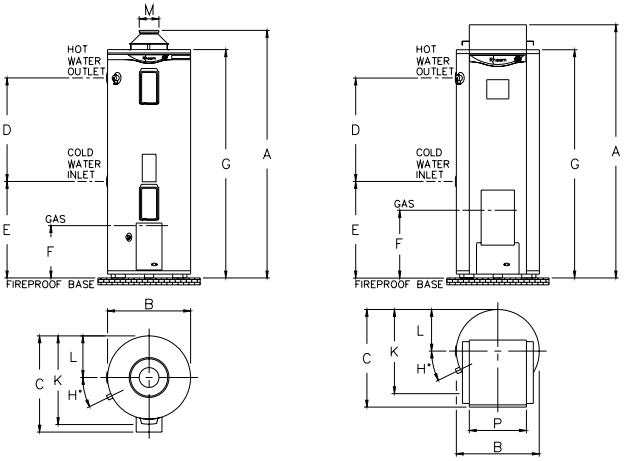
TYPICAL INSTALLATION – INDOOR LOCATION



621 275 model shown

INSTALLATION

DIMENSIONS AND TECHNICAL DATA



Model No.		621265	631265	621275	631275
		(Indoor)	(Outdoor)	(Indoor)	(Outdoor)
Storage capacity (litres)		265	265	275	275
Nominal Dimensions (mm)	A	1795	1835	1895	1865
	B	610	610	640	640
	C	750	710	780	780
	D	750	750	760	760
	E	700	700	700	700
	F	380	380	340	340
	G	1655	1655	1695	1695
	H	36°	36°	36°	36°
	K	660	660	722	722
	L	302	302	320	320
	M	125	-	200	-
	P	-	420	-	320
Weight empty (kg)		129	136	180	190

Gas Details	Hourly Gas Consumption (MJ)		Min. Gas Pressure (kPa)		Test Point Gas Pressure (kPa)	
	265	275	265	275	265	275
Natural / SNG (typical)	110 / 100	200 / 180	1.13	1.13	0.85	0.9
Town	95	190	0.75	0.75	0.32	0.5
TLP	90	190	0.75	0.75	0.32	0.5
Propane	100	190	2.75	2.75	2.5	2.65
Butane	95	160	2.75	2.75	2.5	2.65

Model numbers: N = Natural; T = Town; P = Propane; B = Butane. Letter N, T, P or B is included in the model number, eg 621275N0, to denote gas type.
Specifications are subject to change with ongoing product improvements.

CONNECTIONS – PLUMBING

CONNECTION SIZES

- Hot water connection: RP 1¼/32.
- Cold water connection: RP 1¼/32.
- Relief valve connection: RP ¾/20.
- Gas inlet: RP¾/20.

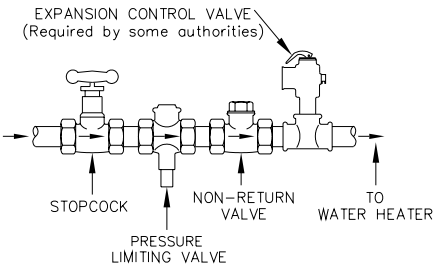
All plumbing work must be carried out by a qualified person and in accordance with the National Plumbing Standard AS/NZS 3500.4 and local authority requirements.

All gas work must be carried out by a qualified person and in accordance with the Australian Gas Installations Standard AS 5601 and local authority requirements.

WATER INLET AND OUTLET

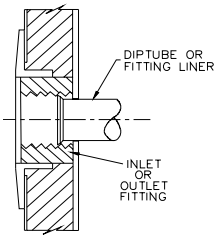
All pipe work must be cleared of foreign matter before connection and purged before attempting to operate the water heater. All olive compression fittings must use brass or copper olives. Use thread sealing tape or approved thread sealant on all fittings.

An isolation valve and non-return valve must be installed on the cold water line to the water heater. Use the arrangement shown in the diagram or on page 34 for multiple installations. Refer also to "Hot Water Delivery" on page 18.



A disconnection union must always be provided at the cold water inlet and hot water outlet on the water heater to allow for disconnection of the water heater.

All water heaters have a plastic dip tube or fitting liner in the inlet and outlet fittings (see diagram). These must be in place for the water heater to function properly. Do not remove or damage them by using heat nearby. They will be pushed into the correct position as the fitting is screwed in.



CONNECTIONS – PLUMBING

GAS INLET

The gas connection is made to the left hand side of the gas control. 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 the Gas Installations Standard AS 5601 for the correct pipe sizing.

Warning: 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 control. Warranty does not cover damage of any nature resulting from failure to observe this precaution. Refer to rating label for gas types and pressures.

Ensure the gas line is also purged at the union of the gas control. If this procedure is not followed, a retry lockout (i.e. single flashes on control module) may result on initial start up. The HSI system has a flame sensing period of 2.5 seconds from the time the gas valve opens. If the burner flame is not sensed during this period, a five minute waiting period follows so any unburnt gas can escape before a second and third burner ignition is automatically attempted. If the third attempt is also unsuccessful, the system enters the re-ignition attempt lockout mode. The LED on the control module has a series of flashes to indicate this mode (refer to label on the access cover). The electrical supply to the water heater must be turned off and then on again, or the reset button on the control module must be pressed to allow further ignition attempts.

Caution: Care is necessary when tightening fittings into the gas valve. The gas valve casting may crack if the fittings are over tightened. Cracked valve castings are not covered under warranty. Damaged valves must be replaced.

PIPE SIZES

The pipe sizing for hot water supply systems should be carried out by persons competent to do so, choosing the most suitable pipe size for each individual application. Reference to the technical specifications of the water heater and local regulatory authority requirements must be made.

RELIEF VALVE

The temperature pressure relief valve is shipped in the plastic bag attached to the side of the water heater. The temperature pressure relief valve must be fitted before the water heater is operated. Before fitting the relief valve, make sure the probe has not been bent. Seal the thread with Teflon tape - never hemp. Make sure the tape does not hang over the end of the thread.

Screw the valve into the correct opening (refer to the installation diagram on page 22) leaving the valve outlet pointing downwards. Do not use a wrench on the valve body - use the spanner flats provided.

CONNECTIONS – PLUMBING

RELIEF VALVE DRAIN

A copper drain line must be fitted to the relief valve to carry the discharge clear of the water heater. Connect the drain line to the relief valve using a disconnection union. The pipe work from the relief valve to the drain should be as short as possible and fall all the way from the water heater with no restrictions. It should have no more than three right angle bends in it. Use DN20 pipe.

