

THERMANN™

INSTALLER'S MANUAL

Electric Storage Water Heaters

Models

80THMB136 | 125THMB118 | 125THMB136
N135THMB118 | N135THMB130 | 160THMB124
160THMB136 | 180THMD124 | 180THMD130
180STHM124 | 180STHM130 | 250THMB136
250THMB236 | N250THM124 | N250THM130
N300THM124 | N300THM130 | 315THMB136
315THMB236 | 315THMB248 | 400THMB136
400THMB248

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).



IMPORTANT SAFETY INFORMATION

WARNING – THIS APPLIANCE MAY DELIVER WATER AT HIGH TEMPERATURE. REFER TO THE PLUMBING CODE OF AUSTRALIA (PCA), LOCAL REQUIREMENTS AND INSTALLATION INSTRUCTIONS TO DETERMINE IF ADDITIONAL DELIVERY TEMPERATURE CONTROL IS REQUIRED.

WARNING – FOR CONTINUED SAFETY OF THIS APPLIANCE IT MUST BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

This water heater is 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 water heater by a person responsible for their safety.

Children should be supervised to ensure they do not interfere with the water heater. Ensure animals are supervised so they do not interfere with the water heater.

DO NOT store chemicals or flammable materials, or spray aerosols near this water heater.

DO NOT modify this water heater.

DO NOT operate the water heater with any panels or covers removed.

If the water heater is not used for two weeks or more, a quantity of hydrogen (which is highly flammable) may accumulate inside the water heater tank.

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 a sound similar to air escaping.

RELIEF VALVE:

The Pressure & Temperature Relief (PTR) Valve must be installed directly into the RP $\frac{1}{2}$ " (DN15) socket marked "RELIEF VALVE".

The PTR valve rating is 1,000 kPa and 10 kW on electric water heaters.

The 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 drain line from the PTR Valve must be installed in a continuously downward direction in a frost free environment.

The PTR Valve is to be operated regularly to remove lime deposits and to verify it is not blocked. The drain line fitted to the PTR Valve must be left open to the atmosphere.

DANGER – FAILURE TO OPERATE THE PTR VALVE EASING LEVER AT LEAST ONCE EVERY SIX MONTHS MAY RESULT IN THE WATER HEATER EXPLODING. CONTINUOUS LEAKAGE OF WATER FROM THE VALVE MAY INDICATE A PROBLEM WITH THE WATER HEATER.

IMPORTANT SAFETY INFORMATION

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

It is normal for water to drip from the drain line fitted to the PTR Valve during heating cycles.

Continuous leakage of water from the PTR Valve may indicate a problem with the water heater. This may be caused by excessive water supply pressure, a faulty PTR Valve or a faulty thermostat.

Turn off the water heater and contact Customer Service for advice if required:

- 1300 412 612 (Australia);
- +61 3 8678 4259 or contact your local Reece branch (New Zealand) .

OVER-TEMPERATURE ENERGY CUT-OUT:

The operation of the over-temperature energy cut-out indicates a possibly dangerous situation. Do NOT reset the over-temperature energy cut-out until the water heater has been serviced by a licensed tradesperson.

ELECTRICAL SAFETY:

This water heater is designed for single phase 230 - 240V a.c. supply only. The electrical connection must comply with Local Supply Authority Regulations and AS/NZS 3000 (known as the Wiring Rules). A means for disconnection must be incorporated in the fixed wiring in accordance with the Wiring Rules.

Any electrical covers should be removed only by a licensed tradesperson, and only after the electrical supply to the water heater has been isolated.

When the supply wiring has been connected, ensure the wires are kept lower than the terminal block.

Excess wire is not to be looped close to the thermostat or tank.

In addition to the Pressure & Temperature Relief Valve, electric storage water heaters are fitted with a combination thermostat and over-temperature energy cut-out.

This device must not be tampered with or removed. Replacement of this device must only be carried out by a licensed tradesperson or the manufacturer.

The water heater must not be operated unless this device is fitted and in working order.

COLD WATER CONNECTION:

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

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.

Instructions explaining how the water heater can be drained can be found on page 6.

