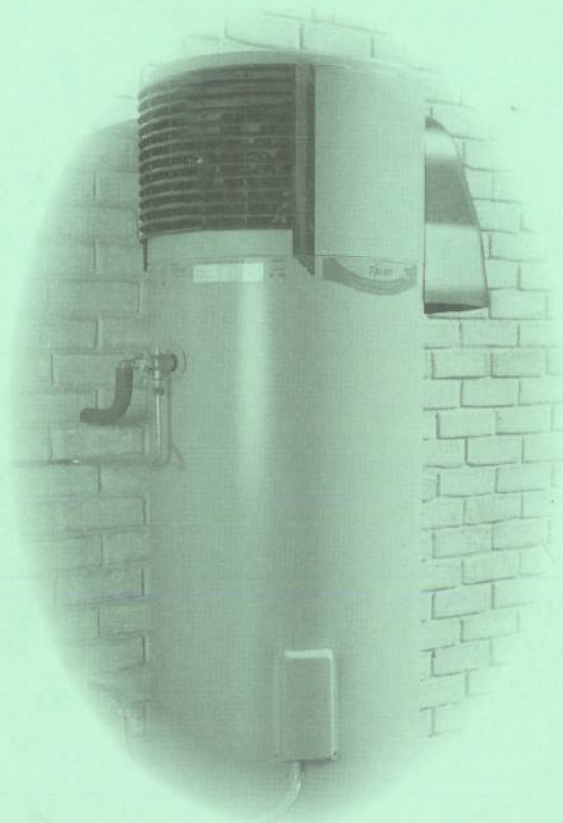


Owners Guide and Installation Instructions



Air Sourced Heat Pump Water Heater



Install a Rheem

*This water heater must be installed and serviced by an authorised person.
Please leave this guide with the householder.*

**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.

PATENTS

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

® Registered trademark of Rheem Australia Pty Ltd.

CONTENTS

HOUSEHOLDER – We recommend you read pages 4 to 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® water heater. The model you have chosen is a Rheemglas model. Your Rheem air sourced heat pump water heater is designed for outdoor installation only.

HOW HOT SHOULD THE WATER BE?

The system controls (compressor, evaporator and fan) will operate until a water temperature of approximately 75°C is reached in the summer months and 65°C in the winter months. During periods of ambient temperature below 7°C, the water temperature is boosted automatically by the thermostatically controlled electric heating unit.

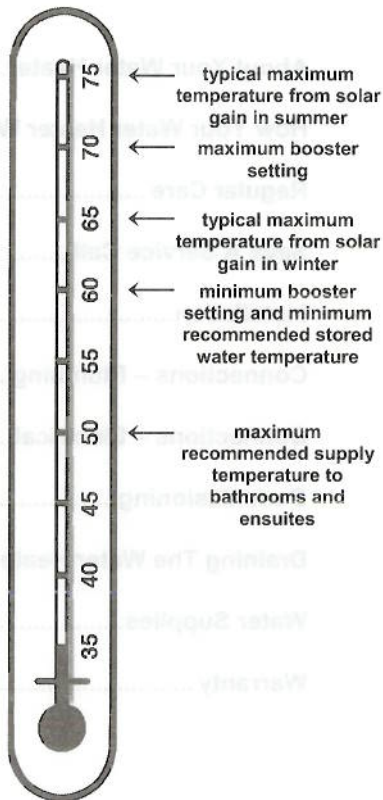
To meet the requirements of the National Plumbing Standard the temperature of the stored water must not be below 60°C. Rheem recommends the booster thermostat is set at 60°C to maximise solar contribution.

HOTTER WATER INCREASES THE RISK OF SCALD INJURY

We recommend and it may also be required by regulations that an approved temperature limiting device, such as the Rheem Temp-Set®, be fitted into the hot water pipe work to the bathroom and ensuite when this water heater is installed. This will keep the water temperature below 50°C at the bathroom and ensuite. The risk of scald injury will be reduced and still allow hotter water to the kitchen and laundry.