The outlet of the drain line must be in such a position that flow out of the pipe can be easily seen (refer to AS/NZS 3500.4) - but arranged so hot water discharge will not cause injury, damage or nuisance. The drain line must discharge at an outlet or air break not more than 9 metres from the relief valve.

In locations where water pipes are prone to freezing, the drain line must be insulated and not exceed 300 mm in length. In this instance, the drain line is to discharge into a tundish through an air gap of between 75 mm and 150 mm.

For multiple installations the drain line from each water heater can discharge into a common tundish (refer to "Multiple Installations" on pages 32 and 33).

Warning: As the function of the temperature pressure relief valve on this water heater 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.

EXPANSION CONTROL VALVE

Local regulations may make it mandatory to install an expansion control valve (ECV) in the cold water line to the water heater. In other areas, an ECV is not required unless the saturation index is greater than +0.4 (refer to "Water Supplies" on page 46). However, an ECV may be needed in a corrosive water area where there are sufficient quantities of silica dissolved in the water.

The expansion control valve 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 25). A copper drain line must be run separately from the drain of the relief valve.

CONNECTIONS – ELECTRICAL

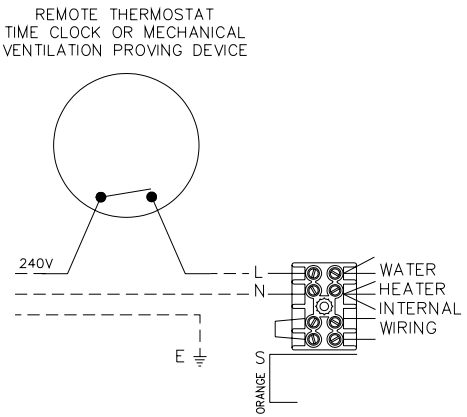
The power supply to the water heater must not be switched on until the water heater is filled with water and a satisfactory megger reading is obtained.

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 local authority requirements.

The water heater, supplied with a 1.8 metre power cord, requires a 240 V general power outlet (GPO) to be located within 1.2 metres of the installation. The GPO is required to be weatherproof for an outdoor installation.

Should it be necessary to provide permanent wiring, the water heater must be directly connected to a 240V AC 50 Hz mains power supply with a double pole isolating switch installed adjacent to and accessible from the water heater. A 20 mm flexible conduit is required for the electrical cable to the water heater. The conduit is to be connected to the unit with a 20 mm terminator. Ensure there are no excess wire loops inside the front cover.

The water heater can be wired for use with a remote control thermostat or a remote time switch. The water heater thermostat should be adjusted to a temperature higher than the setting on a remote thermostat.



Method of Wiring for Remote Control or Time Switch

THERMOSTAT SETTING

The thermostat is adjustable from 60°C to 82°C. For reasons of safety and economy, we advise the thermostat is set at the lowest temperature that will provide sufficient hot water. Discuss the thermostat setting requirements with a responsible officer. Refer to "Temperature Control" on page 43.

If this water heater is installed as an in-series booster water heater as part of a commercial solar water heating system, to maximise solar contribution it is recommended the thermostat is set at 60°C, unless sanitising temperatures are required.

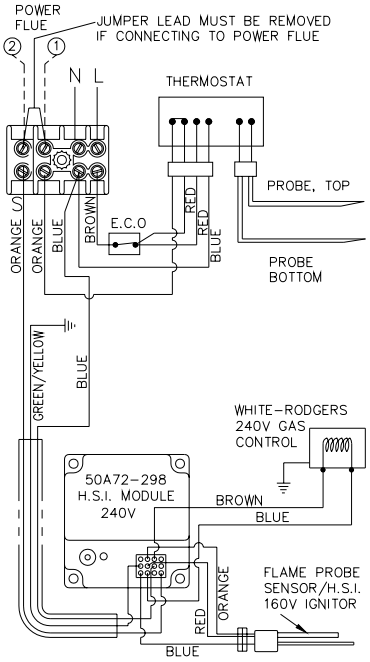
CONNECTIONS – ELECTRICAL

WIRING A POWER FLUED SYSTEM TO THE WATER HEATER

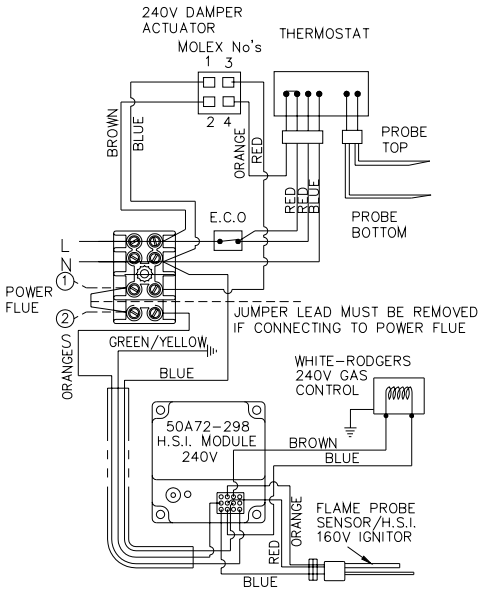
An indoor model can be wired to a power flued system. A power flued system must be designed by a qualified person to suit the particular installation and for approval by the gas supply authority. The power flue system must be interlocked with the water heater(s) to prevent the water heater(s) from operating if the power flue is not working.

The principle of operation for multiple gas water heater control with a power flue is the same as for a single water heater. Any water heater can switch on the fan and the burners can only come on when the sail switch is closed.

To connect a power flue into the water heater system design, it is necessary to remove the bridging wire from the terminal block of the water heater and connect the wiring to the power flue to these two terminals. Refer to the wiring diagrams for the connection points on the water heater.



