

H E A L E Y & L O R D

Sequential TMV3 Shower Valve

Introduction

This installation guide has been produced for the Healey & Lord range of single outlet thermostatic sequential shower valves. These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product.

Please note: The installation must be carried out by a competent professional and be strictly in accordance with the Water Supply (Water Fitting) Regulations 1999 and any local authority regulations.

It is recommended, especially in hard water areas, that a water conditioner is fitted to reduce the risk of calcium deposits forming.

Safety

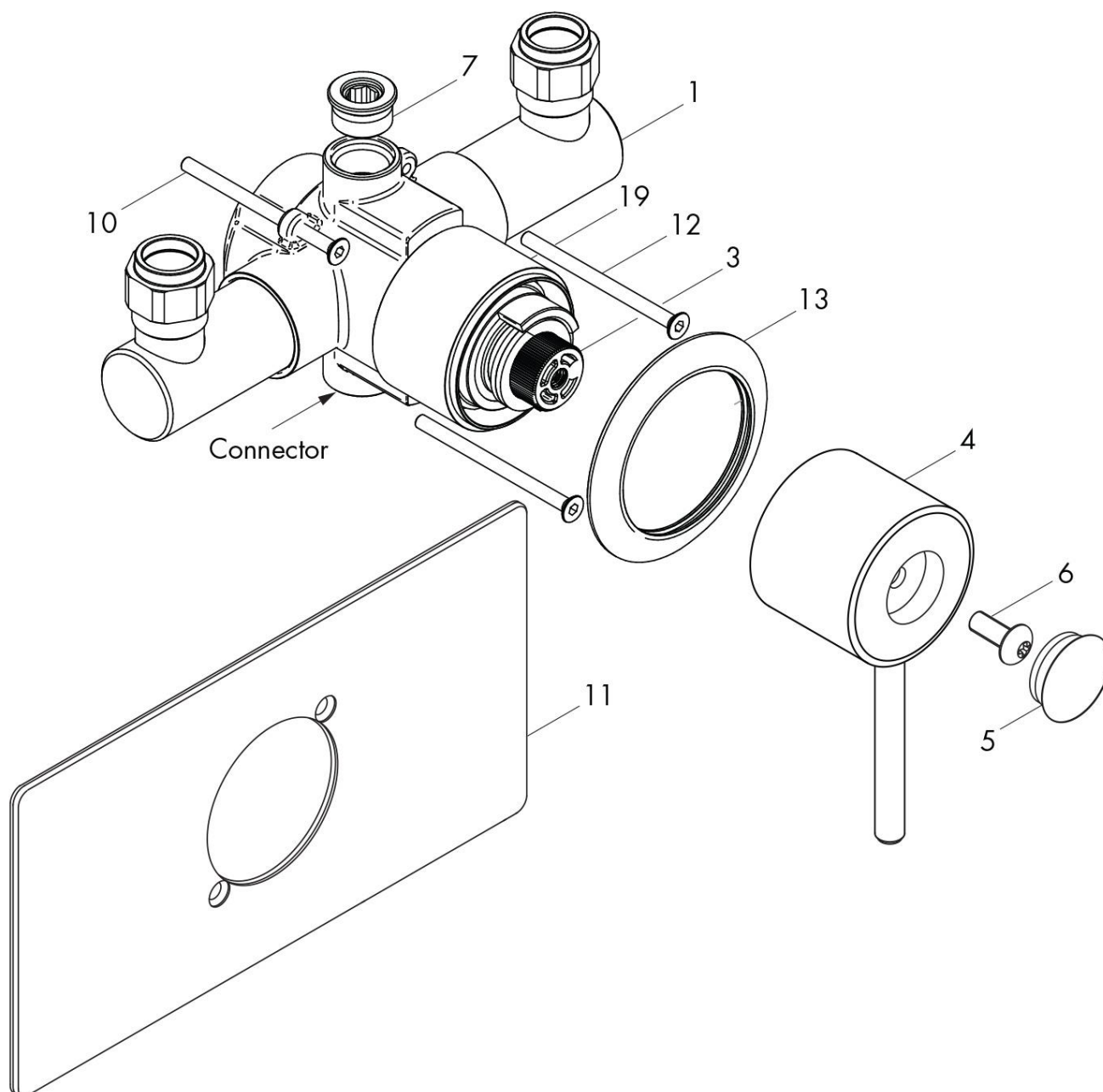
H&L thermostatic showers must be installed and commissioned correctly to ensure that water is supplied at a safe temperature to suit the users.

