

# Easy Wins: Condensing Boiler Settings



If you have a condensing boiler then checking that it is set properly can increase its output efficiency by up to 10%. The physics behind this is a little complex, but the action to improve the boiler efficiency can be fairly simple.

## The Physics

Condensing boilers are more efficient than older non-condensing boilers as they are able to capture extra energy (called latent heat). When the water vapour in the waste flue gases condense to liquid water it gives off heat and the boiler is able to capture this, making it run more efficiently.

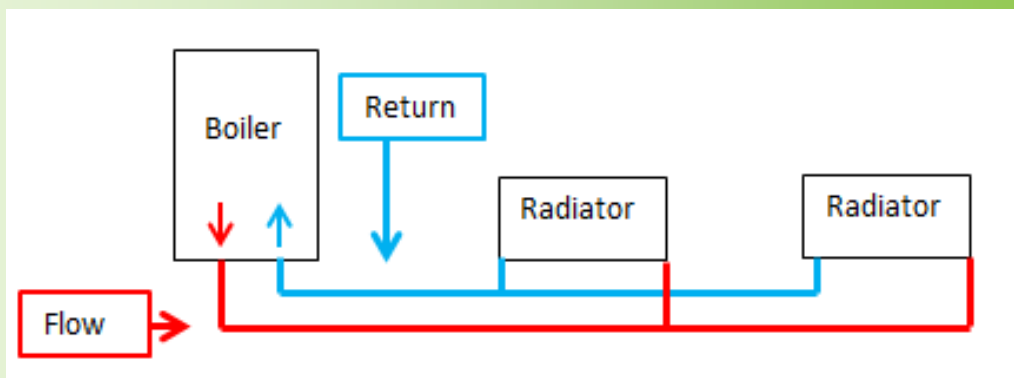


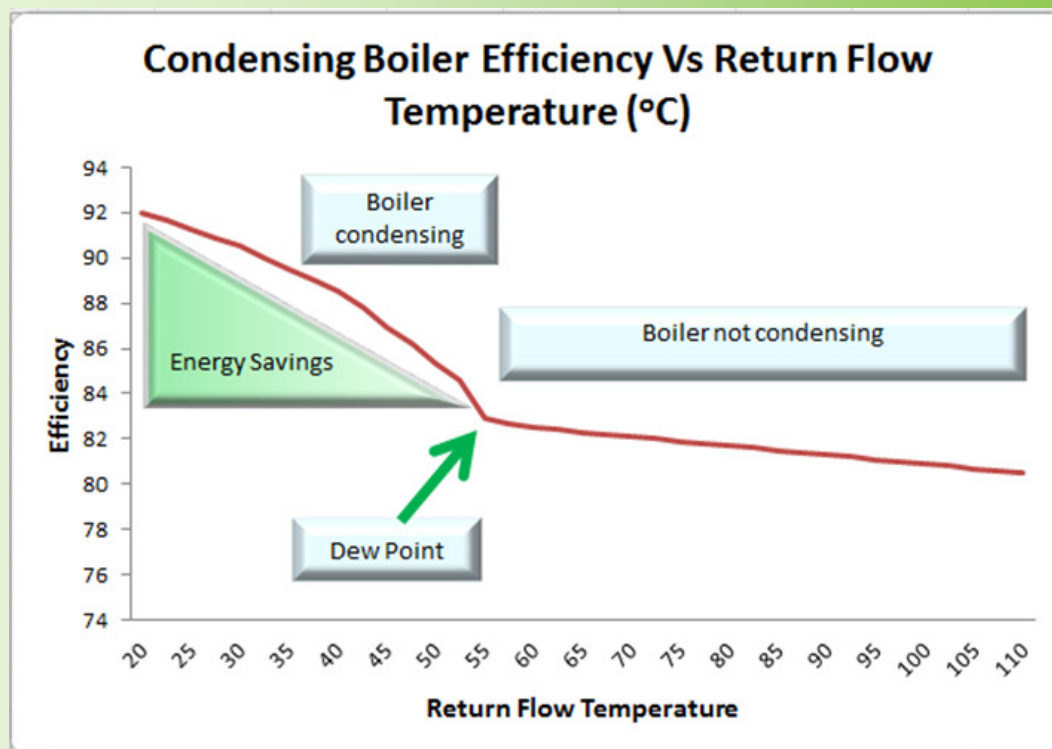
Figure 1: Very Basic Heating System

Figure 1 shows a basic schematic of a heating system. In order for condensing to occur, the return (the heating water in the loop returning to the boiler) needs to be below 55°C. In fact the lower it is the higher the efficiency of the boiler. This adjustment is usually achieved via the radiator dial on the boiler front. Please refer to your boiler manual if you are unsure.



Examples of Radiator Dials





As a result of reducing the heating flow temperature, the radiator temperature will also be reduced. This can slow the rate at which the building will heat up. Some experimentation will be needed to see how much the flow temperature (and hence the return temperature) and time settings can be adjusted.

Smaller or well insulated sites will not have such high heat demand and so it is likely that these boilers will be able to have the flow temperatures at lower settings without any issues.

### Rough Rule of Thumb

- Towards the beginning and end of the heating season aim to have the heating/radiator dial in the lower third (1 or 2).
- As the weather gets colder turn the dial-up to half to three quarters (3 or 4).
- In particularly cold conditions - if needed - turn the dial to the upper third (5 or 6).

**Don't forget to reduce the dial as the outside temperature increases.**

Remember this is a rough rule of thumb and you do need to use common sense. If the system is not getting warm quickly enough for you, then you may have the dial too low.

Investing some time in to learning how your boiler and property work together can save you 5% to 15% on your heating costs.

**Alternatively:** You could invest in weather compensation control which will automatically do these adjustments based on the outside temperatures. Typically weather compensation controls would cost £100 to £300 plus fitting.

**If you are interested in energy efficiency improvement measures then take a look at the installer or supplier section of the Link to Energy website:**

[www.linktoenergy.org.uk](http://www.linktoenergy.org.uk)