

## Room thermostats in radiator systems

Along with correctly sized radiators, a room thermostat is an essential component of a radiator system. In conjunction with programmable time control the room thermostat ensures stable heating temperatures and efficiency.

A room thermostat typically operates with a small switching differential, turning the heating off at between .5 & 1° over the set temperature, turning the boiler back on when the room temperature drops by the same increment below the set temperature.

Thermostatic valves further improve controllability of a system, but in conjunction with a room thermostat, not in place of it. With properly sized radiators, using a room thermostat and thermostatic valves is the key to system efficiency.

### Much more than just ensuring stable and efficient heat

A room thermostat is not just ensuring stable and efficient heat, it also ensures correct operation of the heating appliance.

Without a room thermostat, control of heat output is entirely controlled by the boilers integral Heat Exchanger thermostat. This thermostat is there to regulate maximum output temperature delivered to the system.

If there is no room thermostat and the boiler is reliant on the HX thermostat for switching control then once the system is initially heated the boiler will from there forward short cycle (turn on and off far too frequently). This is so for all boilers and will cause premature component failure. Excessive short cycle will undoubtedly also lead to a requirement for additional maintenance.

With a room thermostat installed, after initial heating there should be longer system off times while the room thermostat switching differential is met, in this way when the room thermostat again calls for heat, the body of water in the system has cooled sufficiently that the boiler run times will be longer.

**In the EU & UK where installation is regulated, the inclusion of a thermostat is mandatory. All boiler manufactures require that systems attached to their appliances include a thermostat.**

Heat IQ Boiler warranties apply only where the appliance is installed as prescribed & used as intended, this includes the use of a room thermostat.