621 265

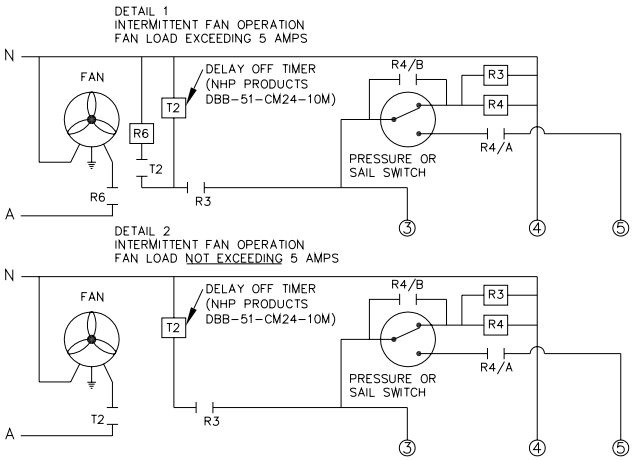


621 275

Wiring Diagrams

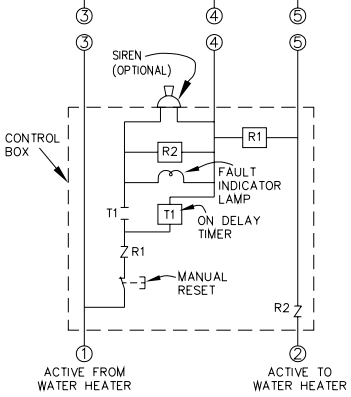
CONNECTIONS – ELECTRICAL

POWER FLUE EXTERNAL CONTROLS – INTERMITTENT OPERATION



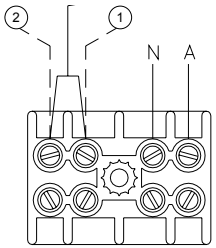
Notes

1. Power source for the water heater, fan and control circuit must be from the same circuit.
2. R1 monitors return signal.
3. R2 monitors alarm signal.
4. T1 to be set for 20-30 seconds.
5. Meets requirements of Clause H.2.2.6 of AS5601 – 2004, providing lockout in the event of flue product flow failure.
6. Where intermittent fan operation is utilised, it is necessary to run the fan for some time after combustion ceases to prevent flue spillage of combustion products. T2 to be set for 5 minutes.

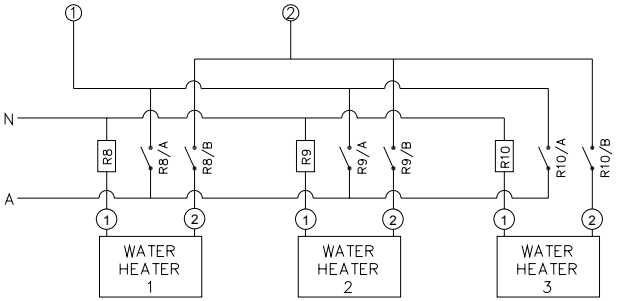


For a single water heater installation, connect 1 and 2 directly to the water heater

jumper lead must be removed for connection to a power flue



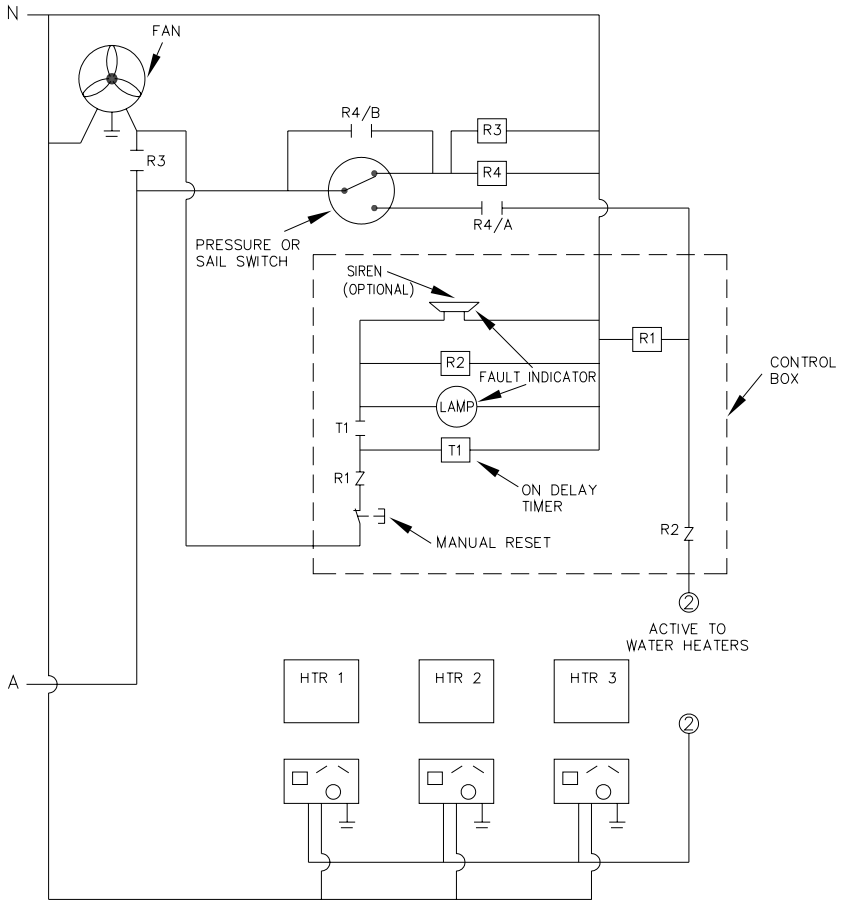
INTERLOCK TERMINAL
621 SERIES RHEEM



multiple water heater installation

CONNECTIONS – ELECTRICAL

POWER FLUE EXTERNAL CONTROLS – 24 HOUR OPERATION



Notes:

1. Power source for the water heater, fan and control circuit must be from the same circuit.
2. R1 monitors return signal.
3. R2 monitors alarm signal.
4. T1 to be set for 20-30 seconds.
5. Use SPO with round earth terminal. Water heater supply cord must be changed to suit.
6. Meets requirements of Clause H.2.2.6 of AS5601 – 2004, providing lockout in the event of flue product flow failure.

MULTIPLE INSTALLATIONS

A multiple installation of Rheem water heaters on a single manifold or multiple manifolds is possible, using the Rheem Equa-Flow® manifold system, where large volumes of hot water are required. The Equa-Flow principle will function with water heaters in line, around a corner or in rows back to back (refer to the diagrams on page 33).

The cold water and hot water manifolds must be designed to balance the flow from each water heater. To achieve this, there are basic installation requirements and principles which must be followed:

1. The maximum number of water heaters in a bank should be 8, however several banks of water heaters can be installed.

2. The hot water line from the manifold must leave from the opposite end to which the cold water line enters the manifold.

3. The water heaters must be of the same model.

4. The cold water line, cold and hot headers and hot water line must be sized to meet the requirements of both AS/NZS 3500.4 and the application.

5. A non return valve, isolation valve and if required a pressure limiting valve and expansion control valve, must be installed on the cold water line to the system.

6. A full flow gate valve or ball valve (not a stop tap, as used on a single water heater installation) must be installed on both the cold water branch and hot water branch of each water heater.

