



OWNER'S MANUAL & INSTALLATION GUIDE

250L - 400L Electric Storage Water Heaters

MODELS T2F136S | T3F136S | T4F136S

Installation Details

Owner's Information

Warranty

For advice, repairs and service
call: 1800 080 055



Carefully remove all packaging and transit protection from the heater before installation. Dispose of the packaging responsibly using re-cycling facilities where they exist.

Specifications and materials may change without notice.

Effective for all Thermann electric storage water heaters manufactured and sold after 1st May 2013.



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Installation Details

Installation Requirements

This water heater must be installed by a licensed tradesperson, and in accordance with:

- AS/NZS3500.4 “National Plumbing and Drainage Code Hot Water Supply Systems – Acceptable Solutions”.
- AS/NZS3000.
- Local authority regulations.
- Outside Australia and New Zealand, please refer to local plumbing and building codes and regulations.
- 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.

Water Supply Pressure

This water heater is designed for direct connection to water supply pressures of:

250 Litre model – 800kPa

315 Litre model – 800kPa

400 Litre model – 800kPa

Where the mains pressure can exceed or fluctuate beyond the pressure shown above, a pressure limiting device (complying with AS1357) must be fitted in the cold water inlet supply. This device must be installed after the isolating valve and set below the pressure shown above. Note that during periods of lower demand, water pressure may increase.

Caution: This water heater delivers hot water at temperatures exceeding 50°C. Refer to AS/NZS3500 and local regulations regarding the need for additional hot water delivery temperature control.

Pool Heating

This water heater must **not** be used for pool heating.

Installation Details

Location

The water heater should be located as close as possible to the most frequently used hot water outlet.

Adequate access must be made for service to the element(s), thermostat, relief valve and anode. Ensure that the data plate is clearly visible.

Note: All models are equipped with a sacrificial anode, accessible through the top cover. Allow 50% of the height of the water heater for clearance above to replace the anode.

We recommend a plinth be installed under the water heater where the water heater is subjected to wet conditions.

A properly drained overflow tray must be used where property damage could occur from water spillage. (See AS/NZS3500.4 for further details.)

When installing this water heater in a roof area as a mains pressure unit, refer to local regulations.

Note: The warranty does not cover damage due to leakage of the water heater.

Plumbing Connections

Pressure & Temperature Relief Valve

The Pressure & Temperature Relief Valve is supplied loose with the water heater. The valve rating is:

250L = 1000 kPa

315L = 1000 kPa

400L = 1000 kPa

The PTR valve must be installed directly into the top socket marked "RELIEF VALVE". The drain line from this valve must run in a continuously downward direction in a frost-free ambient position with the discharge end left open to atmosphere permanently.

The PTR Valve is not intended to enable connection of the water heater to supplementary energy sources such as solar panels or slow combustion stoves (refer AS/NZS 3500.4 for guidance on these types of installations).

Open the PTR Valve for approximately 10 seconds by lifting the lever on the valve to ensure water is relieved to waste through the relief drain pipe. Lower lever gently and check that it closes correctly.

The PTR Valve must not be tampered with or removed. The water heater must not be operated unless this valve is fitted and in working order.

The PTR Valve should be checked for adequate performance or replaced at intervals not exceeding 5 years, or less in areas where local regulations apply.

Important: The PTR Valve and its drain outlet pipe must not be sealed or blocked. It is normal for the PTR valve to leak a small amount of water during heating cycles.

Danger

Failure to operate the relief valve easing lever at least once every six (6) months may result in a problem with the water heater and in some cases the tank may explode.

Warning: A separate drain line must be run for this relief valve. It is not permitted to couple drain lines from relief valves into a single common drain line.

Cold Water Connection

An approved isolating valve, non return valve, line strainer (optional but recommended), and union must be fitted between the supply main and the RP³/₄/20 socket marked INLET at the bottom of the water heater. All fittings must be approved by the relevant Authority. See the diagram on page 4 for details.

Note for S.A. and W.A.: It is a state requirement that a pressure relief valve be fitted on the cold water supply line between the non return valve and the water heater. See the diagram on page 4 for details.

