

60007 CP Thermostatic Mixing Valve Installation and maintenance instructions



The following information is required for use when the Inta Series 60007 Thermostatic mixing valve is used in a TMV2 Application under the requirements of BS EN 1287:1999 "Sanitary tap ware. Low pressure thermostatic mixing valves. General technical specifications."

Introduction

The Inta Series 60007 thermostatic mixing valve has been specifically designed and manufactured to meet the requirements of BS EN 1287:1999 and TMV2 Type Scheme. The valve has been independently tested and approved as a TYPE 2 valve under the BuildCert TMV2 scheme by the WRc Testing & Evaluation Center.

Technical Specification

Temperature stability	± 2°C
Inlet temperature range	55°C ~ 65°C Hot Supply ≤25°C Cold Supply
BS EN 1287 Working Pressure Ranges	0.1 ~ 1.0 Low Pressure
Min. temp differential (mix to hot for fail-safe)	10°C
Max. pressure inlet differential	5:1

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

Commissioning (continued)

The mixed water temperature at the terminal fitting must never exceed 2°C above set temperature.

- Once the desired temperature is established, remove the cap and secure the temperature spindle with the locking ring and replace the cap into its original position to prevent tampering by unauthorized persons. For shower and bath products refer to the relevant section of the instructions.
- Ensure that the application in which the valve will be used is appropriate for the approved designation.
- The above information must be recorded and updated on every occasion when any work is carried out on the valve.

In service testing

The Inta Series 60007 thermostatic mixing valve should be tested against the original set temperature results once a year. When testing is due the following performance checks should be carried out.

- Measure the mixed water temperature at the outlet.
- Carry out the cold fail-safe shut off test by isolating the cold water supply to the Inta series 60007CP thermostatic mixing valve and wait for five seconds. If water is still flowing, check that the temperature is below 46°C for bath fill and 43°C for showering.
- If there is no significant change to the set outlet temperature (2°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 Inta series 60007CP thermostatic mixing valve has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturer's instructions.

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Commissioning

IMPORTANT - The following instructions must be read and understood prior to the commissioning of a the Inta series 60007 thermostatic mixing valves. If under any circumstances there are aspects to the installation / system which do not comply with the specification laid down, the valve **MUST NOT** be put into operation until the system / installation complies with our specification. However if all these conditions are met, proceed to set the temperature as follows;

- Ensure that the system is thoroughly cleaned and free from any debris prior to the commissioning of the Inta Series 60007 thermostatic mixing valve.
- The commissioning of the temperatures must be carried out using a suitably calibrated thermometer - preferably a digital thermometer. The sensing part of the thermometer probe must be fully submerged in the water when testing.
- Each valve must be commissioned taking into consideration any fluctuations which may occur within the system due to simultaneous demands. It is advisable that any outlets which are connected to the same supply as the mixing valve is connected to, are open during the setting of the mixed water temperature. During commissioning it is advisable to ensure that the water temperatures are established before any attempt is made to commission.
- Once the supply temperatures are stable and the normal operating conditions are established, the valve can be commissioned. Due to the unique design of the head, the temperature setting can be adjusted by removing the head from the valve body and reversing the head onto the temperature adjustment spindle. We suggest that the following sequence is followed when commissioning the valve;

Set the mixed water temperature to the required temperature.

Measure and record the temperature of the hot and cold water supplies at the connection to the valve.

Measure and record the temperature of the water discharging from the valve.

Isolate the cold water supply to the valve and monitor the mixed water temperature.

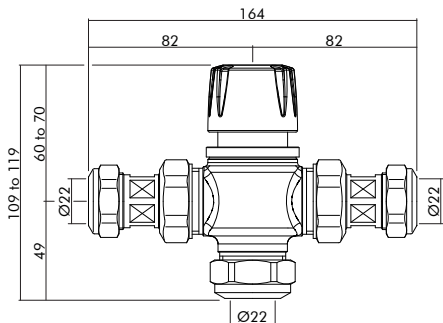
Measure and record the maximum mixed water temperature and the final temperature. The final temperature found during the test should not exceed the values quoted. Record all the equipment used during the commissioning.

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Approvals

TMV2 scheme approval number)
WRAs scheme approval number) on request

Drawing



Application

The Inta series 60007 thermostatic mixing valve has been independently tested by BuildCert and certified as meeting the requirements of BS EN 1287:1999 under the TMV2 scheme, as being suitable for use in the following designations.