7. Non return valves or pressure limiting valves **must not** be installed on the branch lines to the water heaters.

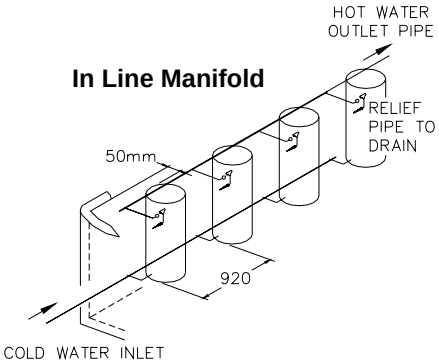
8. All fittings, valves and branch lines must be matched sets all the way along the manifold.

9. Sufficient space must be left to enable access, servicing or removal of any water heater. Outdoor 631 265 models must be spaced at minimum 920 mm centres to provide the required clearance between flue terminals.

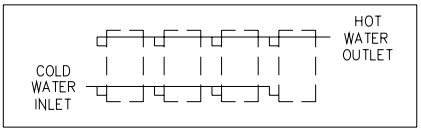
10. The temperature pressure relief valve drain line from each water heater can terminate at a common tundish (funnel) with a visible air break at each drain discharge point (refer to the diagram on page 33 and to “Relief Drain Line” on page 27).

Refer to the diagrams on pages 33 to 36 for installation and plant layout details.

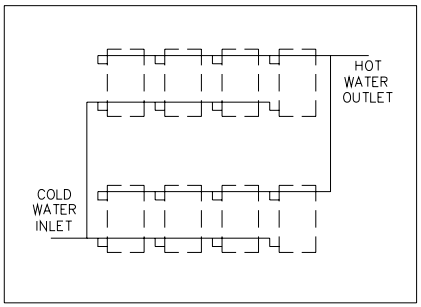
MULTIPLE INSTALLATIONS



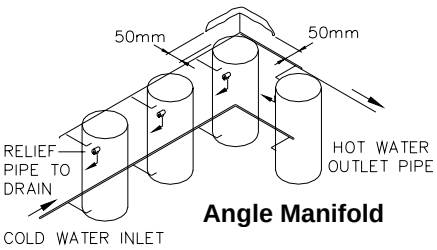
In Line Manifold



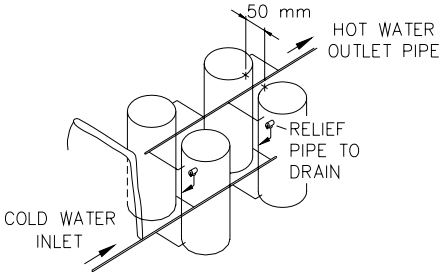
Single Bank of Water Heaters



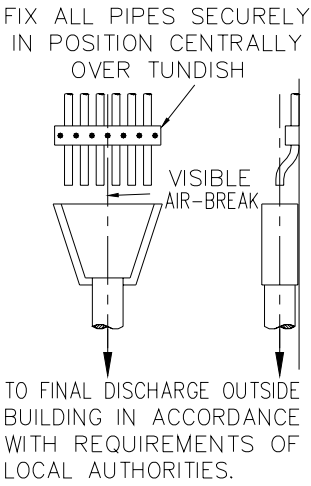
Multiple Banks of Water Heaters



Angle Manifold

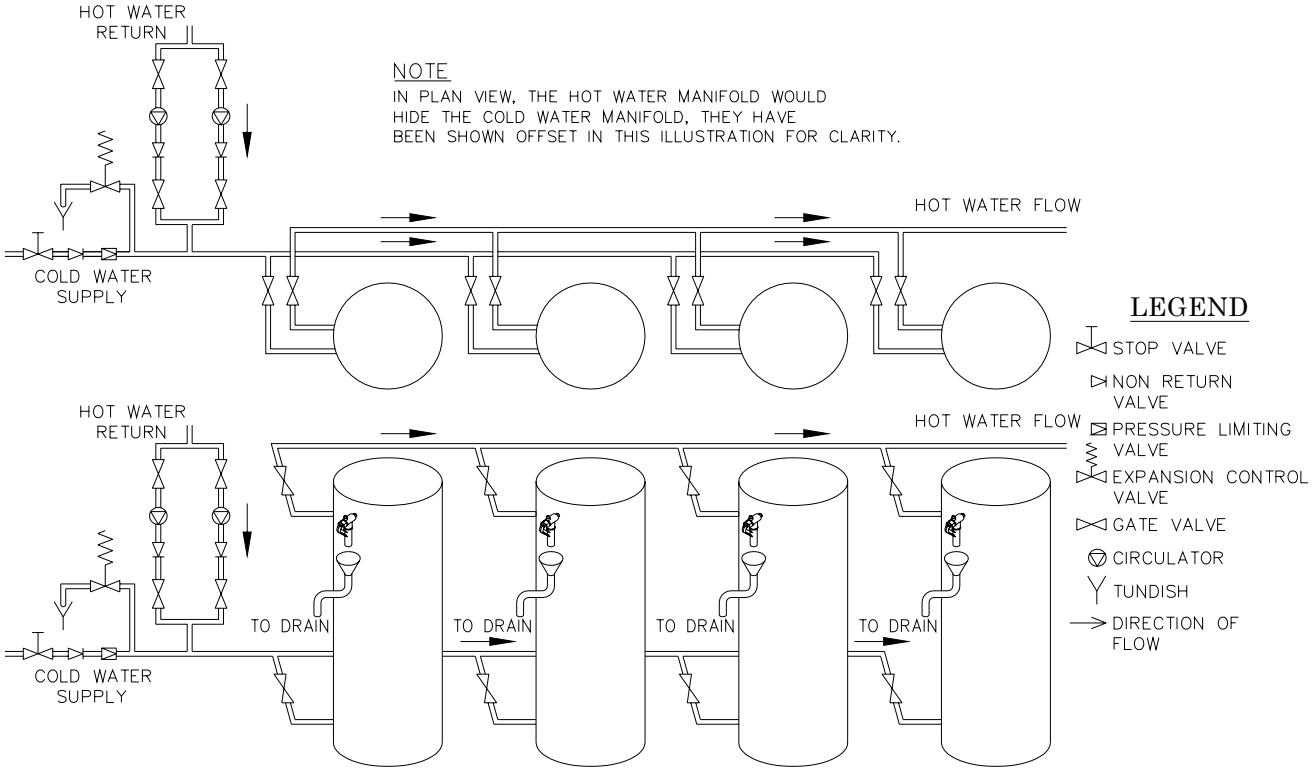


Back to Back Manifold



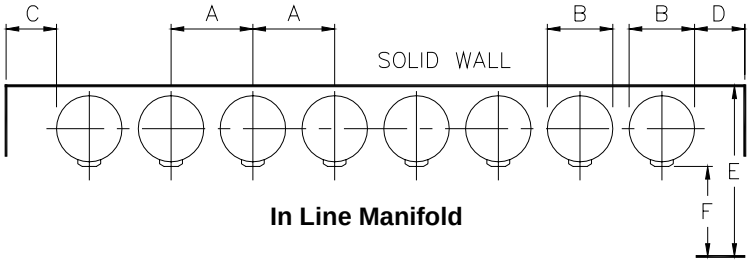
TPR Valve Drain Line
Common Discharge Point