TEMPERATURE ADJUSTMENT

The water heater features a tradesperson adjustable thermostat. This requires a licensed tradesperson to make any temperature adjustments. The temperature is adjustable within the range shown in the diagram. We advise you have your electrician adjust the thermostat to the lowest setting which meets your needs, especially if there are young children or elderly people in the home. 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 volt wiring. They must only be removed by an authorised or service person.

- Do not use **aerosols, stain removers and household chemicals** near the water heater whilst it is working. Gases from some aerosol sprays, stain removers and household chemicals are corrosive to the materials used in the heat pump system.
- Do not store swimming pool chemicals, household cleaners, etc., near the water heater.
- Ensure the air inlet and discharge cover are not obstructed in any way at any time.

SAFETY

This water heater is supplied with a thermostat, two over-temperature energy cut-outs 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.

If the electrical supply conduit to the water heater is damaged, it must be replaced by an authorised person in order to avoid a hazard. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

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 you plan to be away from home for a few nights, we suggest you leave the water heater switched on. However, if you plan to stay away more than a few nights, conserve energy by switching off the isolating switch to the water heater.

ABOUT YOUR WATER HEATER

TO TURN ON THE WATER HEATER

If the electrical supply to the water heater has been switched off, then switch on the electrical supply to the water heater at the isolating switch. If the water heater was turned off whilst it was operating, do not turn on again for 20 minutes. Turning the water heater on again immediately after it is turned off may cause damage to the compressor.

HOW DO I KNOW IF THE WATER HEATER IS INSTALLED CORRECTLY?

Installation requirements are shown on page 19. The water heater must be installed by an authorised person and the installation must comply with AS/NZS 3500.4, AS/NZS 3000 and all local codes and regulatory authority requirements. In New Zealand, the installation must conform with the New Zealand Building Code.

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 water heater and fittings. **If you are in a known harsh water area you must read page 26.** If you are not sure, have your water quality checked against the conditions described on page 26.

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, temperature (inlet and outlet) and the water usage pattern. However, your water heater is supported by a comprehensive warranty (refer to page 28).

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 8 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 26).

HOW YOUR WATER HEATER WORKS

The Rheem air sourced heat pump water heater is designed to be installed outdoors and has a vitreous enamel lined steel cylinder. The water heater's evaporator absorbs heat from the surrounding air and transfers this heat into the water. The water heater operation is similar to that of a refrigerator but in reverse. The heat pump controls produce a sound level of up to 59 dbA (measured at 1.5 metres) when they are operating. This is similar to a domestic air conditioner.

When hot water is drawn off and cold water enters the tank, the thermostat activates the fan, which draws outside air in through the vent at the top of the water heater. Heat is absorbed from the air by an evaporator and transferred into the water. Even on cold days, heat is drawn from the surrounding air. The resulting cold air is then discharged through the deflector back to atmosphere. This process continues while ever heating is required.

The water will reach a temperature of approximately 75°C in the summer months and 60°C in the winter months. This water heater will operate at temperatures between a minimum -10°C and maximum 45°C. The water heater is most efficient when the ambient air temperature is between 10°C and 40°C.

ELECTRIC BOOSTING

Ice may begin to form on the evaporator when the air temperature falls below 10°C. At temperatures below 7°C, the water inside the tank will be heated by the electric booster heating unit if its temperature is below the thermostat setting. During this period the evaporator will defrost.

The thermostat is tradesperson adjustable. It is factory set at the minimum temperature setting of 60°C and has a maximum temperature setting of 70°C. It can only be adjusted by an authorised person. 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 16, a pressure limiting valve must be fitted. The supply pressure should be greater than 350 kPa for true mains pressure operation to be achieved.

