

What to do if a zone is not reaching temperature

This article applies to the following scenario:

- A zone has:
 - a radiator valve
 - a separate Room Sensor or Room Thermostat
- The zone is not achieving it's target temperature

Why this can happen

Radiator valves have a temperature sensor that is used to decide when the valve should adjust itself to open more, or close more to achieve the target room temperature. If a room has a separate temperature measurement from a thermostat or a room sensor, it can sometimes be the case that the valve and the thermostat / room sensor measure different temperatures. For example this can happen in the following scenarios:

- the valve is inside a radiator cover
- there is restricted air flow around the valve
- the thermostat / room sensor is mounted on an external wall (which tend to be colder than internal walls)
- the thermostat / room sensor is in direct sunlight or exposed to a draft
- the thermostat / rooms sensor is mounted a large distance from the radiator

If the valve temperature measurement is sufficiently higher than the thermostat / room sensor measurement, then the valve can 'think' that it is up to temperature and close off, when in fact the thermostat / room sensor is still measuring a temperature below the target.

How to resolve this situation

There is a setting for the radiator valve called 'hidden valve offset'. Setting this value can help to compensate for the difference in measured temperature between the two devices. The value 'hidden valve offset' in degrees C is added to the target temperature for the valve. So, for example if the target temperature for the room is 21C, and a hidden valve offset of +1.5C is set, the valve will aim to reach a temperature of 22.5C before it closes.

When setting a hidden valve offset, it is also recommended that the 'Enable valve shutoff' setting is enabled for the zone that contains the valve. This will ensure that even if the hidden valve offset value that is specified is too large, the room will not overheat as the thermostat / room sensor will switch off the 'call for heat' for the zone in question, according to it's own measured temperature.