MULTIPLE INSTALLATIONS

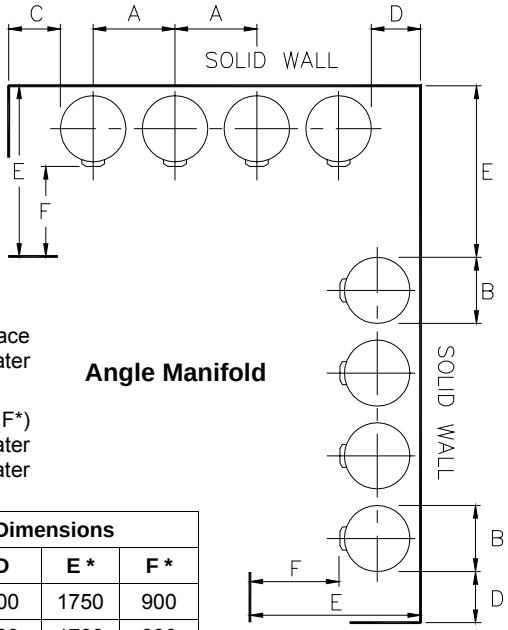


TYPICAL INSTALLATION – RHEEM HEAVY DUTY GAS WATER HEATERS

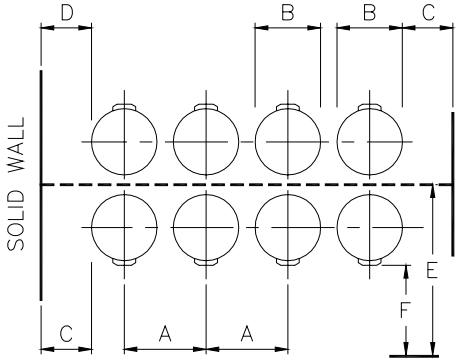
MULTIPLE INSTALLATIONS



In Line Manifold



Angle Manifold



Back to Back Manifold

NOTES:

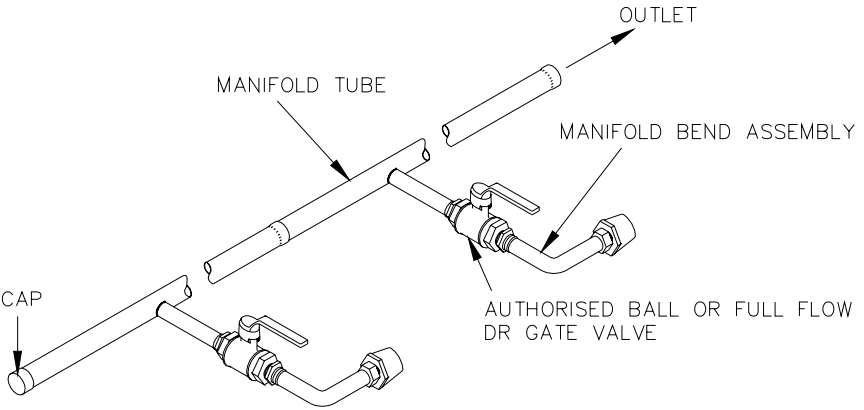
1. Minimum recommended space between wall and back of water heater is 100 mm.
2. A minimum of 900 mm (E* & F*) should be left in front of the water heater for access, servicing and water heater removal.

Installation Layout Minimum Dimensions						
Model	**A**	**B**	**C**	**D**	**E ***	**F ***
621 265	860	610	300	100	1750	900
621 275	890	640	300	100	1780	900
631 265	920	610	410	410	1710	900
631 275	890	640	350	350	1780	900

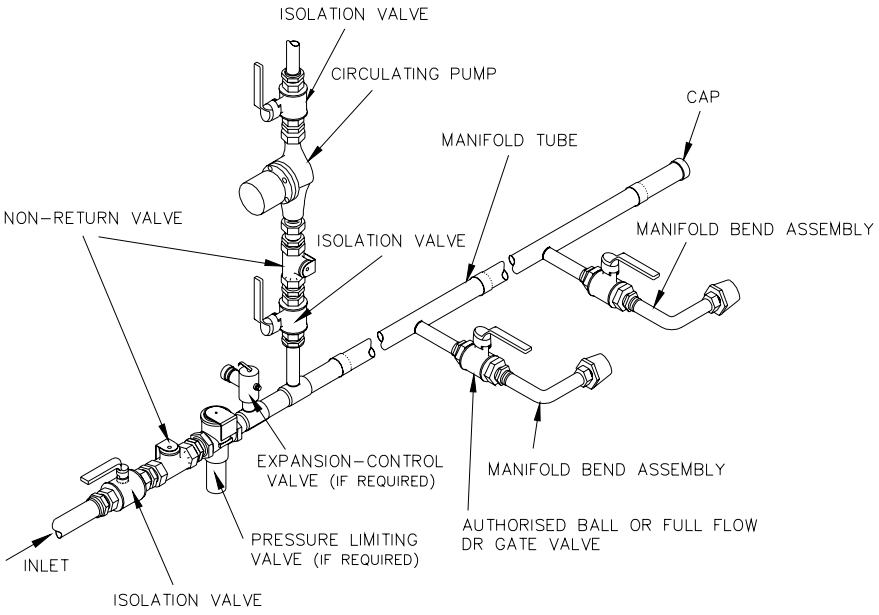
INSTALLATION DIMENSIONS – RHEEM HEAVY DUTY GAS WATER HEATERS

MULTIPLE INSTALLATIONS

MANIFOLD ARRANGEMENT



Hot Manifold Assembly



Cold Manifold Assembly

COMMISSIONING

TO FILL AND TURN ON THE WATER HEATER

The power supply to the water heater must not be switched on until the water heater is filled with water and a satisfactory megger reading is obtained.