HOW YOUR WATER HEATER WORKS

THERMAL CUT OUT

The refrigeration circuit is protected by a thermal cut out. This will activate in the event of power or thermal surges. The thermal cut out can only be reset by a qualified person. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

TIMER CONTROL

A timer can be installed in the electrical circuit to the water heater. The timer must be weatherproof if it is installed outdoors. It may be desirable for the water heater not to operate between certain hours due to the noise created by the system controls, such as during the night time.

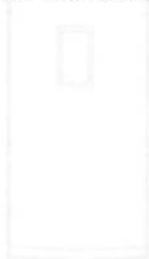
Remember, even on cloudy and cold days your heat pump water heater will heat your stored water.

GOING ON HOLIDAYS

If you plan to be away from home for a few nights, we suggest you leave the water heater switched on. If you plan to be away for a longer period, conserve energy by switching the isolating switch to the water heater off (refer to "To Turn Off The Water Heater" on page 5).

ENVIRONMENT

At the end of the service life of the heat pump water heater and prior to the water heater being disposed of, a person qualified to work with refrigerants must recover the refrigerant from within the sealed system. The refrigerant must not be vented to atmosphere. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.



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).

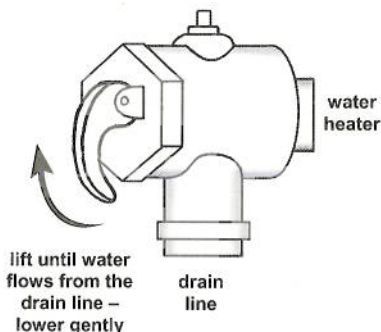
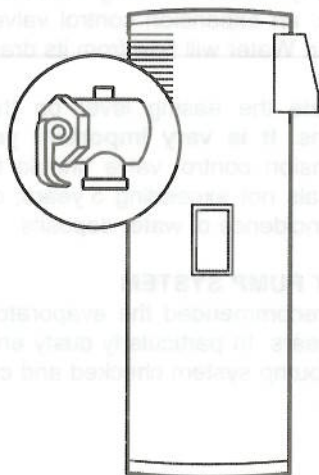
WARNING: Never block the outlet of this valve or its drain line for any reason.

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, or under certain circumstances, exploding.

If water does not flow freely from the drain line when the lever is lifted, then the water heater should be checked by the 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 26).



REGULAR CARE

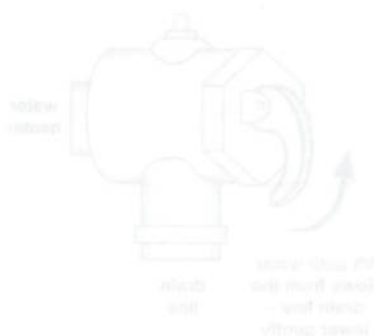
EXPANSION CONTROL VALVE

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.

HEAT PUMP SYSTEM

It is recommended the evaporator and refrigeration system is checked every five years. In particularly dusty environments, it may be necessary to have the heat pump system checked and cleaned of dust and residue on a more regular basis.



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 marked "HOT WATER" or "WATER HEATER" at the switchboard and the isolating switch (if one is installed) at the water heater and ensure they are turned on.

Check the fuse marked "HOT WATER" or "WATER HEATER" at the switchboard.

- **Is a timer installed?**

If a timer has been installed, ensure sufficient time has been allowed to reheat the storage tank.

- **Are you using more hot water than you think?**

Is one outlet (especially the shower) 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 family's hot water usage. As you have installed an energy saving appliance, energy saving must also be practised in the home. Adjust your water usage pattern to take advantage of maximum energy gains. Have your plumber install a flow control valve to each shower outlet to reduce water usage.



- **Thermal Cut Out Activated**

Has the thermal cut out on the compressor activated? Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

- **Temperature pressure relief valve running**

Is the relief valve discharging too much water? (Refer to "Temperature Pressure Relief Valve Running" on page 13).

