

THERMANN™

INSTALLER'S MANUAL

Electric Storage Water Heaters

Models

80THMB136 | 125THMB118 | 125THMB136
160THMB124 | 160THMB136 | 250THMB136
315THMB136 | 400THMB136

Note - an 'H' at the end of the model number indicates that the water heater has been pre-fitted with a hard-water anode (not available in all models).



Specifications and materials may change without notice.
Effective for all Thermann 80L to 400L Electric Storage Water Heaters
manufactured and sold after 1st October 2016.

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INSTALLATION REQUIREMENTS

General:

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

- AS/NZS 3500.4 Plumbing and Drainage - Heated Water Services.
- Clause G12 of the NZ Building Code (in New Zealand).
- AS/NZS 3000 Electrical Installations (known as the Australian / New Zealand Wiring Rules).
- Local authority regulations.
- Outside Australia and New Zealand, please refer to local plumbing and building codes and regulations.

Failure to comply with these requirements may affect the warranty.

Note for Victoria:

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

Only a licensed person will provide a compliance certificate, showing that the work complies with all the relevant Standards. Only a licensed person will have insurance protecting their workmanship.

Pool Heating:

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

Location:

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

Ensure the compliance plate and associated warnings are clearly visible. The water heater must be accessible without the use of a ladder or scaffold. Adequate clearance must be available for service to the element, thermostat, relief valve and anode. All models are equipped with a sacrificial anode, allow half of the height of the water heater to provide access through the top cover.

Electric storage water heaters may be installed indoors. A properly drained safe tray must be installed where property damage could occur from water spillage. Refer to AS/NZS 3500.4 for further information.

Note - the warranty will not cover damage due to leakage of the water heater if a properly drained safe tray has not been installed.

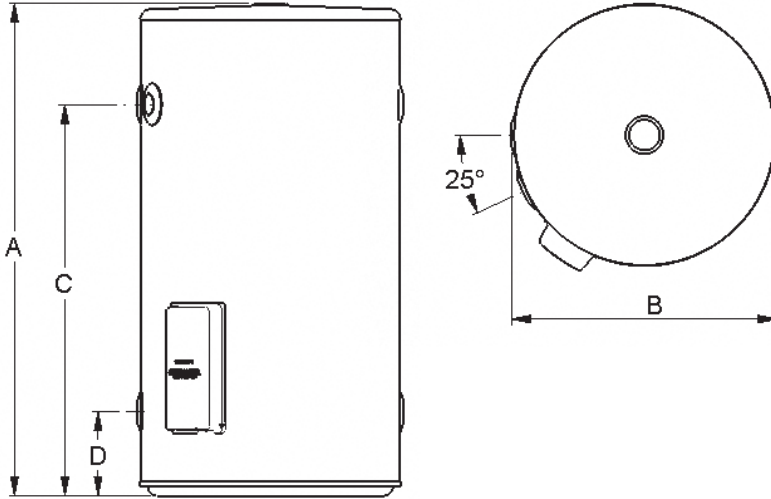
Refer to local regulations before installing the water heater in a roof space.

Water Heater Support:

The water heater must be installed on a flat, solid supporting surface. The pipework must not be used to support the water heater.

Where the water heater is subjected to wet conditions, a plinth should be installed under the water heater.

TECHNICAL DATA



MODEL		80L	125L	160L	250L	315L	400L
Specifications:							
Storage Capacity	Litres	88	130	161	259	321	415
Hot Water Delivery	Litres	80	125	160	250	315	400
Net Weight Empty	kg	41	51	59	72	93	115
Element Size	kW	3.6	1.8/3.6	2.4/3.6	3.6	3.6	3.6
Relief Valve Pressure	kPa	1,000	1,000	1,000	1,000	1,000	1,000
Relief Valve Temperature	°C	99	99	99	99	99	99
Relief Valve Power Rating	kW	10	10	10	10	10	10
Nominal Dimensions:							
Total Height (A)	mm	925	1090	1315	1445	1765	1705
Diameter (B)	mm	490	530	530	620	620	705
Outlet Height (C)	mm	735	865	1095	1210	1530	1445
Inlet Height (D)	mm	160	190	190	195	195	220

PLUMBING CONNECTIONS

Relief Valve:

The Pressure & Temperature Relief (PTR) Valve is supplied inside the electrical cover of the water heater. Instructions on how to remove the electrical cover can be found on page 7. Discard the clear plastic packaging containing the PTR Valve and brass plugs.