The maximum mixed temperature takes account of the allowable tolerances inherent in thermostatic shower mixers and temperature losses.

It is not a safe bathing temperature for adults or children.

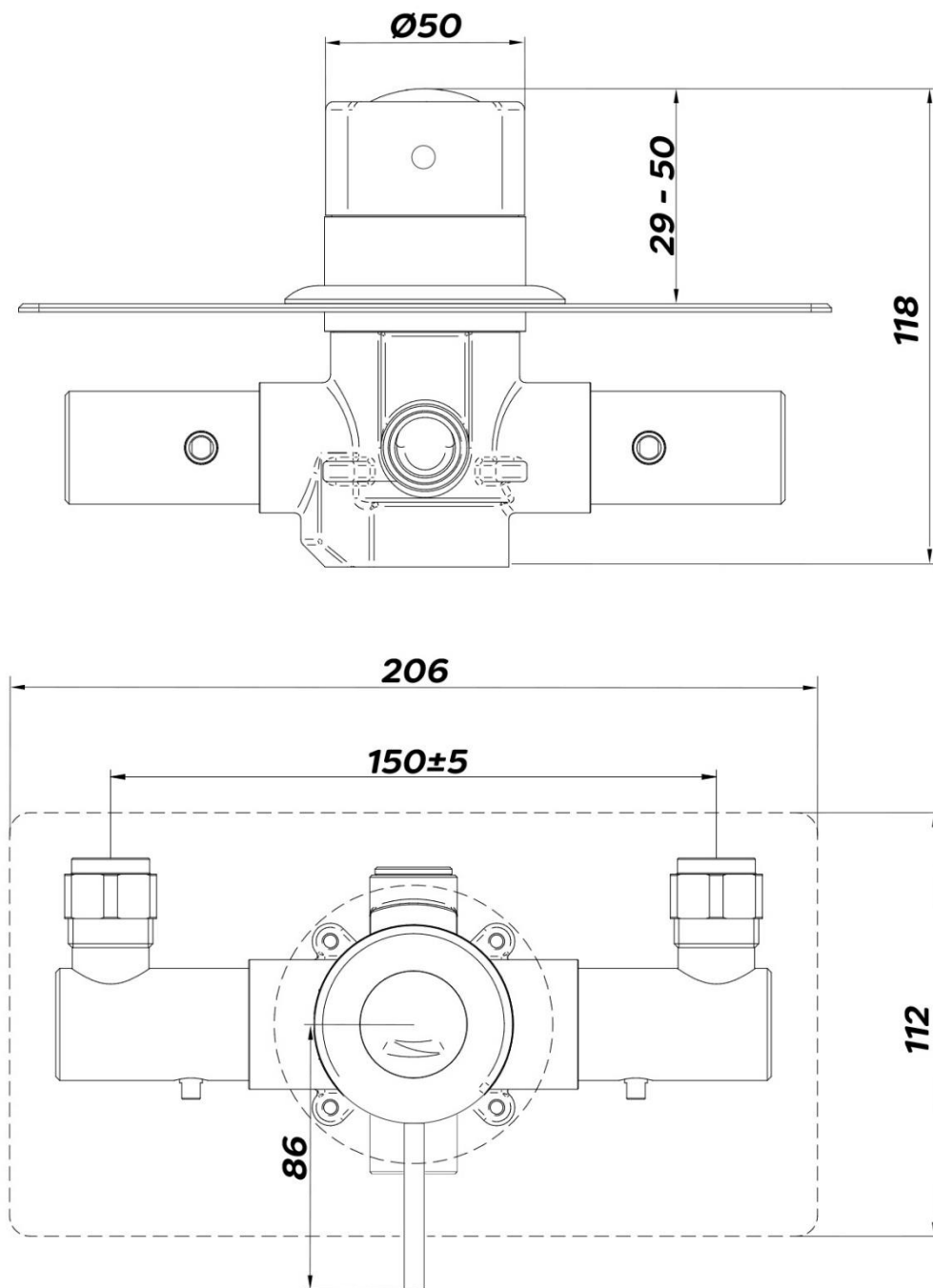
The British Burns Association recommends 37 to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standard Act 2000, the maximum mixed water outlet temperature is 43°C.