SAVE A SERVICE CALL

- **Thermostat setting**

Ensure the thermostat setting is appropriate. You may choose to have your electrician adjust the thermostat upwards to gain additional hot water capacity when boosting.

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 guides in the sales literature and on the Rheem website (www.rheem.com.au) suggest average sizes that may be needed.

WATER NOT HOT ENOUGH

You may find that due to heavy hot water usage the water temperature may be lower than normally expected, due to insufficient heating time being allowed. You will need to carefully plan your use of the hot water on such occasions.

A lower stored hot water volume may also be noticed in the morning during the winter months, particularly when there has been heavy hot water usage the previous evening and combined with insufficient heating overnight due to very cold weather. The booster heating unit will provide 120 litres of stored hot water during these periods. Heating of the water will occur as the morning warms up.

Continuously when showering, particularly when the family's hot water usage. As you have installed an energy saving appliance, energy saving must also be practised in the home. Adjust your water usage pattern to take advantage of maximum energy gains. Have your plumber install a flow control valve to each shower outlet to reduce water usage.

• Thermal Cut Out Activated
Has the thermal cut out on the compressor activated? Please your nearest Rheem Service Representative or Accredited Service Agent to arrange for an inspection.

• Temperature pressure relief valve running
Is the relief valve discharging too much water? (Refer to Temperature Pressure Relief Valve Running on page 13)

SAVE A SERVICE CALL

TEMPERATURE PRESSURE RELIEF VALVE RUNNING

- **Normal Operation**

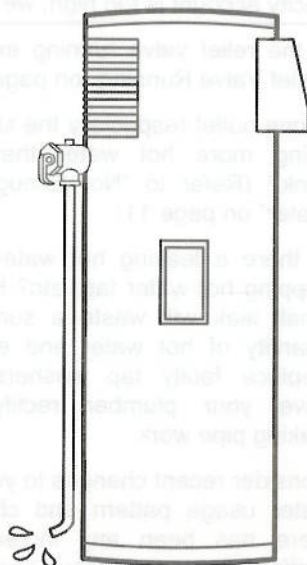
It is normal and desirable this valve allows a small quantity of water to escape during the heating cycle. However, if it discharges more than a bucket full of water in 24 hours, there may be another problem.

- **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 periods (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 the water heater is cold - then stops until water reheats**

The water heater **must** be switched off at the isolating switch or switchboard. Phone your nearest Rheem Service Department or Accredited Service Agent to arrange for an inspection.

EXPANSION CONTROL VALVE RUNNING

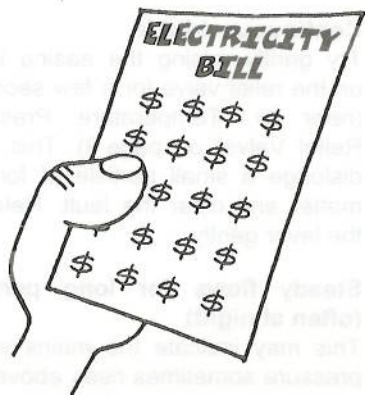
If an expansion control valve is fitted in the cold water line to the water heater (refer to page 19) it may discharge a small quantity of water instead of the temperature pressure relief valve on the water heater. The benefit is that energy is conserved as the discharged water is cooler.

SAVE A SERVICE CALL

HIGH ELECTRICITY BILLS

With the installation of your new air sourced heat pump water heater, maximum electrical energy savings can be achieved. Should you at any time, feel your electricity 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).
- Is one outlet (especially the shower) 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 energy. 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.
- The heat pump water heater operates at its most efficient at temperatures greater than 10°C. Prolonged periods where the temperature is below 7°C will decrease the efficiency of the system and increase running costs.



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

INSTALLATION

**THIS WATER HEATER IS FOR OUTDOOR INSTALLATION ONLY.
THIS WATER HEATER IS NOT SUITABLE FOR POOL HEATING.**

Take care when handling the top of the water heater. The cover over the system controls needs to be handled gently so as not to cause damage.