Plumbing Connections

Hot Water Connection

The hot water pipe should be connected to the RP $\frac{3}{4}$ /20 socket marked OUTLET at the top of the unit. For the most economical operation of the water heater, it is recommended that all hot water lines are insulated. Please check local regulations regarding the use of hot water supply pipework that are not made of copper.

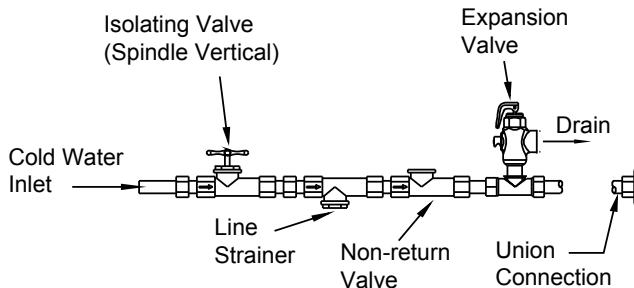
Insulation of Pipes

All hot water pipes must be insulated with UV stabilized insulation suitable for solar working temperatures, e.g. Armaflex Insulation.

Temperature Protection

Water heaters can produce very hot water. To reduce the risk of scald injury, it is mandatory under the requirements of Australian Standard AS/NZS3500.4 that a suitably approved temperature control device be fitted to the hot water supply to outlets used primarily for personal hygiene. This valve should be checked at regular intervals to ensure its operation and settings remain correct.

Inlet Connections



Note: a combined isolating valve/non-return valve/line strainer may be used. Expansion valve only required where local regulations demand.

Electrical Connection

This water heater is designed for single phase 240V A.C supply only. The electrical connection must comply with Local Supply Authority Regulations and AS/NZS3000.

For models pre-wired with a flexible lead, if the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person in order to avoid hazard.

For models not pre-wired with a flexible lead, connections are made at the terminal block inside the water heater, and a means for disconnection must be incorporated in accordance with the wiring rules.

Entry to the connection area is through the hole beneath the element cover, designed to accept a 20mm conduit. The element cover may be removed by undoing the two screws on the cover and sliding the cover downwards to disengage the top edge. Ensure that the conduit entry is well sealed to achieve correct weatherproofing.

Note: This water heater is fitted with a thermostat and over-temperature energy cut-out. Under no circumstances should the water heater be operated without both these devices being in the circuit. Replacement must be carried out only by a qualified electrician or the manufacturer.

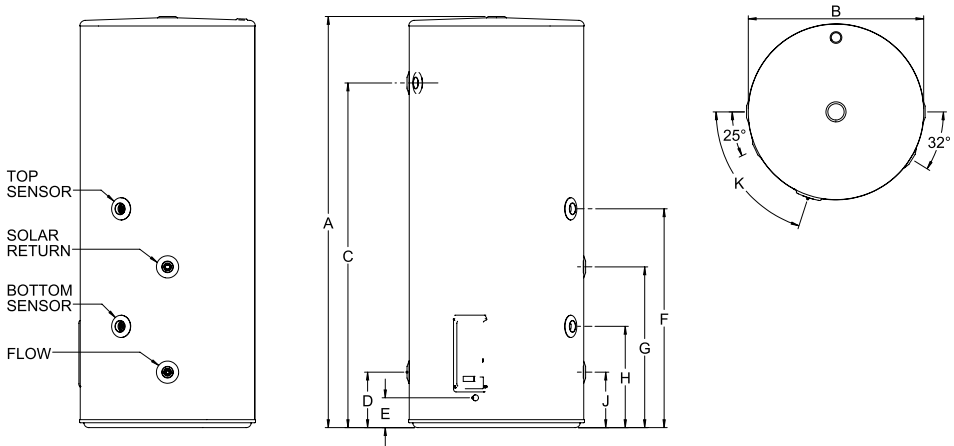
Danger: The operation of the thermal cut-out indicates a possibly dangerous situation. Do NOT reset the thermal cutout until the water heater has been serviced by a qualified person.

Caution: Water heater must be filled with water before turning on the electricity supply.

Electrician: Press the reset button on thermostat to ensure over-temperature cut-out is set.

When supply wiring has been connected, supply wires must be kept lower than the terminal block.

