



Home energy

Immersion heater

How to use your immersion heater most efficiently



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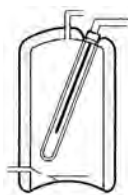
An electric immersion heater can be a cost effective and energy-efficient way of providing

domestic hot water. It can be used all year round or just during the summer months when the main heating is switched off.

If you decide to use your immersion heater for more than just a very short period each day then consider taking advantage of lower-cost night-time electricity on Economy 7. By heating the water overnight at off-peak rates you can have a tank of hot water for around the same cost as heating water for one hour on the standard tariff.

Check you have good insulation on your hot water tank to ensure the water stays hot until you want to use it. Fitting a new lagging jacket will only cost around £10 and should pay for itself in a month or two, saving energy and money. Hot water tanks should be fitted with a jacket of at least 80mm thickness, approved to British Standard BS5615: 1985. These are inexpensive, are made in a range of standard sizes, and are fitted with belts to fasten snugly round the tank.

You will probably find one of three types of immersion heater in your home:



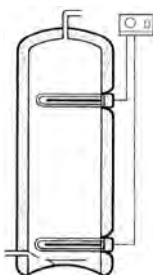
Single Immersion

A SINGLE immersion heater which is fitted either in the top of a 30 gallon/120 litre tank or in the side towards the bottom of the tank. This type of heater is normally “controlled” by a simple on/off switch or a timer.



Dual Immersion

A DUAL immersion heater which is fitted in the top of a 30 gallon/120 litre tank or larger tank.



Twin Immersion

TWIN immersion heaters, one of which is fitted in the top (downwards or sideways) with the other fitted sideways towards the bottom of the tank.

All immersion heaters can operate on Economy 7 with or without the addition of a special time switch controller. A controller simply makes sure you heat the bulk of your water during the seven night hours and takes away the chore of having to remember to switch on and off each time you want hot water.

Some DUAL or TWIN installations will already have two circuits wired so that the meter time switch or teleswitch controls the lower element (off-peak). In these cases you will probably have a simple “runback” timer mounted by the tank which will allow you to heat around 10 gallons/45 litres of hot water on day rate electricity should you need more hot water during the day. If you are not sure which system you have, ask a qualified electrician to tell you.

To make the best use of the time switch controller periodically check that the clock is correctly set for current time and to Greenwich Meantime (GMT). Leave the switch in the “AUTO” position and the tank should heat up during the Economy 7 hours. In general a 3kW element will heat 10 gallons of water in one hour. To find out how much water your tank contains simply measure its height - 1ft (300mm) is equivalent to about 10 gallons of water.








Try to avoid using the “BOOST” button (usually 1 or 2 hours) as it switches the heater on to daytime electricity which is more expensive. On some controllers you can programme the boost to come on at certain times to meet additional hot water needs. The “BOOST” button will not operate during the Economy 7 hours.

Your immersion heater is controlled by a thermostat, which must be carefully set, as too high temperatures can cause scale build-up and the eventual need to replace the immersion heater. Consult a qualified electrician if you think there is a problem or you think the temperature needs adjusting.

The hot water cylinder thermostat controls the temperature of water that comes out of the taps. In “hard water” areas it is recommended that the thermostat on the immersion heater is set to 50°C. If you have a twin immersion heater the top element should be set to 50°C and the lower one to 60°C.

In “soft water” areas set a single immersion heater and twin immersion heaters to 60°C. Your local water company will be able to tell you whether you have hard or soft water in your area.

Tips to remember:

-  Fit an 80mm lagging jacket to your hot water cylinder
-  Switch to economy 7 if you use your immersion heater frequently
-  Avoid scale build-up and guard against scalding by checking that storage temperatures are not too high
-  Maximum temperatures for hard water areas 60°C
-  Maximum temperatures for soft water areas 70°C
-  Fit a time switch controller to maximise the benefit of Economy 7
-  Remember to switch off the on/off or boost switch if it is not operated automatically

If you need this information in another format or language please contact 01454 868009

For further information about energy efficiency, please contact

The Energy Efficiency advice line on **0800 500 3076**

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