Do not tilt the water heater more than 45° from the vertical. This will unsettle the refrigerant gas and compressor lubricating oil. If the water heater has been tilted more than 45° from the vertical during handling, it will need one hour to settle before the power to the water heater can be switched on, otherwise damage to the compressor may result.

WATER HEATER LOCATION

The water heater is suitable for outdoor installation only. The water heater should be installed close to the most frequently used outlet and its position chosen with safety and service in mind. Make sure people (particularly children) will not accidentally touch the air inlet and discharge cover and that they are 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 top and front covers, system controls and thermostat 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 anodes can be inspected or replaced. Remember you may have to remove the entire water heater later for servicing.



A clearance of 200 mm is required from both the air intake grill and the air discharge cover to any wall or obstruction.

It is advisable to install the water heater away from bedroom or living room windows as the system controls can generate a noise of up to 59 dbA (at 1.5 metres from the water heater) whilst they are operating.

INSTALLATION

The installation must comply with the requirements of AS/NZS 3500.4, AS/NZS 3000 and all local codes and regulatory authority requirements. In New Zealand, the installation must conform with the New Zealand Building Code. It is recommended the heat pump water heater be installed at ground or floor level and must stand vertically upright.

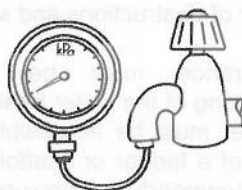
The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or aerosol propellants are released. Remember the air may be safe to breathe, but the chemicals may attack the materials used in the heat pump system.

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 diagram on page 19).

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

* Expansion control valve not supplied with the 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 both the highest hot water outlet. Take care 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 such as the Rheem Temp-Set, be fitted between the water heater and the hot water outlets in any ablution area such as a bathroom or ensuite, 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 area (refer to diagram on page 19).

INSTALLATION

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.

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 26). 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 |

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.

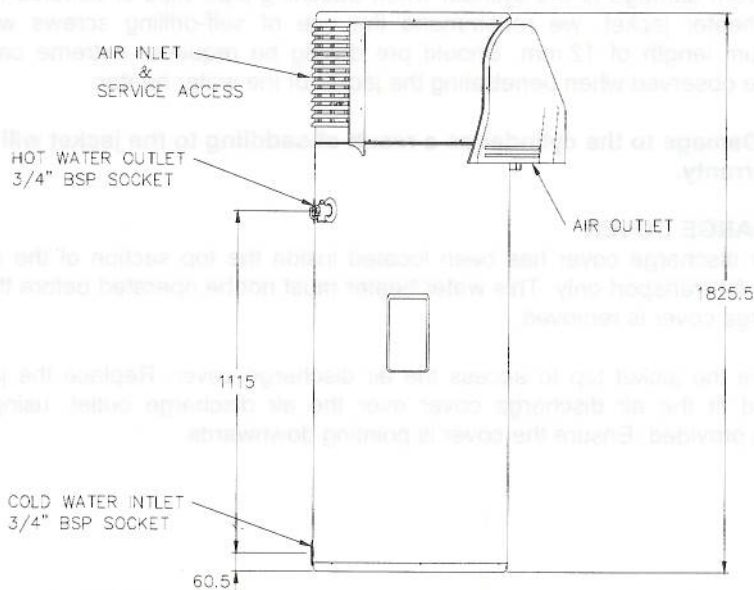
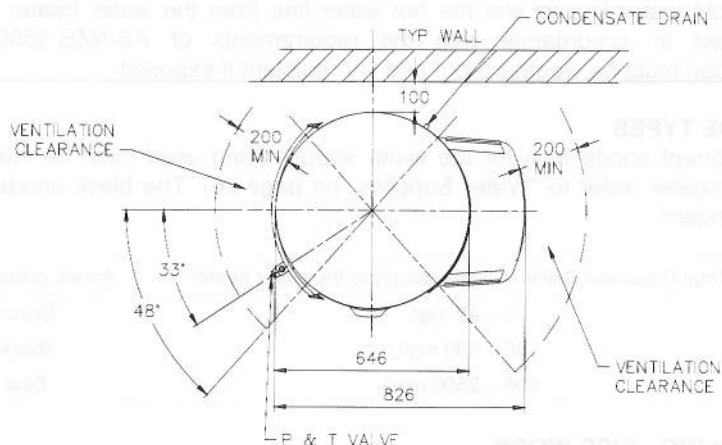
DISCHARGE COVER