- Open all of the hot water tap(s) in the building (don't forget the showers) and supply cock(s) and valve(s) in the system.
- Open the isolation valves fully on the cold and hot water branches to the water heater(s) installed in a bank.
- Open the cold water isolation valve on the cold water line to the water heater(s).

  Air will be forced out of the taps.
- Close each tap as water flows freely from it.
- Check the pipe work for leaks.
- Open the gas isolation valve fully.
- Check the gas pipe work for leaks.
- Switch on the electrical supply at the isolating switch to the water heater(s).
- Check the pipe work again for leaks when the system has reached its working temperature.

Warning: Upon completion of the installation and commissioning of the water heater, leave this guide with the householder or responsible officer. **DO NOT** leave this guide inside of the cover of the water heater, as it may interfere with the safe operation of the water heater or ignite when the water heater is turned on.

COMMISSIONING

GAS INLET PRESSURE

IMPORTANT – CHECK the gas supply pressure at the inlet to the water heater with the water heater and all other gas burning appliances in the premises operating (burners alight). The minimum gas supply pressures are:

Natural Gas	1.13 kPa	Propane	2.75 kPa
Town / TLP	0.75 kPa	Butane	2.75 kPa

If this minimum cannot be achieved, it may indicate the meter or the gas line to the water heater is undersized. It is important to ensure that an adequate gas supply pressure is available to the water heater when other gas burning appliances, on the same gas supply, are operating.

TO TURN OFF THE WATER HEATER

If it is necessary to turn off the water heater on completion of the installation, such as on a building site or where the premises is vacant, then:

- Switch off the electrical supply at the isolating switch to the water heater(s).
- Close the gas isolation valve(s) at the inlet to the gas control(s).
- Close the cold water isolation valve on the cold water line to the water heater(s) to shut down the entire system, or;
- Close the isolation valves on the cold and hot water branches to shut down an individual water heater in a bank.

LIGHTING THE WATER HEATER

FOR YOUR SAFETY READ BEFORE LIGHTING

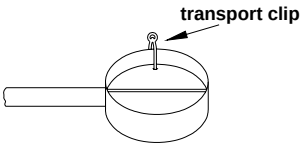
Warning: This gas water heater is designed to operate reliably and safely as long as the lighting procedure is followed **exactly**.

Make sure the water heater is filled with water and the water supply is on, otherwise serious damage to the vitreous enamel cylinder lining and plastic components may occur.

The installer must purge the gas line up to the gas control (refer to "Gas Inlet" on page 26), check all gas connections for leaks, gas supply pressure, test point pressure (refer rating label) and adjust burner aeration if necessary (refer to "Air Adjustment" on page 41).

Note:

- 621 275 indoor model - remove the transport clip from the flue damper housing.



- 631 275 outdoor model - the front cover must be in place before the burner will operate. If the front cover is off when power is switched on, the system will enter re-ignition attempt lockout (refer to "Diagnostic Features Of Hot Surface Ignition Control" on page 40).
- A viewing window is provided to check burner operation on the water heater.

LIGHTING PROCEDURE

The water heater incorporates an automatic ignition system.

1. Switch on the electrical supply at the isolating switch to the water heater.
2. When the controlling thermostat registers heating is required, the hot surface igniter rod warms up for 20 seconds. The burner will automatically ignite.
3. If burner ignition is unsuccessful, a second and third re-ignition attempt will occur after a five (5) minute delay between each try. This delay is to allow for any build up of unburnt gas to escape.
4. If the third re-ignition attempt is unsuccessful, the system will enter lockout. To reset the water heater, switch the electrical supply off at the isolating switch, wait ten seconds then switch on again. If the water heater fails to light, phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection. (Authorised Service Person only: refer to "Diagnostic Features of Hot Surface Ignition Control" on page 40).

LIGHTING THE WATER HEATER

DIAGNOSTIC FEATURES OF HOT SURFACE IGNITION CONTROL

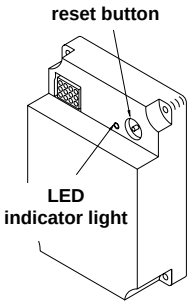
Warning: The removal of the access covers will expose 240 V wiring. They must only be removed by an authorised or service person only.

The water heater incorporates an electronic control module. This is located inside the access cover of an indoor model and to the right of the access cover inside the air duct on an outdoor model (refer to installation diagrams on pages 22 and 23).

An LED light on the module will flash once when power is switched on to the water heater. In the event of a fault occurring in or affecting the Hot Surface Ignition system, the system will enter “lock out” and the LED will emit a series of flashes diagnosing the fault. There will be a 2 second interval between each group of flashes.

Flashes	Fault
1	Re-ignition attempt lockout.
2	631 275 models only – Pressure switch not open.
3	631 275 models only – Pressure switch not closed.
4	Faulty igniter/igniter sensing circuit.
5	Flame sensed with gas valve de-energized.
6	Active and neutral wiring reversed.
7	Check flame sensor and/or appliance grounding.
Rapid	Frequency check failure.
Remains on	Press the reset button.*

*** Note:** If the LED light remains on after pressing the reset button, the electronic control must be replaced. Phone your nearest Rheem Service Department or Accredited Service Agent.



TEST THE WATER HEATER AFTER INSTALLATION

- The operation of the water heater must be thoroughly checked by the installer.
- The burner flame must light smoothly and quickly from the hot surface igniter and must go out quietly and completely.
- The burner flame must be stable, although slight lifting at the front edge of the burner is acceptable when the burner is cold.

LIGHTING THE WATER HEATER

- The burner flame should be blue, with a clearly defined inner cone - luminous yellow or “floating” flames are not acceptable and must be corrected by opening the interrupter screw (refer to “Air Adjustment” on page 41).

- Check the test point pressure and compare with the rating label. Adjust if necessary.

- If unable to get the water heater working properly, contact your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

- When satisfied everything is working properly instruct the user in the correct method of operation.

- Removal of the front cover on the 631 275 model whilst burner is operating will lead to re-ignition lockout (refer to “Diagnostic Features of Hot Surface Ignition Control” on page 40).

BURNER PRESSURE ADJUSTMENT

- Switch off the electrical supply at the isolating switch.

- Attach a manometer to the test spigot at side of gas control.

- Switch on the electrical supply at the isolating switch.

- Check the gas pressure (refer to data plate).