The PTR Valve rating is 1,000 kPa.

The PTR Valve rating is also shown on the compliance plate. The PTR Valve must be installed directly into the RP $\frac{1}{2}$ "(DN15) socket marked "RELIEF VALVE" at the top of the water heater. Ensure that a sealing material is applied to the PTR Valve to prevent water leaks.

The drain line from the PTR Valve must be made of copper and run in accordance with the requirements of AS/NZS 3500.4. It must be installed in a continuously downward direction in a frost free environment.

The PTR Valve and its drain line must not be sealed or blocked. Generally a separate drain line must be run for the valve although it may be joined with the drain line from the expansion control valve under certain circumstances.

Care must be taken when attaching pipe saddles to the water heater. Self-drilling screws no longer than 12 mm are recommended.

It is normal for the valve to leak a small amount of water during heating cycles.

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 to AS/NZS 3500.4 for guidance on these types of installations.

Hot Water Connection:

The hot water pipe is to be connected to either of the RP $\frac{3}{4}$ "(DN20) sockets marked "OUTLET" at the top of the water heater.

The unused socket marked "OUTLET" is to be plugged with one of the brass plugs supplied inside the electrical cover of the water heater. Ensure that a sealing material is applied to the brass plug to prevent water leaks.

It is recommended that all hot water pipes are insulated. Hot water pipes installed outdoors should be insulated with UV stabilised insulation.

Plastic pipes or fittings shall not be used within 1 metre of the outlet although they may be used downstream of a temperature control valve. Refer to AS/NZS 3500.4 for further details.

Temperature Protection:

Water heaters can produce very hot water. To reduce the risk of scald injury, it is mandatory under the requirements of AS/NZS 3500.4 that an approved temperature control device is fitted to the hot water supply to outlets used primarily for personal hygiene. This device should be checked at regular intervals to ensure its operation and settings remain correct.

PLUMBING CONNECTIONS

Water Supply:

This water heater has been manufactured to suit the water conditions of most Australian metropolitan supplies.

Please note certain water supplies can have a detrimental effect on the water heater and its life expectancy. If you are unsure about the water supply you can obtain information from the 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. The Tank Failure Warranty (see Owner's Guide) does not apply in areas where the TDS exceeds 2500 mg/L.

In areas where the TDS exceeds 600 mg/L, it is possible the magnesium alloy anode (supplied in standard water heaters) may become over-reactive. To alleviate this, a hard water model is recommended, or the magnesium alloy anode should be replaced with an aluminium alloy anode. Aluminium alloy anodes are 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 electrical heating element should be replaced with a low power density Incoloy heating element. Please consult Customer Service on 1300 412 612 for advice if required.

Cold Water Connection:

The water heater is intended to be permanently connected to the water supply main, and not connected by a hose-set.

An approved isolating valve, non-return valve, line strainer (optional but recommended) and union must be fitted between the water supply main and either of the RP $\frac{3}{4}$ " (DN20) sockets marked "INLET" at the bottom of the water heater. See the diagram on page 6 for details.

All fittings must be approved by the relevant Authority. Plastic pipes or fittings shall not be used between the isolating valve and the inlet.

The unused socket marked "INLET" is to be plugged with one of the brass plugs supplied inside the electrical cover of the water heater. Ensure that a sealing material is applied to the brass plug to prevent water leaks.

Water Supply Pressure:

This water heater is designed for direct connection to water supply pressures of up to **800 kPa**.