The air discharge cover has been located inside the top section of the water heater, for transport only. This water heater must not be operated before the air discharge cover is removed.

Remove the jacket top to access the air discharge cover. Replace the jacket top and fit the air discharge cover over the air discharge outlet, using the screws provided. Ensure the cover is pointing downwards.

INSTALLATION

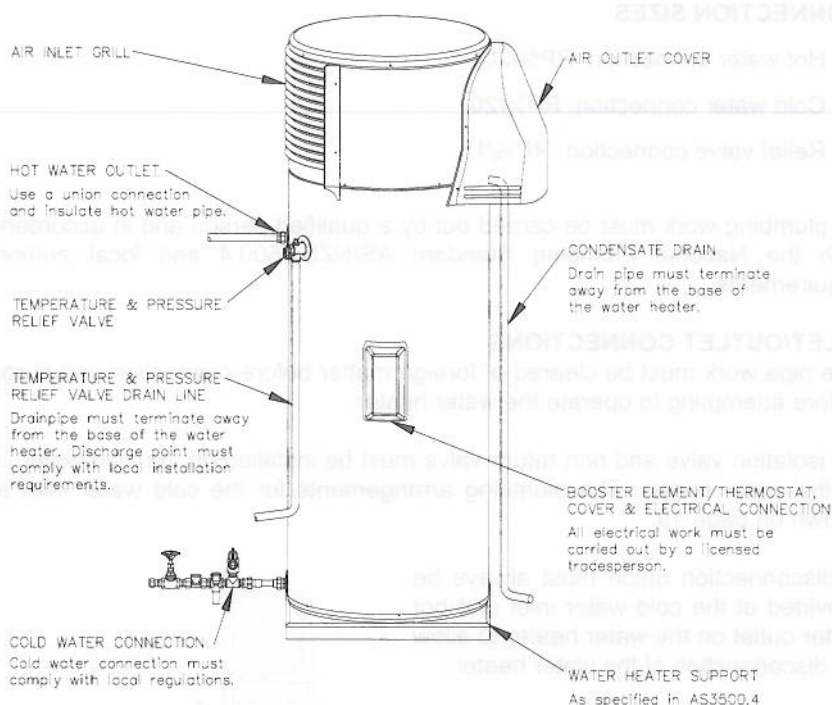
DIMENSIONS AND TECHNICAL DATA



| | |
|-------------------------------------|-----------------|
| Total rated power input | 3600 watts |
| Rated heat pump power input | 700 –1200 watts |
| Booster element rating | 3600 watts |
| Refrigerant type | R22 |
| Refrigerant circuit pressure | 3000 kPa |

| | |
|-------------------------|------------|
| Storage Capacity | 275 litres |
| Boost capacity | 120 litres |
| Mass Empty | 145 kg |
| Mass Full | 420 kg |

INSTALLATION



TYPICAL INSTALLATION – OUTDOOR LOCATION

COLD WATER INLET

See cold water connection detail as applicable to your local requirements.

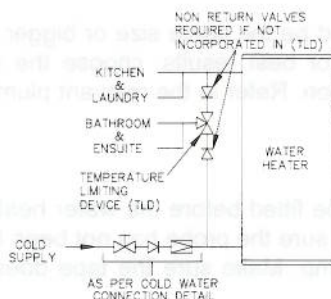
HOT WATER OUTLET

Provide a union for disconnection. Insulate pipe.

