

# Householder information on the use of Myson thermostatic radiator valves.

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## What is a thermostatic radiator valve (TRV)?

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*.....an explanation for householders*

TRVs sense the air temperature around them and regulate the flow of water through the radiator to which they are fitted. They do not control the boiler.

They should be set at a level that gives you the room temperature you want. These settings may have to be different in each room, and you should set the TRVs to suit each room and then leave them to do their job.

Turning a TRV to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the boiler size and setting, and the radiator size. Turning a TRV to a lower setting will result in the room being controlled at a lower temperature level, and saves energy.

TRVs need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture.

TRVs cannot turn the boiler off when the whole house is warm. To do that you will need a room thermostat as well. The radiator in the room with the where the room thermostat is should not normally have a TRV, but, if it does, keep the TRV on the maximum setting and adjust the room thermostat as explained with the instructions.

*This is an industry agreed definition approved by the Plain English Campaign.*

### **OPERATION of the TRVs** **Valve Markings.**

**IMPORTANT.** The open **O** is a positive shut off setting. This should **only** be used if it is required to remove the radiator for decorating or maintenance purposes. The system pressure must be adjusted to ensure it does not exceed 0.6bar. (However it is recommended that the maintenance cap provided with the valve be used for greater security, up to 4bar.)

The \* setting is a frost protection setting. When this setting is selected the valve will open when the temperature falls below 8°C. This can be used to protect the system from freezing when the house is left unoccupied for periods during the winter. The system however, must be programmed for the boiler and pump to be working to enable the valve to control under these conditions.

The valve settings shown below are only to be used as a guide. Actual room temperature achieved will be dependent on the size of the room, size, temperature and location of the radiator.

Setting I. The valve will start to open when the temperature around the valve head falls to 12°C. or below.

Setting II. This setting approximates to 16°C.

Setting III. This setting approximates to 20°C.

Setting IIII. This setting approximates to 24°C.

The solid ● is the maximum setting.

The ability to achieve the higher temperatures listed will be entirely dependant upon the radiator sizing, average water temperatures flowing through the radiator and the size of the room. Design specifications for example, only require that a living room space be heated to 21°C, with an outside temperature of -3°C, in accordance with BS5449.

The temperature achieved in any room will be dependant upon the air temperatures surrounding the TRV head.

### **Setting the TRV.**

In order to get the most economic use of the TRV, the TRV should be set on the lowest setting that will achieve the degree of comfort required and left to do its job. For example if setting for a living room area set the TRV head to III. Leave the valve to settle down. If the room temperature is not sufficient increase the setting on the head by a small amount and again leave for the system to settle down. In common with all TRVs the valves do take a period of time to adjust (15 to 20 minutes to respond to a 2 degree change in temperature). This initial setting up may seem tedious but once you have established the comfort setting the valve can be left to operate and control.

You may find that the radiator is sometimes cold to the touch although the room is at temperature. This is quite normal and indicating that the valve is doing its job. When the temperature of the air around the TRV head falls the sensor will detect this and allow the valve to open and provide more heat into the radiator.

### **Additional economy.**

When a room is not in use for considerable periods it can be advantageous to adjust the TRV to a lower setting. This will then allow the room to maintain a lower background heat if the system is live, thus avoiding unnecessary wastage of heat. On reoccupying the room the control is reset to the appropriate "comfort" position to provide the amount of heat required.

### **IMPORTANT NOTE FOR SUMMER SETTINGS**

During the summer period the TRVs should be left OPEN. Do not close them off.

With the programmer or room stat set for no heat the heating system will not circulate hot water around the system. If the TRV is left at its normal setting the higher summer temperature will close the valve under normal conditions.

The TRV must not be set to the 'O' Off for long periods of time. The 'O' position is designed for maintenance purposes, e.g. when the radiator is removed for cleaning or decorating behind.

The valve must not be left in the 'O' setting because the high room temperatures will cause the sensor to expand and apply an additional force to the mechanism. If the valve is forcibly closed for long periods the valve piston that controls water flow may become stuck to the valve seat and prevent its proper operation when the heating is required.

### **Maintenance**

There is little practical maintenance that the householder can carry out on the TRV. Should the valve sensing heads become soiled they should only be wiped over with a damp cloth.

At no time should any hydrocarbon-based lubricants (for example Vaseline or WD40) be used to "lubricate" the valves as these materials will permanently damage components that are specifically designed for use on heating or hot water systems.

### **Problem Solving**

*'The radiators feel cold to touch.'*

If the sensing head has reached the set temperature it will stop the flow of hot water to the radiator. The radiator will cool and possibly feel cold to the touch. When the temperature of the air around the head drops the valve will open providing replacement heat.

*'The room does not feel warm and the radiators are not staying hot.'*

There can be a number of reasons for this.

1. Check that the TRV head is in a clear flow of air. It should not be covered by curtains, behind furniture, close to an additional source of heat such as computer or audio equipment or close to an auxiliary source of heating.

2. If the TRV is fitted to a double convector radiator it may be necessary for the valve to be remounted so that the sensing head is mounted horizontally, away from the radiator surface.

3. In order for a room to be heated satisfactorily the temperature of the water from the boiler to the radiators must be at the design standard (usually between 70 - 80°C). If the water temperature is not high enough the radiator will only be able to heat the air adjacent to the radiator and will not develop enough energy to create warm air circulation to heat the whole room. If the radiator is operating with a low water temperature it is only the air next to the radiator that becomes heated causing the valve to close before the whole room is heated.

*'The TRVs are on different settings on each radiator'*

This is quite normal. The variation of setting will be dependent on the size and position of the radiator in relation to doors, windows and furnishings in order to achieve the heat requirements for any one room.

*'One radiator feels cold while one is hot in the same room'*

This is quite normal and is due to the independent control on each radiator. Each TRV will be reacting to the air temperature that is passing the sensing head. The valves are making constant adjustment as a result of monitoring the temperature in the location of the TRV and are operating independently of each other.

*'It seems to take a long time to change temperature'*

Be aware that for a two degree drop in temperature the valve takes approximately 20 minutes to go from shut to open. So when any adjustments are made there is a need for them to be left alone to enable the room and valve opening to stabilise

We trust that the above information is clear but should you require further assistance please contact Myson Controls Customer Service. Telephone 0845 402 34 34 Or visit our web site on [www.myson.co.uk](http://www.myson.co.uk)  
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