- If necessary adjust the regulator under the cap on top of the gas control.

AIR ADJUSTMENT

The normal setting is to have the interrupter screw clear of the burner throat for Natural and LP gases. For some Town and TLP gases, the screw may need to be closed slightly to prevent flame lift-off or burning back inside burner tube.

DRAINING THE WATER HEATER

To drain the water heater:

- Turn off the water heater (refer to “To Turn Off The Water Heater” on page 38).
- Close all hot water taps.
- Operate the relief valve release lever - do not let the lever snap back or you will damage the valve seat.

  Operating the lever will release the pressure in the water heater.
- Attach a hose to the water heater drain cock.

  Let the other end of the hose go to a drain.
- Open the drain cock.
- Operate the relief valve again.

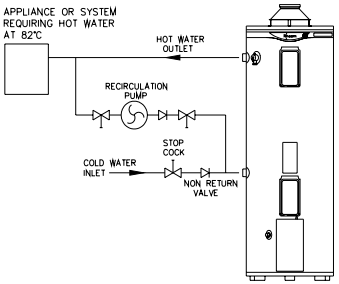
  This will let air into the water heater and allow the water to drain through the hose.

TEMPERATURE CONTROL

HOTTER WATER INCREASES THE RISK OF SCALD INJURY.
This water heater can deliver water at temperatures which can cause scalding.

It is necessary and we recommend that a temperature limiting device be fitted between the water heater and the hot water outlets in any ablution and public areas such as bathrooms, ensuites or public amenities, to reduce the risk of scalding. The installing plumber may have a legal obligation to ensure the installation of this water heater meets the delivery water temperature requirements of AS/NZS 3500.4 so that scalding water temperatures are not delivered to a bathroom, ensuite, or other ablution or public area.

RECIRCULATION SYSTEM
Where the installation involves close temperature control for any purpose, or the installation is providing water above 80°C, it is **essential** to install a circulating pump. All valves and associated equipment must be suitable for safe operation up to the maximum thermal discharge temperature of the temperature pressure relief valve, i.e. 99°C.



Where water is required at a sanitising temperature of 82°C for dishwashing or air conditioning applications, the following installation is strongly recommended:

1. A recirculation pump must be fitted.

2. The pump must be capable of withstanding working pressures greater than 1000 kPa and be constructed of materials corrosion resistant to hot water.

3. The pump should be installed with a full flow service valve on each side of it.

4. A non-return valve should be fitted in the recirculation line to prevent back flow of hot or cold water.

5. Length of branch lines off the main recirculation line should be kept to a minimum.

6. The installation of gas, electric and water services must comply with all relevant local Authorities' regulations.

7. The cold water supply pressure or the setting of the pressure limiting valve must not exceed the working pressure of the pump.

TEMPERATURE CONTROL

THERMOSTAT ADJUSTMENT

The water heater is supplied with the thermostat preset at 70ºC. It will be necessary to adjust the thermostat temperature setting if another temperature is required.

When adjusting the thermostat temperature it is necessary to alter the thermostat offset. The table outlines the thermostat temperature and the corresponding offset. **Failure to adjust the offset will result in incorrect water temperature.**

Temperature	Offset
60	14
65	15
70	16
75	17
80	18
82 *	18

* Recirculation required for 82°C setting

To adjust the thermostat setting and offset:

1. Press the down button (▼) for five (5) seconds. The current set point value will be displayed.

2. Press the down button (▼) to decrease the set point or the up button (▲) to increase the set point.

3. Once the required temperature is selected press and hold the down button (▼) and the up button (▲) simultaneously. The display will revert to the current temperature in the water heater.

4. Press and hold the down button (▼) and the up button (▲) simultaneously for ten (10) seconds, “C0” (offset program) will be displayed. Release the buttons.

5. Press and hold the down button (▼) and the up button (▲) simultaneously again. The current setting for “C0” will be displayed. Release the buttons.

6. Press the down button (▼) to decrease the setting or the up button (▲) to increase the setting according to the table, i.e. if the temperature set in step three is 60 then the offset value will be 14.

7. Once the required offset is selected press and hold the down button (▼) and the up button (▲) simultaneously, “C0” will be displayed.

8. Press the down button (▼) once; “EP” (exit program) will be displayed.

9. Press and hold the down button (▼) and the up button (▲) simultaneously; the current temperature in the water heater will now be displayed and programming complete.

Note: During the programming process if a button is not pressed for 25 seconds the thermostat will revert to its previous temperature display. It will be necessary to start again from step 1.

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WATER SUPPLIES

Your water heater is manufactured to suit the water conditions of most metropolitan supplies. However, there are some known water supplies which can have detrimental effects on the water heater and its operation and/or life expectancy. If you are unsure of your water quality, you can obtain information from your local water supply authority.

ANODE

In areas where the total dissolved solids (TDS) exceeds 600 mg/L it is possible the black anode, which is the standard anode fitted to the water heater, may be excessively active. To alleviate this, the black anode should be replaced with one colour coded blue. Where the TDS of the water is less than 40 mg/L, such as when the water has been deionised or is from an alpine supply, a high potential anode, colour coded green, should be used. The changing of anodes must be carried out by a plumber or qualified service person.

CAUTION

If your water supply has a TDS greater than 600 mg/L and the anode has not been changed to a blue one, there is the possibility hydrogen gas could accumulate in the top of the water heater during long periods of no use.

If, under these conditions, the water heater has not been used for two or more weeks the following procedure should be carried out before using any electrical appliances (automatic washing machines and dishwashers) which are connected to the hot water supply.

The hydrogen, which is highly flammable, should be vented safely by opening a hot tap and allowing the water to flow. There should be no smoking or naked flame near the tap whilst it is turned on. Any hydrogen gas will be dissipated. This is indicated by an unusual spurting of the water from the tap. Once the water runs freely again, any hydrogen in the system will have been released. In areas where this is likely to occur, the householder should be instructed by the installer on how to dissipate the gas safely.

SATURATION INDEX

The saturation index is used as a measure of the water's corrosive or scaling properties. In a corrosive water supply, the water can attack copper parts and cause them to fail. In a scaling water supply calcium carbonate is deposited out of the water onto any hot metallic surface. Where the saturation index exceeds +0.40, the water is scaling and an expansion control valve* must be fitted on the cold water line after the non-return valve.

* Refer to the cold water connection detail on page 25.

WATER HEATERS NOT INSTALLED IN ACCORDANCE WITH THE ABOVE ADVICE WILL NOT BE COVERED BY THE WARRANTY.