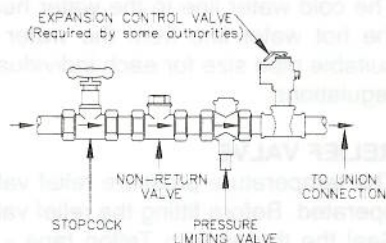
RELIEF VALVE

A copper drain line must be fitted (refer to page 21).

SCHEMATIC OF 2 TEMPERATURE ZONES USING A TEMPERATURE LIMITING DEVICE



COLD WATER CONNECTION DETAIL



CONNECTIONS – PLUMBING

CONNECTION SIZES

- Hot water connection: $RP\frac{3}{4}/20$.
- Cold water connection: $RP\frac{3}{4}/20$.
- Relief valve connection: $RP\frac{1}{2}/15$.

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.

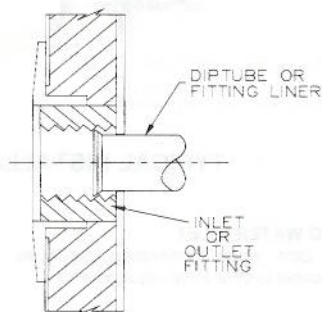
INLET/OUTLET CONNECTIONS

The pipe work must be cleared of foreign matter before connection and purged before attempting to operate the water heater.

An isolation valve and non return valve must be installed on the cold water line to the water heater. The plumbing arrangements for the cold water inlet are shown on page 19.

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.



PIPE SIZES

The cold water line to the water heater should be the same size or bigger than the hot water line from the water heater. For best results, choose the most suitable pipe size for each individual application. Refer to the relevant plumbing regulations.

RELIEF VALVE

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.

CONNECTIONS – PLUMBING

Screw the valve into the correct opening (refer to the installation diagram on page 19) leaving the valve outlet pointing downwards. Do not use a wrench on the valve body - use the spanner flats provided.

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 DN15 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.

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 26). However, an ECV may be needed in a corrosive water area where there are sufficient quantities of silica dissolved in the water. A copper drain line must be run separately from the drain of the relief valve.

CONDENSATE DRAIN

A drain line must be fitted to the condensate drain to carry the discharge clear of the water heater. The pipe work from condensate 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. The outlet of the drain line must be in such a position that flow out of the pipe can be easily seen - but arranged so water discharge will not cause damage or nuisance.

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 must be directly connected to a 240 V AC 50 Hz mains power supply. The water heater must be on its own circuit with an isolating switch installed at the switchboard. A secondary isolating switch may be installed within reach of the water heater.

A flexible 20 mm 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. Connect the power supply wires directly to the terminal block and earth tab connection, ensuring there are no excess wire loops inside the front cover.

BOOSTER HEATING UNIT AND THERMOSTAT SETTING

A booster heating unit and thermostat are factory fitted and will be automatically activated during periods when ambient temperatures are below 10°C. The heating unit and thermostat do not require fitting during installation.

The thermostat is adjustable from 60°C to 70°C. The thermostat is adjusted by turning the adjuster counter clockwise to decrease the temperature setting and clockwise to increase the temperature setting. Only adjust the temperature setting when the isolating switch is switched off at the switchboard.