Specifications



Nominal Dimensions			
Tank Size	250L	315L	400L
Total Height (A)	1444	1765	1704
Total Diameter (B)	617	617	705
Outlet Height (C)	1211	1530	1445
Inlet Height (D)	195	195	219
Electrical Entry (E)	125	125	150
Top Sensor (F)	769	865	832
Solar Return (G)	565	555	545
Bottom Sensor (H)	356	350	350
Flow (J)	195	195	219
Element Angle (K)	72°	72°	72°

Specifications			
Tank Size	250L	315L	400L
Storage Capacity (L)	258	322	415
Hot Water Delivery (L)	250	315	400
Net Weight Empty (kg)	72	93	115
Element(s) Sizes (kW)	3.6	3.6	3.6

Relief Valve:

Pressure (kPa)	1000	1000	1000
Temperature (°C)	99	99	99
Power Rating (kW)	10kW	10kW	10kW

Operating Instructions

Safety

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children and animals should be supervised to ensure that they do not interfere with the appliance.

Filling The Water Heater

Open all hot water taps. Open isolating valve at the cold water inlet slowly and allow water heater to fill until water flows through the system. Close each hot water tap after the air is expelled from its line. As noted previously power is not to be turned on until the water heater is filled with water.

Water Quality

Your Thermann water heater has been manufactured to suit water conditions of most Australian metropolitan supplies. Please note that harsh water supplies can have a detrimental effect on the water heater and its life expectancy. If you are unsure about your water quality you can obtain information from your local water supply authority.

The water heater is designed for use in areas where the Total Dissolved Solids (TDS) content of the water supply is less than 2500 mg/L. In areas where the TDS exceeds 600mg/L

it is possible that the magnesium alloy anode (supplied in the heater) may become over-reactive. To alleviate this, the magnesium alloy anode should be replaced with an aluminium alloy anode, available from your local Reece branch.

Water can also be very corrosive, the measure of this is the saturation index. If the water saturation index is greater than 0.40, an expansion control valve should be fitted. If the index is greater than 0.80, the water heater installed should be a Hard Water Model. Please consult our Customer Service Department for advice if required.

Caution

If the water heater is left in an operating condition and unused for two weeks or more, a quantity of hydrogen (which is highly flammable) may accumulate in the top of the water cylinder. To dissipate this gas safely it is recommended that a hot tap be turned on for several minutes at a sink, basin or bath, but not a dishwasher, clothes washer or other appliance. During this procedure there must be no smoking, open flame or any other electrical appliance operating nearby. If hydrogen is discharged through the tap it will probably make an unusual sound as with air escaping.

Where the water heater is not installed in accordance with the listed advice, the water heater will not be covered by the Terms of Warranty.

Safety Information

Warning

For safe performance, this water heater is fitted with:

1. Combination Thermostat and over-temperature energy cut-out.
2. Combination Pressure & Temperature 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 in working order. Element covers should be removed only by an electrician.

The electrical power supply switch must be turned off and the fuse removed or the circuit breaker isolated at the main electrical supply switchboard before the water heater electrical cover is removed.

Open the PTR Valve for approximately 10 seconds by lifting the lever on the valve to ensure water is relieved to waste through the relief drain pipe. Lower lever gently and check that it closes correctly.

The PTR Valve must not be tampered with or removed. The water heater must not be operated unless this valve is fitted and in working order.

The PTR Valve should be checked for adequate performance or replaced at intervals not exceeding 5 years, or less in areas where local regulations apply.

Important

The PTR Valve and its drain outlet pipe must not be sealed or blocked. It is normal for the PTR valve to leak a small amount of water during heating cycles.

Danger

Failure to operate the relief valve easing lever at least once every six (6) months may result in a problem with the water heater and in some cases the tank may explode.

Service Information

Six Monthly Service (By Owner)

Operate the Pressure & Temperature Relief Valve for approximately 10 seconds by operating the easing lever on the valve to ensure water is relieved to waste through the relief drain pipe. Check to ensure the valve closes correctly.

Five Year Service (By Authorised Personnel Only)

The five yearly service should be carried out by a licensed tradesperson. It is recommended that this service be carried out by your local agent.