IMPORTANT SAFETY INFORMATION

INSTALLATION REQUIREMENTS

GENERAL:

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

- In Australia, the Plumbing Code of Australia (PCA);
- In New Zealand, Clause G12 of the New Zealand Building Code (NZBC);
- AS/NZS 3000 Electrical Installations (known as the Australian / New Zealand Wiring Rules); and
- 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.

AS/NZS 3500.4 Plumbing and Drainage – Heated Water Services provides a Deemed-to-Satisfy Solution for the PCA and a Verification Method for Clause G12 of the NZBC. Other methods of compliance are available. Dux recommends that installations conform with AS/NZS 3500.4.

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.

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.

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.

POOL HEATING:

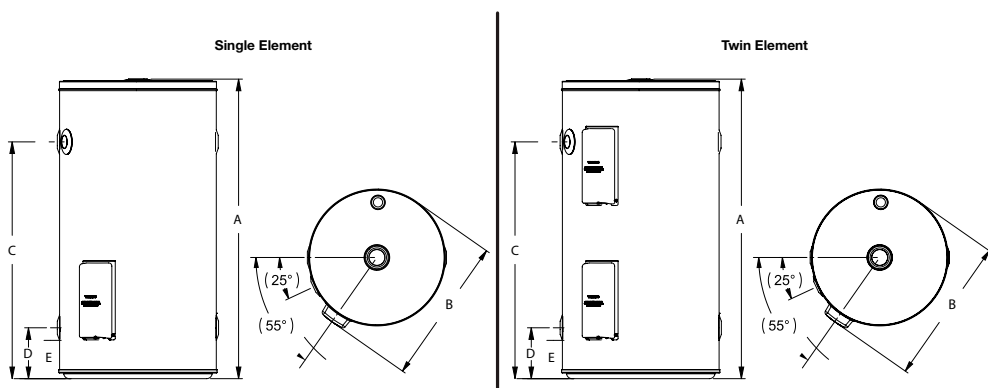
This water heater must **not** be used for pool heating.

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Specifications and materials may change without notice.
Effective for all Thermann 80L to 400L Electric Storage Water Heaters
manufactured and sold after 1st September 2021.

TECHNICAL DATA

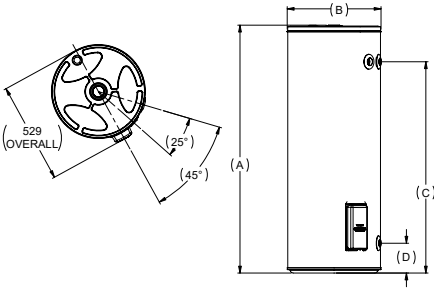


MODEL		80L	125L	160L	250L	315L	400L
Specifications:							
Storage Capacity	Litres	88	130	161	259	321	415
Hot Water Delivery	Litres	80	125	160	250	315	400
Boost Capacity (Twin Element)	Litres	-	-	-	50	50	80
Net Weight Empty	kg	41	51	59	72	93	115
Element Size (Single Element)	kW	3.6	1.8/3.6	2.4/3.6	3.6	3.6	3.6
Element size (Twin Element)	kW	-	-	-	2 x 3.6kW	2 x 3.6kW 2 x 4.8kW	2 x 4.8kW
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
Element Cable Entry* (E)	mm	85	100	100	105	105	130

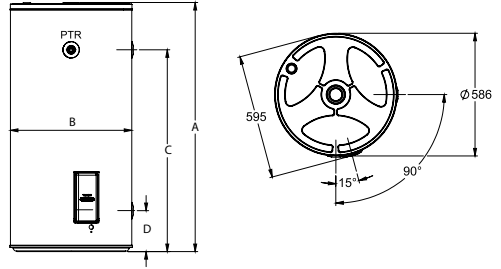
*Electrical entry for twin elements is also only under the bottom element.

