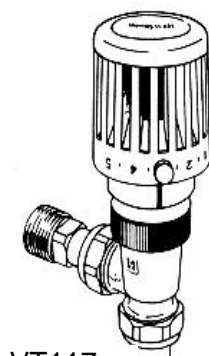


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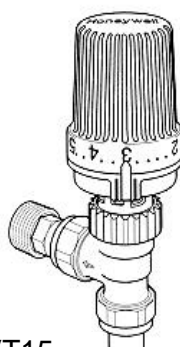
Thermostatic radiator valves*

Radiator thermostats, thermostatic radiator valves or TRVs can be added to Sundial Systems or any of the systems outlined in our Practical Application Guides to provide the extra benefits of individual room temperature control and even greater energy savings. “Radiator thermostats can be installed in all rooms except where a room thermostat or programmable thermostat is positioned. Added comfort is usually gained due to the individual control and by preventing localised overheating caused by solar gains, appliances, etc. They are particularly useful in rooms where desired temperatures are different to those in the main living rooms, for example, bedrooms. Systems with radiator thermostats should always be fitted with a room thermostat and a bypass, preferably automatic.”

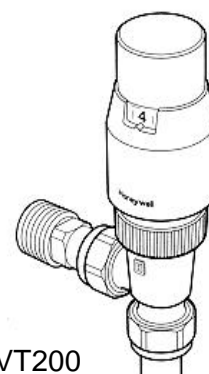
- “Radiator thermostats provide good local temperature control in individual rooms.
- Radiator thermostats are particularly useful where there are high incidental gains from e.g. sunshine or equipment.
- In domestic systems, radiator thermostats should be used with a room thermostat or a boiler energy control to ensure boiler interlock. (On their own, they have no interlock.)
- Radiator thermostats should not be installed in the same room as the room thermostat.
- It is necessary to fit a bypass and a regulating valve to ensure that a minimum flow rate through the boiler is maintained.
- Remote sensor versions are available for radiator thermostats in situations where a representative room temperature is difficult to detect.
- In some circumstances, horizontally mounted radiator thermostats can achieve more accurate control of room temperature.”
- Honeywell radiator thermostats VT117 and VT200 have reverse flow bodies, which means that they can be mounted either vertically or horizontally on both the flow and return pipes at the radiator.



VT117



VT15



VT200

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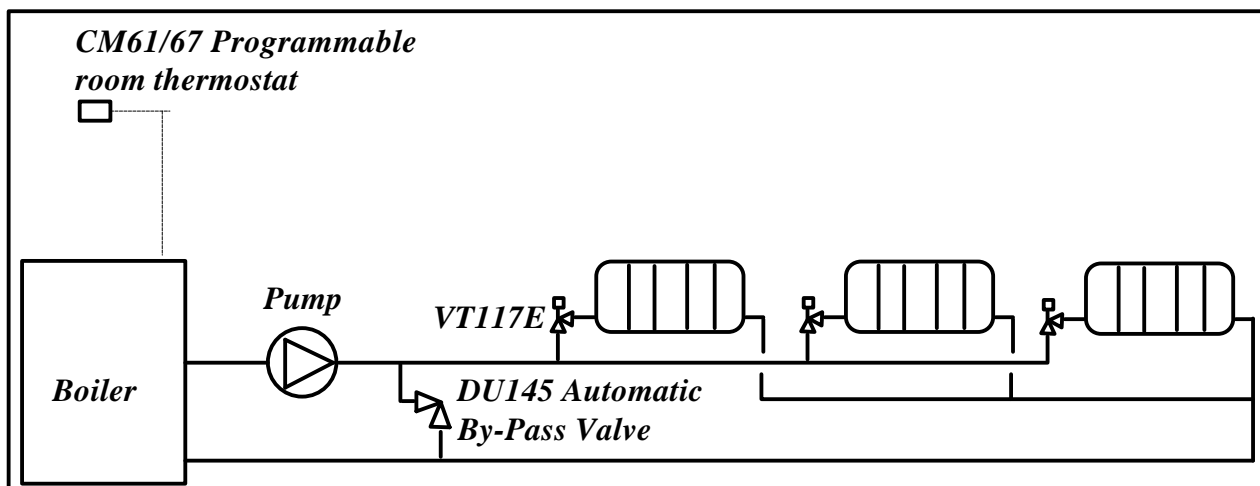
Points to remember:

A radiator thermostat is a modulating control that allows proportionally more flow for a greater demand, and less flow for smaller demand, thus controlling the amount of heat available to be emitted by the radiator. When the air temperature has risen to be the same as the set point temperature, the radiator thermostat will not be fully closed; it will still be partially open. This is so that the air temperature can be maintained by the flow through the radiator thermostat. If the valve were to close fully, the temperature would fall as the radiator would start to cool down.

“A radiator thermostat should not be positioned on a radiator where it is going to be exposed to draught or direct sunlight, nor should it be isolated from the airflow of the adjacent room by furniture or furnishings.

In some instances, it may be preferable to fit the thermostatic head in an horizontal attitude to obtain a better performance. This may be done on either end of the radiator if a reverse flow radiator thermostat is fitted.

When fitting several thermostatic radiator valves, it is essential that a bypass is fitted. An automatic bypass valve ensures that the flow rate through the boiler is maintained at a constant rate.”



Notes:

- The room thermostat should be fitted in a heated area that is not controlled by a thermostatic radiator valve.
- Fitting an automatic by-pass ensures that the boiler manufacturer's requirements for minimum flow rate can be met.
- If both a room thermostat and an automatic by-pass valve are fitted, every radiator may have a radiator thermostat on it, except for the radiator that is heating the area with the room thermostat.

BS5449:1990 Part 2 states:

“Where individual thermostatic radiator valves (TRVs) are used they shall not be the sole means of control for the heating circuit but shall be used in conjunction with other controls which ensure that the boiler is shut off...

Where thermostatic radiator valves are used they shall not be fitted in the same room or area as the air temperature sensor (room thermostat) is situated.”