Application	Range	Application	Range
Basin	High Pressure	Basin	Low Pressure
Bidet	High Pressure	Bidet	Low Pressure
Shower	High Pressure	Shower	Low Pressure
Bath (T44)	High Pressure	Bath (T44)	Low Pressure
Bath (T46)	High Pressure	Bath (T46)	Low Pressure

Note: Applies to HP installations only

If a water supply is fed by gravity, then the supply pressure should be verified to ensure the conditions of use are appropriate for the valve. The installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

Flow Rate

Mixed water @ 46°C

Pressure (bars)	0.2	0.3	0.5	1.0	1.5	2.0
Litres/minute	15	18	22	30	36	42

Recommended outlet temperatures

The following temperatures are recommended for all premises and should never exceed 46°C

Application	Maximum Hot water Temperature
Wash Hand Basin	41°C
Shower	41°C
Bidet	38°C
Bath fill	44°C

Installation

IMPORTANT- The following instructions must be read prior to the installation of a The Inta Series 60007 thermostatic mixing valve. The installer should also be aware of their responsibility and duty of care to ensure that all aspects of the installation comply with all current regulations and legislation.

It has been brought to our attention that flushing through water systems using certain chemicals may wholly or partially remove the lubricant from the internal workings of the valve, which may adversely affect its performance. We recommend that the flushing of the system should be carried out in accordance with the requirements of BS 6700, HSE Documents L8 and HTM 2040 where applicable. We recommend that following flushing of the system the valves are checked for correct operations / performance

The Inta Series 60007 thermostatic mixing valves **MUST** be installed in an accessible position to ensure that maintenance, commissioning and testing of the valve can be undertaken easily.

1. It is essential before installing any of the Inta Series 60007 thermostatic mixing valves, that you ensure that the supply conditions of the system to which the valve is intended to be fitted are checked to confirm compliance with the parameters as quoted within the technical specification and conditions on which the approval is granted i.e. verify supply temperatures, supply pressures, risk assessment.

Installation (continued)

2. Consideration must be made for the possibility of multiple / simultaneous demands being made on the supply system whilst the Inta Series 60007 thermostatic mixing valve is in use, all practical precautions must be made to ensure that the valve is not affected. Failure to make provision within the pipe sizing etc will affect the performance of the valve.

3. The supply system to which the Inta Series 60007 thermostatic mixing valve is to be installed must be thoroughly flushed and cleaned to remove any debris which may have accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer's warranty of the product. Independent filters / check valves and isolation valves must be fitted in conjunction with the valve. In areas that are subject to aggressive water, provision must be made to treat the supplies prior to the supplies entering any Intatec product.

4. The maximum flow rate of the valve will only be achieved when the supply conditions are achieved as quoted within the technical specification, with a flow condition under 1 bar differential pressure.

5. The Inta Series 60007 thermostatic mixing valve has been designed to ensure that the valve can be installed in any position whether vertical or horizontal. It can be surface mounted or within a supply duct. It is essential that access to the valve is not obstructed for any future maintenance that may be required to the valve or associated fittings.

6. We recommend that the Inta Series 60007 thermostatic mixing valve fail-safe thermostatic mixing valve be installed as close as practically possible to the outlet which it is serving. In this situation, attention must be paid to the maximum distance of pipework from the mixed water outlet of the valve to any terminal fitting.

7. Current guidelines recommend a maximum distance of 2m from the outlet of any mixing valve to the furthest terminal fitting / outlet which the mixing valve is to serve.

8. The hot and cold water supplies must be connected to the valve strictly in accordance with the indications on the body of the valve i.e. hot water supply to the hot port of the valve.

9. In a situation where one or both of the water supplies are excessive, it is possible to fit a Pressure Reducing Valve to reduce the pressure(s) to within the limits as quoted previously.

Installation (continued)

10. Any thermostatic mixing valve must be fitted with a back flow prevention device, such as check valves to prevent the cross contamination of supplies. The Inta Series 60007 thermostatic mixing valve is complete with integral insert check valves and strainers.

11. We recommend that Y Pattern strainers and full-bore isolation valves are installed in conjunction with the Inta Series 60007 thermostatic mixing valve fail safe products - the Y Pattern Strainers should be fitted as close as practically possible to the valve.

12. It is essential that the Inta Series 60007 thermostatic mixing valve fail-safe should not be installed in situations where there is a possibility of the valve being deprived of water or where demands for water are greater than the actual stored supplies.

13. To ensure that the performance levels of the Inta Series 60007 thermostatic mixing valve are maintained (in the event of cold water failure), the temperature of the hot water supply at the point of entry to the Inta Series 60007 thermostatic mixing valve must be a minimum of 15°C above the commissioned mixed water discharge temperature.

14. The Inta Series 60007 thermostatic mixing valve fail-safe products must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

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