

Swadling Brassware Invincible

Thermostatic Shower Valve.

With
Three Flow Controls & Fourth Open Outlet.



TMV2 Scheme

This valve is an approved TMV2 Thermostatic Mixing Valve and will operate as such under the following installation conditions.

	High pressure	Low pressure
Maximum Static Pressure	10 Bar	10 Bar
Flow Pressure, Hot & Cold	0.5 to 5 Bar	0.1 to 1 Bar
Hot Supply Temperature °C	55 to 65 °C	55 to 65 °C
Cold Supply Temperature °C	≤ 25 °C	≤ 25 °C

NOTE: Valves operating outside these conditions cannot be guaranteed by the scheme to operate as Type 2 valves.

Designation of use, HP & LP. Except low pressure bath fill.

Recommended mixed water temperatures for applications of use.

- 44°C for bath fill.
- 41°C for shower applications
- 41°C for washbasin applications
- 38°C for bidet applications

These are recommended for all premises and should never exceed 46°C

The Thermostatic mixing valve will be installed in such a position that maintenance of the TMV and it's valves and the commissioning and testing of the TMV can be undertaken.

The fitting of isolation valves is required as close as practicable to the water supply inlets of the TMV. These should be 22mm so as not to restrict the high flow rate available.

TMV2 Commissioning Notes for Thermostatic Mixing Valves

The first step in commissioning a thermostatic valve is to check the following

1. The designation of the thermostatic valve matches the application.
2. The supply pressures are within the valves operating range.
3. The supply temperatures are within the valves operating range.
4. Isolating valves are provided.

The mixed water temperature at the terminal fitting must never exceed 46°C.

TMV2 valves shall be tested against the original set temperature results once a year. When testing is due the following performance checks shall be carried out.

1. Measure the mixed water temperature at the outlet.
2. Carry out the cold fail safe shut off test by isolating the cold water supply to the TMV, wait for five seconds if water is still flowing check that temperature is below 46°C.
3. If there is no significant change to the set outlet temperature(±2°C or less from original settings) and the fail-safe is functioning , then the valve is working correctly and no further service work is required.

How to test mixed water outlet temperatures once TMV's are installed. The following guidance should be followed where appropriate.

Temperature readings should be taken at the normal flow rate after allowing the system to stabilise.

1. The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.
2. Any TMV that has been adjusted or serviced must be re-commissioned and retested in accordance with the manufacturers' instructions.

The Installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

Please read these instructions in full before commencing any installation. After the work is completed, pass these instructions on to the end user for their future reference. We recommend that before tiling or finishing, you ensure that the valve is operating correctly and that there are no leaks.

Most problems with any thermostatic valve are caused by debris from new pipework getting into the thermostat when it is first installed.
It is most important to flush out all new pipework before commissioning.
This thermostatic valve is suitable for use with all water systems up to a maximum operating pressure of 5.0 Bar, (beyond which we recommend pressure reducing valves be fitted)

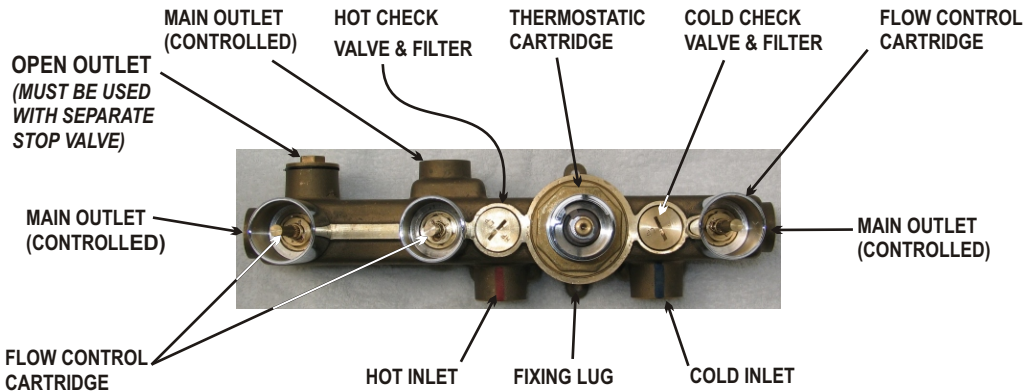
Plumbing Configuration.

Controlled
Primary Outlet
Third Controlled outlet
Secondary Shower or Body Jets
or bath (Min 1.0 bar) Fill etc.