Where the mains pressure can exceed or fluctuate beyond this pressure, a pressure reducing valve must be fitted in the cold water inlet supply.

Note for New Zealand, South Australia and Western Australia:

It is a requirement in these locations that an expansion control valve be fitted on the cold water supply line between the non-return valve and the water heater.

FILLING AND DRAINING

Filling the Water Heater:

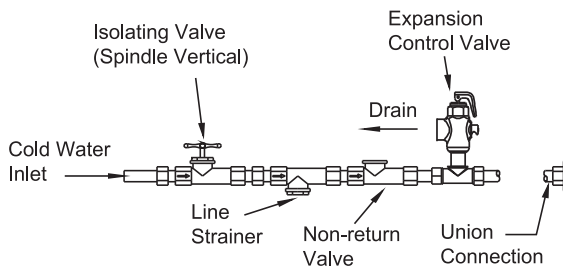
The water heater must be filled with water before turning on the electrical supply.

1. Open all hot water taps.
2. Open the isolating valve at the cold water inlet slowly and allow the water heater to fill until water flows through the system.
3. Close each hot water tap after the air is expelled from its line.
4. Open the Pressure & Temperature Relief Valve for approximately 10 seconds by lifting the easing lever on the valve. Confirm water is relieved to waste through the relief valve drain pipe.
5. Lower the lever gently and check it closes correctly.

Draining the Water Heater:

1. Turn off the electricity supply to the water heater.
2. Turn off the cold water supply to the water heater at the isolating valve.
3. Gently operate the easing lever on the Pressure & Temperature Relief (PTR) Valve to release the pressure in the water heater.
4. Disconnect the cold water inlet union and attach a drain hose to the water heater.
5. Gently operate the easing lever on the PTR Valve to let air into the water heater and allow water to escape through the hose.

Cold Water Connection Diagram:



Note: a combined isolating valve/non-return valve/line strainer may be used.

The expansion control valve is only required where local regulations demand, although it is recommended in areas where the water saturation index is greater than 0.40.

ELECTRICAL CONNECTION

General:

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/NZS 3000.

Connection of the electrical wiring must only be carried out by a licensed tradesperson.

Connections are made at the terminal block under the water heater electrical cover. A means for disconnection must be incorporated in the fixed wiring in accordance with the Wiring Rules.

Removing the Electrical Cover:

Before removing the electrical cover, ensure the electrical power supply is safely isolated.

The electrical cover is removed by undoing the two screws at the bottom of the cover and sliding the cover downwards to disengage the top edge.

Connections:

The cable entry is a pre-punched hole designed to accept a 20 mm conduit gland. It is located adjacent to the terminal block.

To prevent damage to the wiring, the cable entry must be fitted with a gland prior to feeding the wiring through the hole. Ensure the conduit entry is sealed correctly.

Connect the active and neutral wires to the terminal block and the earth wire to the earth tab (located on the right hand side). Excess wire is not to be looped close to the thermostat or tank.

Replacing the Electrical Cover:

1. Press the reset button on the thermostat to ensure the over-temperature energy cut-out is set.
2. Check the Pressure & Temperature Relief Valve, both of the brass plugs, and their clear plastic packaging have been removed from inside the cover.
3. Ensure the terminal block mounting plate is horizontal.
4. Slide the cover up, ensuring the top edge engages under the case.
5. Swing the cover down until the bottom edge contacts the case. Ensure the terminal block mounting plate is below the pins located inside the cover.
6. Refit and tighten both screws in the cover.

Ensure the water heater is filled with water before turning on the electricity supply.

HANDBOOK TO THE CUSTOMER

Owner's Guide:

Ensure the customer receives the Owner's Guide supplied with the water heater.

Victorian Installations:

Ensure you provide the customer with a Compliance Certificate as required by the Victorian Building Act (1993). Also ensure you lodge the Compliance Certificate with the VBA within five days of completing the installation.

Disposal of Packaging:

Dispose of the packaging and other transit protection responsibly using recycling facilities where they exist.

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