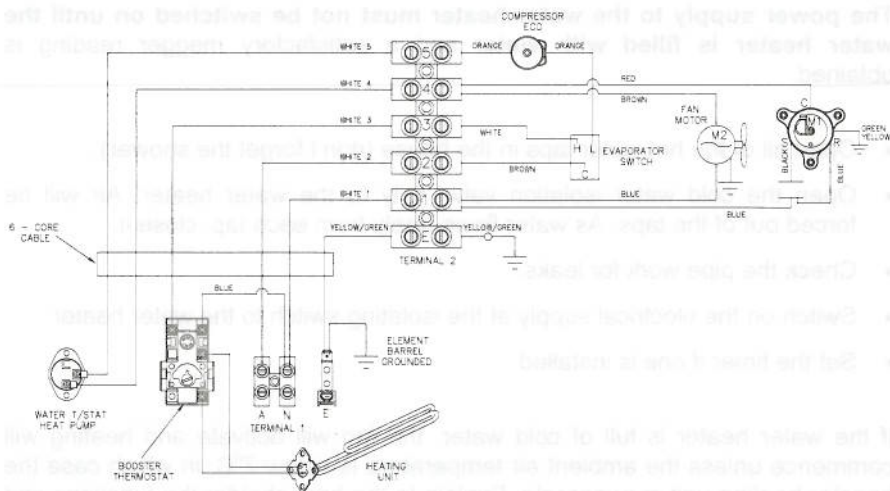
For reasons of safety and economy, we advise the thermostat be set at the lowest temperature that will provide sufficient hot water during periods when boosting is required. Rheem recommends the thermostat is set at 60°C to maximise solar contribution. Discuss the thermostat setting requirements with the householder.

TIMER

A timer can be added to the circuit at a suitable location if the customer requires the water heater does not operate between certain hours, such as during the night. The timer must be weatherproof if it is installed outdoors.

Note: a timer will affect the operating times of both the refrigeration circuit and the booster heating unit.

CONNECTIONS – ELECTRICAL



Internal Wiring Diagram

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 taps in the house (don't forget the shower).
- Open the cold water isolation valve fully to the water heater. Air will be forced out of the taps. As water flows freely from each tap, close it.
- Check the pipe work for leaks.
- Switch on the electrical supply at the isolating switch to the water heater.
- Set the timer if one is installed.

If the water heater is full of cold water, the fan will activate and heating will commence unless the ambient air temperature is below 7°C, in which case the booster heating unit may operate. Explain to the householder the functions and operation of the heat pump water heater.

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 are vacant, then:

- Close the cold water isolation valve at the inlet to the water heater.
- Switch off the electrical supply at the isolating switch to the water heater.
- Do not switch on again for at least 20 minutes or the compressor may be damaged

DRAINING THE WATER HEATER

To drain the water heater:

- Shut down the water heater (refer to "To Turn Off The Water Heater" on page 24).
- 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.
- Undo the union at the cold water inlet and attach a hose. Let the other end of the hose go to a drain.
- Operate the relief valve again. This will let air into the water heater and allow the water to drain through the hose.

WATER SUPPLIES

Your water heater is manufactured to suit the water conditions of most Australian 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

By using the correct colour coded anode this water heater can be used in areas where the total dissolved solids (TDS) content in the water is up to 2500 mg/L. In areas where the 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 authorised 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 spurring 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. Where the saturation index is less than -1.0, a corrosion resistant heating unit should be used.

In a scaling water supply calcium carbonate is deposited out of the water onto any hot metallic surface. When water has a saturation index greater than +0.40 an expansion control valve* must be fitted on the cold water line after the non-return valve. Where the saturation index exceeds +0.80, a low watts density heating unit should be used.

Contact your nearest Rheem Service Department or Accredited Service Agent if a replacement heating unit is required.

* Refer to the cold water connection detail on page 19.

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 October 2003.
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. 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.
6. 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 ABOVE 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 harmful 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 | Years 2 & 3 | New water heater, free of charge, including labour.** |
| | Loline | Years 4 & 5 | New water heater, free of charge, with installation and labour costs being the responsibility of the owner. |
| | HiLine | Years 2 to 5 | New water heater, free of charge, including labour.** |
| | Heat Pump | 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" | Stellar | Years 2 to 5 | New water heater, free of charge, with installation and labour costs being the responsibility of the owner. |
| | Optima | Years 2 to 5 | New water heater, free of charge, with installation and labour costs being the responsibility of the owner. |
| | 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 item 4 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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or refer local Yellow Pages

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