Concealed Sequential Thermostatic Shower:



Item	Qty	Component	Item	Qty	Component
1	1	Valve body - 79020CP	10	2	Wall fixing screw
3	1	Thermostatic cartridge	11	1	Rectangular concealing plate
4	1	Lever	12	2	Plate fixing screw
5	1	Cap	13	1	Concealing plate - small
6	1	Retaining screw	19	1	Cylindrical Concealer
7	1	Outlet plug			

Dimensions: H&L Sequential Thermostatic Shower Valve:



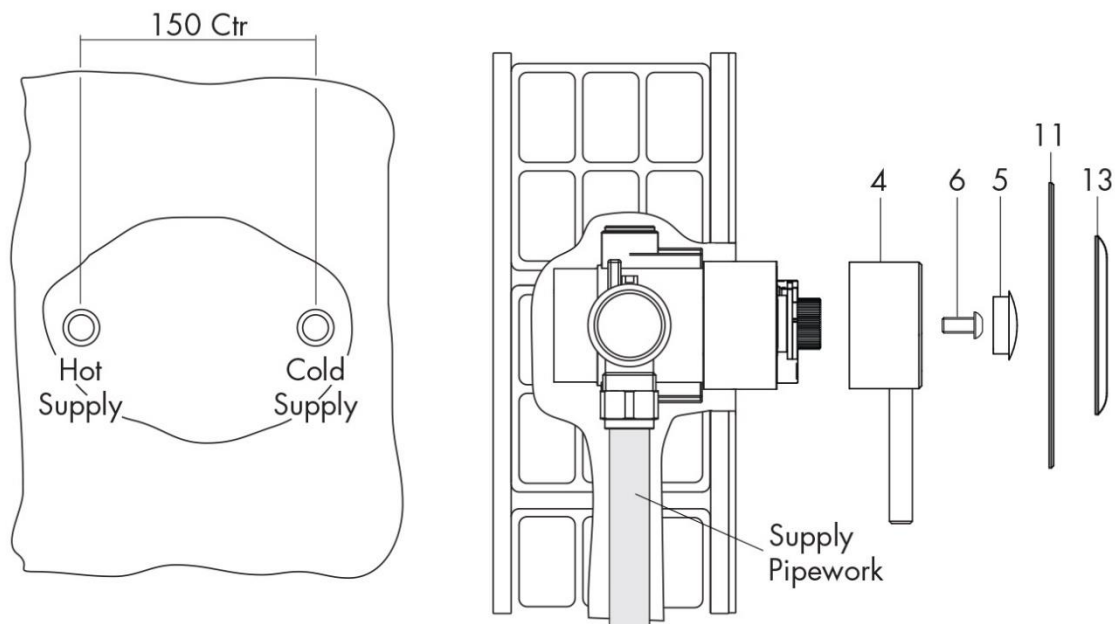
Maximum Operating Parameters H&L Sequential Thermostatic Shower Valve:

Max Inlet Pressure (Static)	10 bar
Max Inlet Temperature	85°C
Max Inlet Pressure (Dynamic)	5 bar
Max Outlet Temperature	41°C
Min Operating Pressure (Dynamic)	0.2 bar
Temperature Stability	±2°C
Max Unbalanced Pressure Ratio	5:1
Min Temp Differential between hot inlet and mixed water outlet to ensure failsafe	10°C
Inlet Connections (Body only)	15mm
Outlet Connection	½"
outlet to ensure failsafe	10°C
Compression (79020CP) 15mm	

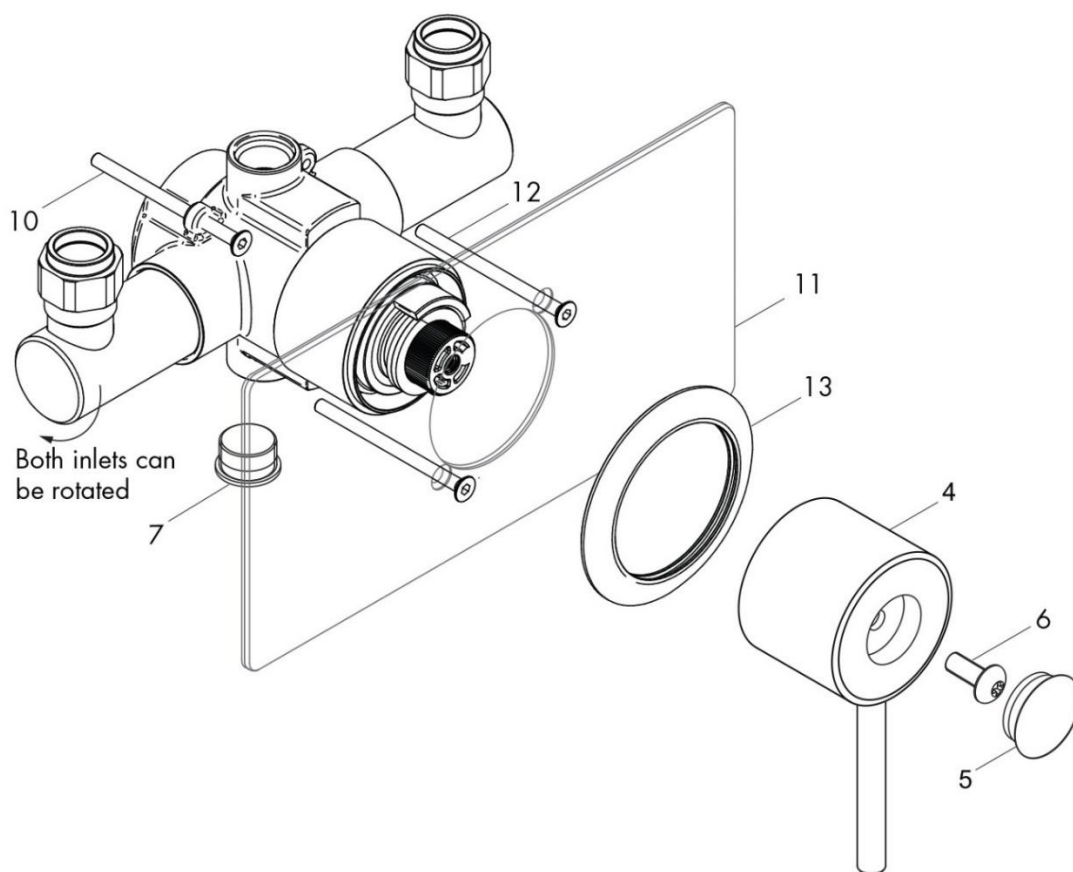
Installation H&L Sequential Thermostatic Shower Valve:

Please note: When fixing the valve, the cold supply connection is on the right-hand side and the hot supply is on the left.

Before commencing remove the concealing plates (11) and (13) from the valve before removing the cap (5), retaining screw (6) and the lever (4).