RHEEM MAINS PRESSURE WATER HEATER WARRANTY - AUSTRALIA ONLY -

WARRANTY CONDITIONS

1. This warranty is applicable only to water heaters manufactured from 1st September 2005.
2. The water heater must be installed in accordance with the Rheem water heater installation instructions, supplied with the water heater, and in accordance with all relevant statutory and local requirements of the State in which the water heater is installed.
3. Where a failed component or water heater is replaced under warranty, the balance of the original warranty period will remain effective. The replaced part or water heater does not carry a new warranty.
4. Where the water heater is installed outside the boundaries of a metropolitan area as defined by Rheem or further than 25 km from a regional Rheem branch office, or an Accredited Service Agent, the cost of transport, insurance and travelling costs between the nearest Rheem Accredited Service Agent's premises and the installed site shall be the owner's responsibility.
5. Where the water heater is installed in a position that does not allow safe, ready access, the cost of accessing the site safely, including the cost of additional materials handling and / or safety equipment, shall be the owner's responsibility.
6. The warranty only applies to the water heater and original or genuine (company) component replacement parts and therefore does not cover any plumbing or electrical parts supplied by the installer and not an integral part of the water heater, e.g. pressure limiting valve; isolation valves; non-return valves; electrical switches; pumps or fuse.
7. The water heater must be sized to supply the hot water demand in accordance with the guidelines in the Rheem water heater literature.

WARRANTY EXCLUSIONS

1. REPAIR AND REPLACEMENT WORK WILL BE CARRIED OUT AS SET OUT IN THE RHEEM WATER HEATER WARRANTY, HOWEVER THE FOLLOWING EXCLUSIONS MAY CAUSE THE WATER HEATER WARRANTY TO BECOME VOID AND MAY INCUR A SERVICE CHARGE AND / OR COST OF PARTS.

a) Accidental damage to the water heater or any component, including: Acts of God; failure due to misuse; incorrect installation; attempts to repair the water heater other than by a Rheem Accredited Service Agent or the Rheem Service Department.

b) Where it is found there is nothing wrong with the water heater; where the complaint is related to excessive discharge from the temperature and / or pressure relief valve due to high water pressure; where there is no flow of hot water due to faulty plumbing; where water leaks are related to plumbing and not the water heater or water heater components; where there is a failure of gas, electricity or water supplies; where the supply of gas, electricity or water does not comply with relevant codes or acts.

c) Where the water heater or water heater component has failed directly or indirectly as a result of: excessive water pressure; excessive temperature and / or thermal input; blocked overflow / vent drain; corrosive atmosphere; ice formation in the pipe work to or from the water heater.

d) Where the solar water heater or solar water heater component has failed directly or indirectly as a result of ice formation in the water ways of a solar water heater system: without a freeze protection system; with a freeze protection system where the electricity supply has been switched off or has failed; (Hiline) installed at an altitude more than 600 metres above sea level; (Loline) installed at an altitude more than 800 metres above sea level; where the system has not been installed in accordance with the water heater installation instructions.

e) Where the water heater is located in a position that does not comply with the Rheem water heater installation instructions or relevant statutory requirements, causing the need for major dismantling or removal of cupboards, doors or walls, or use of special equipment to bring the water heater to floor or ground level or to a serviceable position.

f) Repair and / or replacement of the water heater due to scale formation in the waterways or the effects of corrosive water when the water heater has been connected to a scaling or corrosive water supply as outlined in the Owner's Guide and Installation Instructions booklet.

g) Breakage of collector glass for any reason including hail damage. (We suggest that the collector glass be covered by your home insurance policy).

2. SUBJECT TO ANY STATUTORY PROVISIONS TO THE CONTRARY, THIS WARRANTY EXCLUDES ANY AND ALL CLAIMS FOR DAMAGE TO FURNITURE, CARPETS, 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.

RHEEM MAINS PRESSURE WATER HEATER WARRANTY - AUSTRALIA ONLY -

WARRANTY

Rheem will:

a) Repair or, if necessary replace any Rheem water heater; or

b) Replace any component (or, if necessary, arrange the installation of a new water heater),

which falls within the Warranty Periods specified below, subject to the warranty conditions and exclusions.

Installation	Model	Period	Warranty
All Components (from date of installation)			
All installations	All models	Year 1	New component or water heater (at Rheem's sole discretion), free of charge, including labour.**
Sealed System * (from date of installation)			
Water heater installed in a "single-family domestic dwelling with a thermostat setting below 76°C"	Heat Pump	Year 2	New sealed system component, free of charge, including labour.**
Cylinder and SuperFlue (from date of installation)			
Water heater installed in a "single-family domestic dwelling with a thermostat setting below 76°C"	Rheemglas RheemPlus Loline Hiline Heat Pump	Years 2 & 3	New water heater, free of charge, including labour.**
		Years 4 & 5	New water heater, free of charge, with installation and labour costs being the responsibility of the owner.
	Stellar Optima Heavy Duty	Years 2 to 5	New water heater, free of charge, including labour.**
		Years 6 to 10	New water heater, free of charge, with installation and labour costs being the responsibility of the owner.
Water heater installed in any other than a "single-family domestic dwelling with a thermostat setting below 76°C"	Rheemglas RheemPlus Loline Hiline Heat Pump	Years 2 & 3	New water heater, free of charge, with installation and labour costs being the responsibility of the owner.
	Stellar Optima Heavy Duty	Years 2 to 5	New water heater, free of charge, with installation and labour costs being the responsibility of the owner.
Solar Collector (from date of installation)			
All installations	SCT200 SBT200 NPT200	Years 2 to 5	New solar collector, free of charge, with installation and labour costs being the responsibility of the owner.

Notes:

* The Sealed System includes components that carry refrigerant only, e.g. Compressor, Condenser, TX Valve, Receiver/Drier, Evaporator and associated pipe work.

** Refer to items 4 and 5 of warranty conditions.

Rheem reserves the right to transfer fully functional components from the defective water heater to the replacement water heater if required. The term "water heater" used in the Warranty, Warranty Conditions and Warranty Exclusions means the Rheem supplied water heater(s), solar storage tank(s), solar collector(s), kit(s) and components.

In addition to this warranty, the Trade Practices Act 1974 and similar laws in each state and territory provide the owner under certain circumstances with certain minimum statutory rights in relation to your Rheem water heater. This warranty must be read subject to that legislation and nothing in this warranty has the effect of excluding, restricting or modifying those rights.

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