The service should include the following:

- Replace the Pressure & Temperature Relief Valve.
- Replace the anode. (in areas of harsh or adverse water conditions it is recommended that you carry out a more frequent check of your anode's condition, refer Operating Instructions "Water Quality")
- Flush the water heater by doing the following:
 - i. Turn off the power.
 - ii. Turn off the cold water supply to the water heater at the isolating valve.
 - iii. Gently operate the easing lever on the Pressure & Temperature Relief Valve to release the pressure in the water heater.
 - iv. Disconnect the cold water inlet union to the heater and attach a drain hose.
 - v. Gently operate the Pressure & Temperature Relief Valve to let air into the heater and allow water to escape through the hose.
 - vi. To flush the heater, carry out steps (i) to (iv) above. Disconnect the hot water inlet union and attach a water supply hose to the heater. Turn on the water supply.
 - vii. Flush the heater until clear water appears. Reconnect all fittings, fill the heater and restore the electricity supply.

Troubleshooting

What Should I Check Before Making A Service Call?

If there is not enough hot water, it is recommended that the following points be considered before making a service call. If after checking the following points the problem has not been identified, please contact 1300 412 612.

No Hot Water

- Is the Pressure & Temperature Relief Valve discharging too much water?
- Do you have the correct size water heater for your requirements? Sizing details are available from your supplier.
- Is one outlet (such as the shower) using more hot water than you think?
- Carefully review the family's hot water usage and if necessary check the shower flow rates with a bucket, measuring the amount of water used over that period of time. If it is not possible to adjust water usage patterns, an inexpensive flow control valve can easily be fitted to the shower outlet.
- Consider that during night time heating, the time taken to heat the tank can take longer so you may find that the tank has not fully recovered from a period of heavy usage the previous evening.
- Consider that often the hot water usage of showers, washing machines

and dishwashers can be under estimated. Review these appliances to determine if your daily usage is greater than the storage volume of your water heater. For example, if you have a 315 litre storage tank and you are using 450 litres of water it is possible that there will be certain times of the day where there is insufficient hot water. It is also advisable to inspect tap washers etc. for leakage and replace if necessary.

- Is there a leaking hot water pipe or dripping hot water tap? A small leak can waste a large quantity of hot water.
- Replace faulty tap washers and have your plumber rectify any leaking pipe work.

Water Discharge From Pressure & Temperature Relief Valve (PTR)

It is not unusual for a small quantity of water to discharge during the heating of water in your storage tank. The amount of discharge will depend on hot water usage and size of the storage tank. As a guide, it will discharge 3% of the storage capacity of water in the heating period.

Continuous Trickle (PTR)

This is most likely due to a build up of foreign matter. In this case, try gently raising the easing lever on the PTR Valve for a few seconds, then release gently. This may dislodge a small particle of foreign matter and rectify the fault.

Troubleshooting

Steady Flow (PTR)

- More than 20L per day

This may be caused by excessive water supply pressure, a faulty PTR Valve or a faulty thermostat. Turn off the electricity supply and contact Customer Service on 1300 412 612.

High Electricity Bills

- Is the Pressure & Temperature Relief Valve discharging too much water?
- Is one outlet (such as the shower) using more hot water than you think? See "No Hot Water".
- Is there a leaking hot water pipe or dripping hot water tap? A small leak can waste a large quantity of hot water.
- Replace faulty tap washers and have your plumber rectify any leaking pipework.

Warranty

Thermann Hot Water Unit

Manufactured by GWA Group Limited ("GWA")

Terms of Warranty and Replacement Guarantee

All Thermann water heaters manufactured and sold after 31 December 2011 are backed by a comprehensive one (1) year full parts and labour warranty (conditions apply – see below).

Furthermore, the Thermann tank includes a guarantee to replace your hot water unit if the inner cylinder fails within seven (7) years (conditions apply – see below).

The terms of the Warranty and replacement guarantee are set out below.

1 Year Comprehensive Warranty

Your hot water system and its components ("Unit") are covered by 1 year (parts and labour) warranty against defective factory materials or workmanship.

This warranty period commences from the date of installation of the Unit providing you have proof of this installation date. Where the date of completion of installation is not known or cannot be proven, then this warranty will commence one (1) month after the date of manufacture (refer to the data label on the unit).