The outlet connection can be upwards or downward by inserting the outlet plug (7) into the port which is not required.



Calibration H&L Sequential Thermostatic Shower Valve:

The Healey & Lord sequential thermostatic shower valve has a factory set maximum outlet temperature of 41°C via the security setting.

This is based on a balanced supply pressure and a stable hot water inlet temperature of 65°C.

However, the calibration point **MUST** be checked and re-set as necessary to suit site conditions.

Care must be taken when re-calibrating the tap as **INCORRECT CALIBRATION CAN CAUSE INJURY.**

- Remove the indice (5), retaining screw (6), handle (4) and the temperature stop rings (17).
- Temporarily refit the handle (4) and move to the position for the hottest water and allow the outlet temperature to stabilise.
- Using a digital thermometer, it is possible to increase or reduce the mixed water outlet temperature until 43°C is re-established, by slowly rotating the handle.
- Remove the handle (4) and refit the first temperature stop ring (17) onto the splined section of the cartridge at the maximum temperature position.
- Temporarily refit the handle and turn until water stops flowing from the shower and then refit the second temperature stop ring (17) onto the same splined section at the stop position.
- Refit the handle in the reverse order.

PLEASE NOTE THAT ONCE CALIBRATED, THE SECURITY SETTING WILL ONLY BE 41°C UNDER THE SUPPLY CONDITIONS USED FOR CALIBRATION.

Problem Solving

The following details are supplied for on site queries, should you require any further assistance our Technical Department can be contacted on 01603 488709.

Fault	Solution
Showering temperature is not hot enough.	Ensure the hot water supply is at a constant temperature above 60°C. Check for air locks in the pipework. Thermostatic cartridge movement limited due to lime scale build up
The water goes cold during showering.	Insufficient stored hot water. When used with a combi boiler confirm that the boiler is still firing. Adjust the boiler to a minimum setting of 65°C which may not necessarily be the best flow rate.
When the water is set at cold, the showering temperature is too hot.	The hot and cold supply connections have been made in reverse. Thermostatic cartridge movement limited due to lime scale build up
The maximum showering temperature is too hot or when set to hot water runs to cold.	Check the commissioned maximum temperature of the shower valve. Check the connections to the valve have not been made in reverse. Thermostatic cartridge movement limited due to lime scale build up
The flow of water from the shower valve is low.	Check the filters are clean and the supply pressure is above 0.2 bar.
No flow of water	Ensure the valve has not fail-safed and check that there is hot and cold water flow to the valve. Ensure the check valves are not closed.
Shower is stiff to operate	Build-up of limescale on flow control cartridge - service and de-scale
Passing/dripping from outlet	Service flow control cartridge.

The Healey & Lord sequential thermostatic shower valve uses an INTATEC TMV3 Shower Valve – Please see the below Operating / Technical / Maintenance instructions.

Inta TMV3 Thermostatic Shower Valve

Introduction

The Inta thermostatic shower valves have been specifically designed and manufactured to meet the requirements of BS 7942:2011 and NHS D08. The valve has been independently tested and approved as a TYPE 3 valve under the TMV3 scheme.

Technical Specification / Conditions for use T MV3 Valves

Outlet Temperature Adjustment Range 30°C to 50°C	Outlet Temperature Adjustment Range 30°C to 50°C
Temperature Stability $\pm 2^{\circ}\text{C}$	Temperature Stability $\pm 2^{\circ}\text{C}$
Maximum Hot Inlet Temperature 85°C	Maximum Hot Inlet Temperature 85°C
D08 Working Pressure Range	D08 Working Pressure Range
0.2 to 1.0 bar : Low Pressure	0.2 to 1.0 bar : Low Pressure
1.0 to 5.0 bar : High Pressure	1.0 to 5.0 bar : High Pressure

Operating Pressure Range High Pressure	Operating Pressure Range High Pressure
Maximum Static Pressure 10 bar	Maximum Static Pressure 10 bar
Flow Pressure, Hot and Cold 1 to 5 bar	Flow Pressure, Hot and Cold 1 to 5 bar
Hot Supply Temperature 55°C to 65°C	Hot Supply Temperature 55°C to 65°C

NOTE: Valves operating outside these conditions cannot be guaranteed by the Scheme to operate as Type 3 valves. See Table 1 on page 17 for Recommended Outlet Temperatures.

