

Energy Factsheet 1

Know about...
your gas central heating system



For more information and advice call the
Energy Saving Trust Advice Centre on
0800 512 012



Straightforward
Energy Advice

Your gas central heating system

Central Heating is designed to keep all or most of the house warm from a single central source of heat, such as a gas boiler. Your heating controls are important to help you manage the central heating and hot water supply as efficiently as possible. Heating controls are about getting the right temperatures at the right time!



How does gas central heating work?

Most gas central heating systems have the following parts:

A **boiler** to heat the water system.

Pipes to take the hot water to:

- A) The **radiators**
- B) The **hot water storage cylinder**, heating up the water that will eventually come out of the hot water taps.

A **pump** to help the water to get round the whole system.



Central heating tips

- Try to avoid putting furniture in front of a radiator, as this will block out the heat.
- Where radiators are fitted to the outside walls, kitchen foil fixed behind them will help reflect heat back into the room rather than out through the wall. The shiny side should be facing in to the room. You can also get ready made shiny panels to fit behind the radiators.
- Curtains should not hang down over the radiators, as this tends to encourage the heat to be lost through the window.



Boiler and cylinder thermostats

Boiler thermostat

This is mainly for safety, to make sure that the hot water coming out of the boiler is not too hot. Not all thermostats are visible when the boiler cover is closed. In winter it is advisable to have the boiler thermostat set between medium and maximum. Adjust down to a safe level if the radiators get too hot.

Cylinder thermostat

This controls the temperature of the hot water coming out of the hot water storage cylinder. When the water in the cylinder has reached the set temperature, the thermostat will switch off the supply of hot water from the boiler, and will not switch it back on again until the temperature drops.



The cylinder thermostat should ideally be set to 60 °C (140 °F). This protects against scalding as well as saving energy.

Combination boilers

If you have a combination boiler (sometimes called a 'Combi'), water will be heated as it passes through the boiler whenever you turn on a hot water tap. This means that you will not have a hot water cylinder or a timer to set for heating your water.

The wall thermostat

This switches the heating off when the set temperature is reached. You can alter this to suit your household.



Turning up the thermostat will not make the house heat up faster. It just means the heating will switch off at a higher temperature (wasting both energy and money!!)

When sitting still, most people are comfortable at around 20 or 21°C. If you are happy with it slightly lower then good for you! It will save you money.



IMPORTANT ENERGY FACT

When the weather changes, it is the programmer (timer) rather than the thermostat you should adjust.

The Programmer or 'Timer'

This sets the times for the heating and the hot water to switch on and off. Most programmers have the following features:

1 A mechanical or digital clock...

You must set:

- A) the correct time
- B) the times at which you want the heating and hot water to come on and go off



You will normally be able to set two or three times per 24 hours for the heating and hot water to come on and go off.

2 Some or all of the following programme settings...

Setting	What it means
'OFF'	Off permanently, ignoring programmed times.
'ON' or 'Continuous' or 'Constant'	ON permanently, ignoring programmed times
'TWICE' or 'Timed' or 'Auto' or 'All'	Two heating periods at the times you have set on the clock. Some programmers allow more than two periods in which case this might be called 'all'.
ONCE or 'ALL DAY'	One heating period, from the first 'ON' setting to the last 'OFF' setting in the day, as set on the clock. Note that this is a longer heating time than 'twice'.

3 'Boost' or 'Override' or 'Advance' functions...

This is a useful function that allows you to turn the heating on or off temporarily. It is useful when you have a change in your usual routine. The system will revert to the existing programme setting afterwards, which avoids the risk of you forgetting to do so yourself!



Thermostatic Radiator Valves (TRVs for short)

These are found on individual radiators (in place of the ordinary manual valves) allowing you to adjust the temperature in the room.

A TRV will control the hot water that goes into the radiator. It measures the temperature of the air in the room, and when the set temperature is reached, it will stop any more hot water from flowing into the radiator.

TRVs allow you to set some rooms to be warmer than others—for example, many people have the living room and bathroom warmer than their hallways and bedrooms.

To set the right temperature for each room, set the TRVs to the middle setting and then gradually alter the setting until the room is warm enough. It is worth spending a few days finding a comfortable temperature for each room.

You can set each TRV by turning the white outer shell round. The settings are marked on the outer shell, and indicated by a marker on the inner ring.