 **Open outlet**
Remove sealed plug before using open outlet.

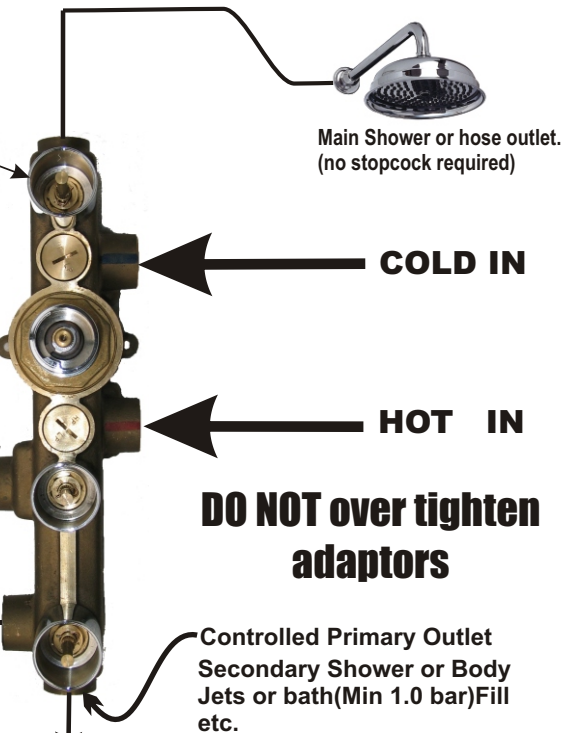
NB: If the open outlet is used stopcocks must be used.
All stopcocks must be fitted with flow in direction of arrow cast into body.

Auxiliary slide rail with own stopcock, body jets with stopcock. Etc



This thermostatic valve is suitable for use with all water systems up to a maximum operating pressure of 5.0 Bar, (beyond which we recommend pressure reducing valves be fitted) and has **FOUR** outlets. The **THREE** primary outlets are controlled by the flow control cartridges, commonly used for main showerhead, bath spout. The **OPEN** outlet, allows for additional fittings (e.g. Body jets, hand shower, etc) to benefit from a thermostatically controlled supply. Any such outlets **MUST** have a stopcock/flow control. Blank off and seal the open outlet using the plug supplied if it is not required

Installation / Servicing. Tel. +44 (0) 1454 322888



Remove the plastic dust covers from the inlets and outlets and discard.

To remove control knobs, loosen grub screws and pull them off.

Gently pull off the concealing plate.

Mount casting in the wall using fixing lugs provided. Take care to fix valve in the wall to an appropriate depth to allow for plasterboard, tiling etc.

Minimum 70mm to maximum 105mm.

Always leave access to the six front cartridges for servicing.

Inlets and outlets are all tapped 3/4" BSP. Make all pipework connections using a proprietary thread sealer. **DO NOT USE TAPERED THREADED ADAPTORS.**

Do Not OVER TIGHTEN Adaptors. Doing so may cause LEAKS.

Open outlet. If open outlet is required remove, sealed blanking plug. Stopcocks must be used with this outlet.

Turn on supplies and test all connections for water tightness.

Remove Hot and Cold check valves, and flush out the installation, and refit.

Apply a narrow bead of clear silicone sealant around the back edge of the cover plate and carefully press into position. Leaving the lower edge open for drainage.

To set temperature, rotate the thermostat spindle (clockwise for cold, counter clockwise for hot) until the maximum desired showering temperature is reached [normally about 42° C.] Then line up the screw head on the back of the control knob with the first stop on the stop ring, push the knob onto its spline and tighten the grub screw. You should now be able to override to set temperature by depressing the button for topping up baths etc.

Trouble Shooting.

1) After installation shower only runs HOT or COLD and will not mix.

Solution: Hot & Cold supplies are plumbed the wrong way round. Remove the Thermostatic cartridge, undo the 52mm AF clamp nut and pull the cartridge out (using the temperature knob to aid removal) reinstall it with the locating lug pointing away from the inlets.

2) Shower will not run hot enough when first installed.

Solution: Maximum temperature needs adjusting, see temperature setting.

3) Cold water tracking through the valve into the hot water system.

Solution: Check and clean the check valve cartridges and filters located under check valves.

4) Very low flow or no flow (gravity)

Solution: Check Hot & Cold feeds (the valve will shut down if either Hot or Cold supply fails) Ensure the correct operation of any flow switches. (in pumped applications)

Maintenance and Servicing.

The 3/4" Concealed thermostatic valve should give many years of trouble free service, but in the event of failure, servicing is straightforward.

Filters/Check valves.

The slotted cartridges can be removed with a large screwdriver to clean the Check Valves and Filters. The Check Valves stop cross flow between the Hot and Cold supplies.

Thermostatic Cartridge

To remove the Thermostatic cartridge, undo the 52mm AF Clamp nut and pull the cartridge out. Be sure to re-fit the cartridge with its locating lug pointing towards the inlets.

Flow Control Cartridge.

The flow control cartridge uses ceramic discs which will normally last indefinitely unless debris manages to get between the ceramic discs.