Approvals

TMV3 Scheme Approval Number: Details Available on Request

WRAS Scheme Approval Number: Details Available on Request

Fail Safe Function

The Inta thermostatic shower valves are designed to stop the mixed water flow in the event of either the hot or cold water supply failing when installed in accordance with these instructions.

To ensure thermal shut off the minimum temperature differential between the hot water inlet to the

valve and the mixed water outlet **MUST be at least 10°C.**

Application

The Inta thermostatic shower valve has been independently tested by NSF and certified as meeting the requirements of the NHS D08 specification under the TMV3 Scheme as being suitable for use on the following designations;

Shower HP-S

Temperature Setting

Ensure that the shower valve is commissioned under normal system conditions. The shower valve **MUST** be commissioned to suit site conditions and the desired outlet temperature set by the installer;

- i With normal supply conditions established and the hot and cold water supplies running, open the shower valve to its maximum temperature and leave running.
- ii Remove the indice, retaining screw and handle by pulling away from the tap and the temperature stop ring, see diagram on page 13.
- iii Fully open the flow control and allow the outlet temperature to stabilise.
- iv Temporarily refit the handle and using a digital thermometer it is possible to increase or reduce the mixed water outlet temperature until 38°C is re-established, by slowly rotating the handle.
- v Remove the handle and refit the temperature stop ring onto the splined section of the cartridge at the maximum temperature position.
- vi Refit the handle in the reverse order.

Installation

IMPORTANT - The following instructions must be read prior to the installation of any Inta shower 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.

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 following a flushing of the system with chemicals, valves are checked for correct operation.

1 It is essential that before installing an Inta shower valve to ensure that the supply conditions of the system, to which the tap 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.

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

3 The supply system to which the shower valve is to be installed into 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.

In areas that are subject to aggressive water, provision must be made to treat the water supply prior to the supply entering any product.

4 The maximum flow rate of the shower 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 These thermostatic shower valves has been designed for exposed or concealed mounting. It is essential that access to the shower valve is not be obstructed for commissioning, testing, or any future maintenance that may be required.

6 The hot and cold water supplies must be connected to the tap strictly in accordance with these instructions i.e. hot water supply to the hot port of the shower valve.

7 In a situation where one or both of the water supplies are excessive, it is possible to fit a pressure reducing valve or a flow regulator to reduce the pressure(s) to within the limits as quoted previously.

8 Any thermostatic shower valve must be fitted with a back flow prevention device, such as check valves to prevent the cross contamination of supplies.

9 Independent filters/check valves and isolation valves must be fitted in conjunction with the Inta shower valve, as close as practically possible to the water supply inlets.

The Inta shower valve has an integral filters and check valves in the inlet connection on the hot and cold supplies.

10 It is essential that the shower valve should not be installed in situations where there is a possibility of the shower valve being deprived of water or where demands for water are greater than the actual stored supplies.

11 To ensure that the performance levels of the shower valve is maintained (in the event of cold water failure), the temperature of the hot water supply at the point of entry to the valves must be a minimum of 10°C above the commissioned mixed water discharge temperature.

12 The shower valve must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

Commissioning

IMPORTANT - The following instructions must be read and understood prior to commissioning the Inta thermostatic shower valve. If under any circumstances there are aspects to the installation / system which do not comply with the specification laid down, the shower **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;

1 Ensure that the system is thoroughly cleaned and free from any debris prior to the commissioning the Inta thermostatic shower valve.

2 Commissioning the temperatures must be carried out using a suitably calibrated thermometer preferably a digital thermometer.