TECHNICAL DATA

N135THM & 180THMD



180STHM, N250THM, N300THM



MODEL		N135THM	180THMD
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Specifications:

Storage Capacity	L	131	183.5
Net Weight Empty	kg	50	65
Element(s) Sizes	kW	1.8, 3.0	2.4, 3.0
Relief Valve Pressure	kPa	1000	1000
Relief Valve Temperature	°C	99	99
Relief Valve Power Rating	kW	10	10

Nominal Dimensions:

Total Height (A)	mm	1298	1776
Total Diameter (B)	mm	492	492
Outlet Height (C)	mm	1106	1574
Inlet Height (D)	mm	156	156

MODEL		180STHM	N250THM	N300THM
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Specifications:

Storage Capacity	L	183.5	250	291
Net Weight Empty	kg	60	77	94
Element(s) Sizes	kW	2.4, 3.0	2.4, 3.0	2.4, 3.0
Relief Valve Pressure	kPa	1000	1000	1000
Relief Valve Temperature	°C	99	99	99
Relief Valve Power Rating	kW	10	10	10

Nominal Dimensions:

Total Height (A)	mm	1190	1566	1804
Total Diameter (B)	mm	580	580	580
Outlet Height (C)	mm	964	1342	1580
Inlet Height (D)	mm	196	196	196

PLUMBING CONNECTIONS

Relief Valve:

The Pressure & Temperature Relief (PTR) Valve is supplied either inside the electrical cover of the water heater or in a bag attached to the water heater. Instructions on how to remove the electrical cover can be found on page 7. Discard the 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 a RP $\frac{3}{4}$ "(DN20) socket marked "OUTLET" at the top of the water heater.

On dual handed models, the unused socket marked "OUTLET" is to be plugged with one of the brass plugs supplied. 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.

Water Supply:

This water heater has been manufactured to suit the water conditions of

PLUMBING CONNECTIONS

most Australian and New Zealand 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 for advice if required:

- 1300 412 612 (Australia);
- +61 3 8678 4259 or contact your local Reece branch (New Zealand) .

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 a RP $\frac{3}{4}$ "(DN20) socket marked "INLET" at the bottom of the water heater. See the diagram on page 5 and 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.

On dual handed models, the unused socket marked "INLET" is to be plugged with one of the brass plugs supplied. 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:

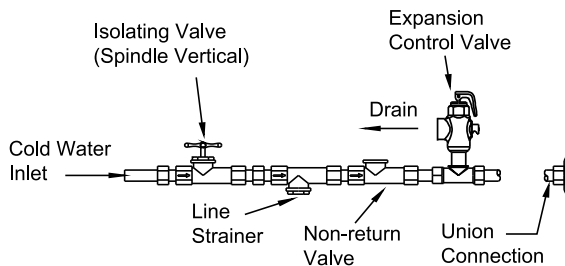
The water heater must be filled with water before turning on the electrical supply.

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 230 - 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.

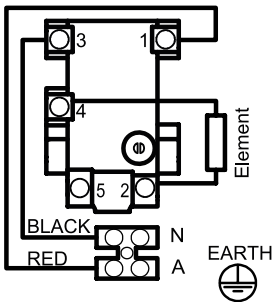
Connect the active and neutral wires to the terminal block and the earth wire to the earth tab (located on the right hand side). Excess wire is not to be looped close to the thermostat or tank.

Replacing the Electrical Cover:

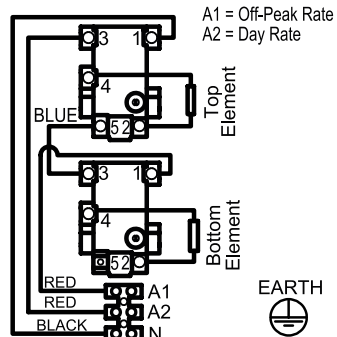
1. Press the reset button on the thermostat to ensure the over-temperature energy cut-out is set.
2. If supplied inside the electrical cover, ensure that the Pressure & Temperature Relief Valve, both of the brass plugs, and their clear plastic packaging have been removed from inside the cover.
3. Slide the cover up, ensuring the top edge engages under the case.
4. 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.
5. Refit and tighten both screws in the cover.

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

SINGLE ELEMENT ELECTRIC



TWIN ELEMENT ELECTRIC



HANDOVER 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.

Packaging:

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



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