A factsheet on

MAKING A CONDENSING BOILER MORE EFFICIENT

severn wye

If you have a modern combination (or combi boiler) the chances are you've got what's called a condensing boiler. Making sure it's set properly can make it up to 10% more energy efficient. The science behind this is a little complex but putting it into practice is fairly simple.

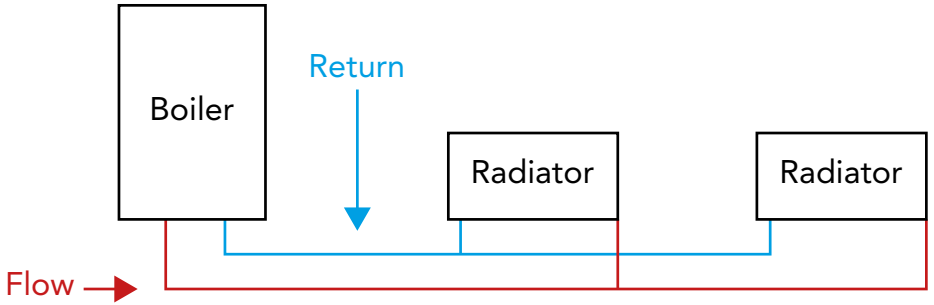
I've got an A rated boiler, shouldn't it already be efficient?

Contrary to what you might expect, boilers that come 'fresh out the box' aren't usually set to be as efficient as they could be. Even an 'A' rated appliance often tends to be operating at somewhere between 'C' and 'E' when it's in the home. In practice, this means you'll be paying for a lot of gas that you're not actually using (or that's escaping from the boiler). Lowering the flow temperature of your boiler will help your boiler to reach higher efficiency.

How does my condensing boiler work?

Condensing boilers produce less waste and are more energy efficient than non-condensing boilers. When a fuel like gas or oil is burned by your boiler, gasses are released via a flue. A condensing boiler can capture these gases and recycle them back into the system via a heat exchanger. Depending on the boiler type, this heat is then either moved directly to the means of heating (such as radiators) or to hot water in the property.

For this condensing to occur, the flow temperature (the heated water that's returning to the boiler) needs to be below 55°C . In fact the lower it is, the higher the efficiency of the boiler. Most factory settings leave the flow temperature at 80°C, which is far too high to allow the boiler to operate efficiently. This adjustment is usually achieved via the radiator dial on the boiler front. You'll be able to find more information about this dial in your boiler manual, including where it's located on your boiler.



A very simple diagram demonstrating a condensing system in practice.

Above are some examples of boiler dials. The dial you want to adjust is the radiator dial. Some dials have numbers (usually 1 to 6) marking the temperature, whilst others have a dashed line increasing in thickness.

Some boilers have dials and a digital display that shows the flow temperature, whilst others have 'up' and 'down' buttons instead of dials.

A step by step guide to lowering your flow temperature

1. Look for the dial or button that has the little radiator symbol next to it.

2. 55°C is roughly at the 12 o'clock position (or around no. 3 on a dial). Start by moving the dial to this point.

3. Set the dial somewhere around this midway point, but don't be afraid to experiment with lower temperatures, especially when the outside temperature begins to increase.

4. If you have a boiler with a digital display or with up and down buttons instead of a dial, the principle is the same. Look for the temperature you want on the digital display or use the buttons to adjust the temperature accordingly.

Don't worry that you'll break your boiler by lowering the flow temperature, this won't happen. If you feel too cold, you can always just turn it back up.

What happens now?

Reducing the flow temperature means the radiator temperature will be reduced. Your radiators won't feel so hot, but so long as you don't feel cold within the room, this is a good sign that the heating is now working more efficiently.

You might also find that your boiler is on more as it will take longer for the system to heat up. You'd be forgiven for thinking this means you'll be using more energy, but in most cases you'll use less energy running the boiler at a cooler temperature than running short, very hot rounds of heating.

You'll need to do some experimentation to see how much you can adjust the flow temperature and to find a level that's comfortable for you.

Is there anything else I need to consider?

The age of your property, how well insulated it is, whether you have double glazing and whether you live in a house or a flat will all affect the likely lowest flow temperature that you can reach.

For example, if you live in an older property you might be looking at a flow temperature of somewhere between 55°C and 60°C. In contrast, if you live in a newly built property with excellent insulation, you may well be able to set the flow temperature at 50°C or lower. This is where some experimentation comes in.

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