3 In the absence of other temperatures being specified, we recommend the outlet temperature quoted in Table 1 are used.

Table 1.

Application	Recommended Set Mixed Water Temp.
Shower	41°C

4 Each shower 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 shower valve are opened during the setting of the mixed water temperature. During commissioning it is advisable to ensure that the water temperatures are established before any attempt to commission.

5 Once the supply temperatures are stable and the normal operating conditions are established, the shower valve can be commissioned. The temperature setting can be adjusted following the procedure described earlier in the Temperature Setting section. We suggest that the following sequence is followed when commissioning the valve:

5.1 Set the mixed water temperature to the required temperature.

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

5.3 Measure and record the temperature of the water discharging from the basin tap.

5.4 Isolate the cold water supply to the tap and monitor the mixed water temperature.

5.5 Measure and record the maximum mixed water temperature and the final temperature. The final temperature found during the test should not exceed the value quoted in Table 2.

5.6 Record all the equipment used during the commissioning

Table 2.

Application	Maximum Set Mixed Water Temp.
Shower	43°C

6 Ensure that the application, in which the basin tap 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 basin tap.

Maintenance

To ensure the Inta thermostatic shower valve maintains a high level of protection, we advise the following in service testing is conducted (the same equipment used to commission the basin tap initially must be used in the following tasks).

1 After a period of between 6 and 8 weeks from commissioning carry out the following;

1.1 Record the temperature of the hot and cold water supplies.

1.2 Record the temperature of the mixed water from the shower valve.

2 If the mixed water temperature has changed significantly from the previous test results (e.g. $>1^{\circ}\text{K}$), record the change and before resetting the mixed water temperature check that:

2.1 All the strainers are clean.

2.2 All the check valves are in good working order.

2.3 The isolation valves are fully open.

3 If the mixed water temperatures are acceptable, carry out the following:

3.1 Record the temperature of the hot and cold water supplies.

3.2 Record the temperature of the mixed water from the basin tap.

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

3.4 Record the maximum temperature achieved as a result of (3.3) and the final temperature (the final temperature should not exceed the values quoted in table 2)

3.6 Record the equipment used during these tests.

4 If the mixed water temperature is greater than the values quoted in table 2 or the maximum temperature exceeds the corresponding values from previous test results by more than 2°K , the shower valve must be serviced.

5 After a period of between 12 to 15 weeks from commissioning, carry out the sequence of tests as described in Maintenance sections 1, 2, 3 and 4.

6 Dependant upon the results obtained from the first two series of tests; there are a number of possible outcomes:

6.1 If no significant change in the mixed water temperatures (e.g. $\leq 1^{\circ}\text{K}$) is recorded between commissioning and Maintenance sections 1 or between commissioning and Maintenance sections 5, the next in service testing should be carried out at a period of 24 to 28 weeks after initial commissioning.

6.2 If a small change (e.g. 1 to 2°K) in the mixed water temperature is recorded in only one of these periods, necessitating adjustment of the mixed water temperature, then the next in service can be deferred to 24 to 28 weeks after commissioning.

6.3 If small changes (e.g. 1 to 2°K) in the mixed water temperature are recorded in both of these periods, necessitating adjustment of the mixed water temperature, then the next in-service test can be deferred to 18 to 21 weeks after commissioning.

6.4 If significant changes (e.g. > 2°K) in the mixed water temperature are recorded in both of these periods necessitating service work, then the next in-service test should be carried out at 18 to 21 weeks after commissioning.

7 The general principle to be observed after the first 2 or 3 in-service tests is that the intervals for future tests should be set to those which previous tests have shown can be achieved with no more than a small change in mixed water temperature.

8 In all areas periodic maintenance of the valve and associated fittings i.e. strainers, check valves will ensure optimum performance levels are maintained.

Spares

A full range of spares are available for this product from Inta.

PLEASE NOTE: Only genuine spares should be used.