

DESIGNATION

Type 2 Approved Thermostatic mixing valves.

Model	Application
FMM 9000 etc.	HP - S

Supply conditions for Type 2 Approved valves

Operating pressure range High pressure.

Maximum static pressure	- bar	10
Flow pressure, hot and cold	- bar	0.5 to 5
Hot supply temperature	- °C	55 to 65
Cold supply temperature	- °C	upto 25

*Thermostatic mixing valves operating outside these conditions by the Scheme cannot be guaranteed to operate as type 2 valves.

The mixers are equipped with temperature knob with an override button. With the knob in it's first stop position, the delivered water temperature is appr. 38°C. The delivered maximum water temperature once the override button has been pressed must be set at the maximum mixed water temperature as indicated in table 1.

Application	Maximum mixed water temperature °C
Washbasin	43 Maximum
Shower	43 Maximum

The mixer is designed for connection to high pressure systems. If connected to a gravity feed systems the supply pressure and temperatures should be verified to ensure that the supply conditions are appropriate for Type 2 application.

Note:

46°C is the maximum mixed water temperature from the bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent in thermostatic mixing valves and temperature losses in metal baths. It is not a safe bathing temperature for adults or children. The British Burns Association recommends 37 to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standards Act 2000, the maximum mixed water outlet temperature is 43°C.

The thermostatic mixing valve will be installed in such a position that maintenance of the TMV and its valves and the commissioning and testing of the TMV can be undertaken.

The fitting of isolation valves is required as close as is practicable to the water supply inlets of the thermostatic mixing valve.

DESCRIPTION

The information in this manual must be read in conjunction with the Product manuals 9000/9000E T/P or Tronic. Where there is conflicting information (e.g. Maximum temperature setting) then you must follow the guidelines laid down in this manual.

IMPORTANT

Information contained in this manual is supplementary to and should be read in conjunction with the relevant product manual (9000 T/P) supplied with the product, where there is conflicting information
(e.g. Maximum temperature setting), you must follow this guidance.

Glossary of terms

The following abbreviations are used throughout this product manual.

HP	High pressure.
S	Shower.
W	Washbasin
SE	Shower with a thermostatic mixing valve having an economy flow rate.
WE	Washbasin with a Thermostatic Mixing Valve having an economy flow rate.

COMMISSIONING

Commissioning of Thermostatic Mixing Valves.

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

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

If all these conditions are met, proceed to set the temperature as laid out in the valves instruction manual.

How to Test Temperatures

Of particular importance is the setting of temperatures once TMV is installed. The following guidance should be followed.

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

The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

Any TMV that has been adjusted or serviced must be recommissioned and re-tested.

If the valve is fitted with an override button then the water temperature must be taken with the override button depressed and the temperature set at the maximum value.

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

Maintaining the Thermostatic Mixing Valve

It is recommended that all Type 2 approved valves should be tested against the original performance results once a year.

When testing is due the following performance checks should be carried out .

1. Measure the mixed water temperature.
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 the temperature is below 46°C.
3. If there is no significant change to the set outlet temperature ($\pm 2^{\circ}\text{C}$ or less change from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required. If the temperature has drifted from its set point by more than 2°C or if the failsafe function does not work, then a full service and recommissioning of the valve will be required.

If the mixer is not operating satisfactory, see "Function defect remedy" in the Product manual

9000 T/P, "Troubleshooting/Service" in Product manual 9000E or "Troubleshooting" in Installation and maintenance instruction Tronic.

Checking the delivered water temperature, see Product manual 9000 T/P, Product manual 9000E or Installation and maintenance instruction Tronic.

For more information about service and maintenance, see Product manual 9000 T/P, Product manual 9000E or Installation and maintenance instruction Tronic.

Notes:

If there is a residual flow during the commissioning or the annual verification (cold water supply isolation test), then this is acceptable providing the temperature of the water seeping from the valve is no more than 2°C above the designated maximum mixed water outlet temperature setting of the valve.

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

The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

Any TMV that has been adjusted or serviced must be re-commissioned and re-tested 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.

TECHNICAL DATA

Operating conditions of use, see Product manual on 9000/9000E T/P or Tronic.

INLET FITTINGS

Stop valves must be installed on the inlets to the mixer to simplify testing, maintenance and service.

INSTALLATION

The mixer is installed exposed on the wall. It is placed to allow service and maintenance. It requires at the least 150 mm spacing from corners to allow dismount of cartridges.

REFERENCES

BS EN 1111 and the Water Supply Regulations 1999.