Replacement Guarantee

If an inner cylinder fails on a Thermann

hot water unit within a further six (6) years after the end of the initial one (1) year warranty period, GWA will provide a free replacement hot water unit at the nearest approved GWA agent or GWA office to the owner's home. Under this replacement guarantee, the transport, installation and labour costs of delivering the replacement hot water unit and removing and replacing the existing hot water unit will be the responsibility of the owner of the existing hot water unit.

Conditions of Warranty and Replacement Guarantee

The benefits provided to you by the warranty and replacement guarantee (collectively "Warranty") are in addition to the guarantees and other rights and remedies available to you under the Australian Consumer Law ("ACL").

If the Unit fails to conform to this Warranty during the applicable period, GWA will replace any failed component or where necessary, in the absolute discretion of GWA, replace the Unit free of charge including reasonable labour costs incurred in normal business working hours.

This Warranty only applies to defects which have arisen solely from faulty materials or workmanship in the Unit and does not apply to other defects which may have arisen as a result of, without limitation, the following: accidental damage, abuse, misuse,

Warranty

maltreatment, abnormal stress or strain, harsh or adverse water conditions including excessive water pressure or temperature, neglect of any kind or otherwise as a result of any use of the Unit contrary to the product manual or other instructions provided with this water heater. Alterations or repair of the Unit other than by an accredited and licensed service agent or technician are not covered. Attachment of accessories or use of non genuine replacement parts other than those manufactured or approved by GWA are not covered by this Warranty.

This Warranty applies only to the Unit and does not cover any ancillary plumbing or electrical parts supplied by the installer such as pressure limiting valve, tempering valve, line strainer, stop cocks, non-return valve, electrical switches, pumps or fuses, or faulty installation.

The Unit must be installed by a licensed plumber in accordance with information set out in the Owner's Manual and/or Installer's Guide supplied with the Unit and/or any relevant statutory requirements.

In addition to this Warranty, certain legislation (including the ACL) may give you rights which cannot be excluded, restricted or modified. This Warranty must be read subject to such legislation and nothing in this Warranty has the effect of excluding, restricting or modifying those rights.

If GWA fails to meet a guarantee under

the ACL, your remedy for such failure may be limited to any one or more of the following:

- replacement of the Unit;
- repair of the Unit;
- refunding the cost of the Unit;
- payment of reasonable costs of having the Unit repaired;
- payment in respect of the reduced value of the Unit.

Any defective part of the Unit must be returned to the point of sale before replacement can be considered under the terms of this Warranty. If the costs of returning any defective parts are unreasonable, please contact GWA on 1300 412 612 so that we can arrange a collection if appropriate.

Warranty claims can be made at the point of sale or by posting a warranty claim to GWA (contact details listed below) within one (1) month of the appearance of a defect. Warranty claims under this extended warranty must include the following details:

- Date of Purchase;
- Location of Purchase;
- Proof of Purchase;
- Date of Installation;
- Contact Details
- Product Serial Number

Business Address

GWA Group Limited
Level 1, 7-9 Irvine Place
Bella Vista, NSW 2151, Australia

Telephone: 1300 412 612

Warranty

Note: If the Unit is located in a position that does not comply with the installation instructions or relevant statutory requirements, then this Warranty does not cover major dismantling or removal of cupboards, doors, walls or special equipment and/or excessive labour, at the determination of GWA, to make the Unit accessible for repair or replacement.

As required by legislation, including under the ACL, any claims for damage to furniture, carpets, walls, foundations or any other consequential loss either directly or indirectly due to defects of any kind in a Unit will only be met by GWA where the damage could be considered reasonably foreseeable.

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

Solar Upgrade

Your Thermann tank is solar upgradable.

Although the tank currently operates as a standard electric storage water heater, a solar upgrade kit can be purchased to convert the water heater to an electric boosted solar water heater.

This will significantly reduce the amount of electricity required to heat the water.

Note: Due to the additional boosting solar power source the standard thermostat/ECO module must also be replaced with a suitable type. ie. ST1301133. This will be available as part of the upgrade kit.

To find out more about upgrading to Solar, contact your local Reece branch.



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For advice, repairs and service,
call: **1800 080 055**

Serial Number