

# THERMOWATT

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Technical Instruction Sheet: <https://www.thermowatt.com/en/products/water-heating-elements/immersion-heater-with-stem-thermostat.html>



## Immersion Heaters with unipolar thermostat and safety disconnection INSTALLATION AND OPERATING INSTRUCTIONS

Thank you for purchasing this immersion heater. This immersion heater is approved to **EN 60335-2-73 BEAB**. This unit is guaranteed for a period of 24 months from date of purchase, provided that:

- it has been correctly installed
- it has only been subjected to “Normal operation conditions” in a Domestic Hot Water System which conforms to BS699, BS1566 or BS3198
- a valid proof of purchase is present as evidence of the purchase

### **WARNING – THIS UNIT MUST NOT BE MODIFIED IN ANY WAY.**

BEAB approval is dependent upon the fitting of the appropriate Unipolar Thermostat with Safety disconnection.

### **CHOICE OF THE CORRECT HEATER**

Copper Immersion Heaters are designed for Copper cylinder only and for operation in areas of soft and neutral water conditions or where a water softener is in use. Alloy 800 Immersion Heaters are recommended in areas of Soft to hard water conditions.

Titanium is suitable for hard and aggressive water conditions.

**If a copper element is fitted in an area of hard water and fails due to the calcification, then the guarantee will become void.**

It is important to choose an immersion heater with the proper length, to obtain the maximum efficiency in terms of hot water production.

We recommend the following heaters:

- Heaters 14” and below are for Horizontal fitting (side entry)
- Heaters 18” and above are for Vertical fitting (top entry)

Before fitting please ensure that the unit is not too long and does not interfere with the inside surface of the tank. It is recommended that there is a minimum of 15mm between the end of the element and the inside of the tank.

### **INSTALLATION**

1. Check your mains power voltage matches the voltage rating indicated on the label of the plastic terminal cover.
2. The immersion heater screws into a 2¼” BSP thread boss. We recommend that any installation using a Heater of less than 350mm (approx. 14”) is installed horizontally. Any heater above this size should be installed vertically (from the top of the cylinder).
3. The immersion heater must be fixed to the cylinder using the gasket provided. Please ensure you remove all traces of previous gaskets/seals. Please ensure that the unit is not over tightened into the tank boss.

**WARNING – THIS HEATER SHOULD ONLY BE INSTALLED IN SYSTEMS WHERE THE ELEMENT IS ALWAYS BELOW WATER LEVEL, SUCH AS A CISTERNE FED TANK. CHECK THAT THERE IS WATER IN THE TANK BEFORE THE IMMERSION HEATER IS FIRST SWITCHED ON. If the heater is allowed to run when the water level is not fully covering the heating element there may be serious damage incurred to the heater, property or persons. THIS WILL ALSO INVALIDATE THE GUARANTEE.**

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

### **THERMOSTAT INFORMATION**

The immersion heater is supplied with a TCU thermostat, approximately factory set to 75° C, with adjustable temperature. To maintain safety, any replacement thermostat must be of the same type.

## RECOMMENDATION:

Low water temperature is recommended to reduce limescale deposit (Not lower than 60°C).

The thermostat in this unit is able to disconnect a single supply conductors (live or neutral) by a single initiating action. It has a safety resettable cut out mechanism which prevents excessive temperatures. In case of the normal sensing device failing, the over temperature safety device will act to limit the water temperature.

### To reset the thermostat after operation of the safety device:

1. Switch off the heater by isolating the power supply
2. Allow the water in the cylinder to cool down sufficiently
3. Remove the cover and press the button on the top of the thermostat.

**Please Note:** This cut out is a safety device, and if this is found to be operating frequently then we recommend a qualified electrician be consulted to investigate the nature of the problem as the thermostat may need to be replaced. It may be helpful to lower the thermostat setting to avoid unnecessary operation of the high limit safety cut out.

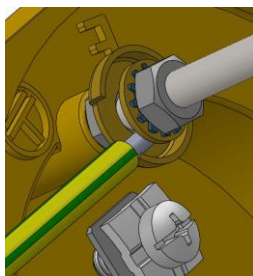
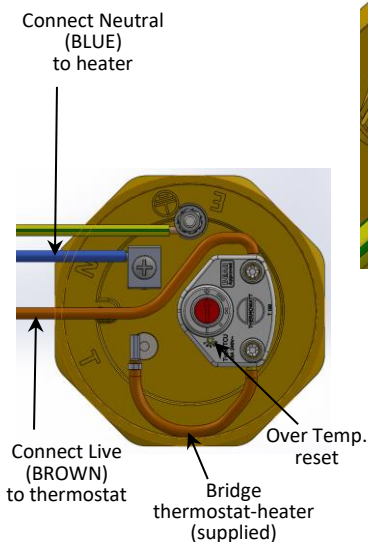
## ELECTRICAL CONNECTIONS

1. This unit should be connected by a suitably qualified electrician in accordance with the latest BS7671 and I.E.E regulations.
2. Ensure the electrical supply is switched off before making any connection to the unit.
3. The immersion heater must be wired through a double pole isolating switch with contact separation of at least 3mm in both poles.
4. The immersion heater must be wired with a heat resistant flexible power cord with a minimum T rating of "T-80".
5. Ensure that the terminal screws are not over tightened as this could result in the terminations being broken off.

## WARNING: THIS DEVICE MUST BE EARTHED

### WIRING:

1. **Earth connection** (green & yellow) should be made firmly to the earth post (marked "E") using the terminals attachments provided.
2. **The Live Supply** (brown) from the mains supply cable to the thermostat terminal
3. **The Neutral connection** (blue) from the mains supply cable to the heater terminal (marked "N")



Connect Earth (GREEN/YELLOW) to earth post

