

Weather compensation and Heating curves

Heating curves are a well established concept used when designing commercial heating systems, but have never been widely used or adopted in the UK for domestic installations – Oso now bring this unique and energy saving feature to the UK in our [Termo – E](#) range of electric boilers.

By correctly setting the heating curve software contained in the E version of the Termo electric boiler energy consumption can be reduced by up to 20%.

A supplied temperature sensor relays the outside temperature to the boiler’s control system. The boiler adjusts its output to only supply enough energy to achieve the desired internal temperature as set by the internal room thermostat. The colder it is outside, the more heat is required inside.

Heating requirements for properties vary according to the insulation levels and occupier preference. Choosing selection is dependent on the insulation property of the building. Better insulated buildings will have a lower heating curve and require less heat than poorly insulated buildings.

Termo boilers have factory set heating curves to match the 2000 insulation requirements of the building regulations. Full guidance to the selection of an appropriate heating curve is given in the easy to use installation and user manuals.

Note: Heating curve software is only installed in the E-version of the Oso Termo Electric boiler.

Figure 1 shows the principle of heat curves. 9 different curves are shown:-
4 curves for underfloor heating labelled 0.2 - 0.8
6 curves for radiator heating, labelled 1 - 3.

As outdoor temperature decreases, more heat is required from the boiler.
For example, a boiler supplying radiators and using curve 1, will supply the heating system at 50°C when the outside temperature is -4°C.
A more poorly insulated building using curve 2 would supply 73°C to the heating system in that situation.

Heating temperatures are always lower with UFH as can be seen by the lower set of curves.

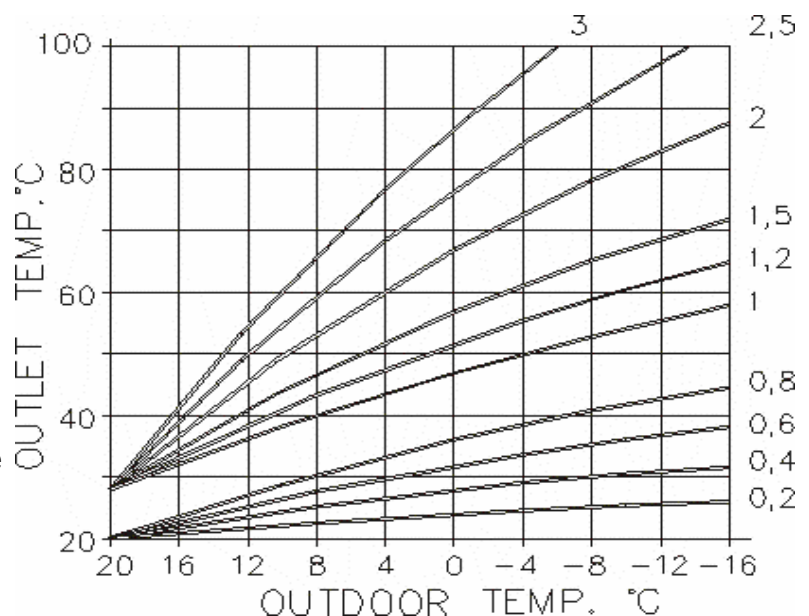


Fig 1. Heat curve graph