

Warranty Information

Proof of purchase will be required.

The guarantee does not cover faults or damage caused by incorrect installation and/or maintenance, ordinary wear and tear, water composition, etc.

*Please see www.deva-uk.com for full terms and conditions of warranty

Cleaning

Your product has a high-quality finish and should be treated with care to preserve the visible surfaces. Never use abrasives or abrasive cleaning agents to clean this product clean regularly with contamination free warm water and a damp soft cloth. Do not use products containing chlorine bleach or hydrochloric acid as these can damage the product.

We have a policy of continuous improvement and reserve the right to change specifications without notice.

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INSTCLNCON
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Deva Exposed/Concealed Dual Control Thermostatic Mixer Shower

CLNCON

Installation Guide

Technical Specification

Working Pressure:

Min: 0.1 Bar

Max: 5.0 Bar

Operating Temperature:

Hot: 85°C

Cold: 5°C

Inlet Connections:

3/4" BSP

Features:

- Suitable for both exposed and concealed installations
- Adjustable centres for ease of installation 148 - 156mm
- Automatic shutoff in the event of hot or cold water supply failure
- Easy to use peg lever gives you maximum control
- Thermostatic cartridge's for precise temperature control
- Separate flow and temperature controls for ease of use
- Supplied with a round brass back plate for perfect finishing
- Suitable for all plumbing systems



Contents

Congratulations on your purchase of your new Thermostatic Shower Valve. Our fitting instructions have been created with you in mind to provide you with all the information you require and, if you need any further help, please don't hesitate to contact our customer care team on 0800 195 1602.

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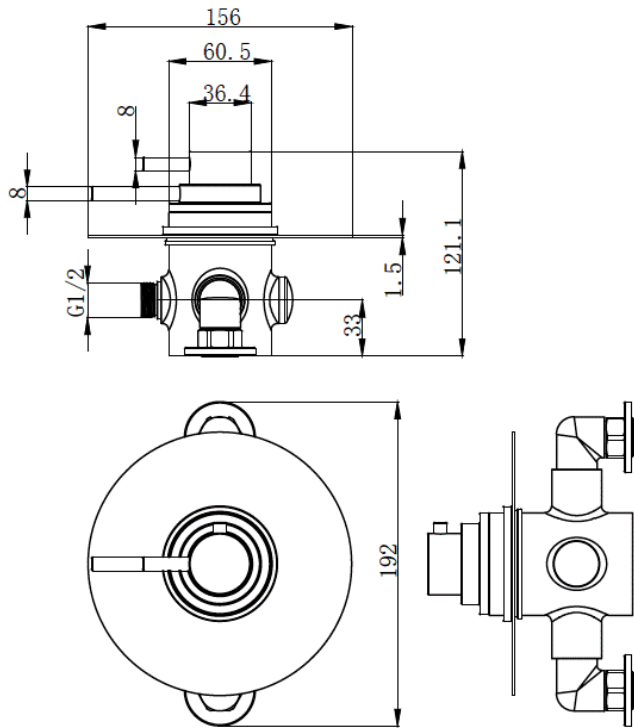
PLEASE RETAIN THIS DOCUMENT FOR FUTURE REFERENCE

IMPORTANT: Please read all of the instructions before installation.

Troubleshooting

<i>Problem</i>	<i>Cause</i>	<i>Solution</i>
1. Reduced or missing flow	<p>a) Closed water inlets.</p> <p>b) Blocked mixer.</p> <p>c) Blocked connecting pipes.</p> <p>d) Blocked hand shower.</p> <p>e) Water flow reduction when other shut off valves are in function.</p>	<p>a) Control the check valves.</p> <p>b) Check if the inlet filters are cleaned.</p> <p>c) Check if the connecting pipes are cleaned.</p> <p>d) Clean or replace the hand shower.</p> <p>e) Control if the check valves are fully open. Reduce the water flow of all open outlets.</p>
2. The mixer does not shut off.	<p>a) The gaskets are dirty.</p> <p>b) The gaskets are damaged.</p>	<p>a) Clean/replace the gaskets.</p> <p>b) Replace the headwork.</p>
3. Water too cold.	<p>a) There is not enough hot water flowing through the mixer.</p> <p>b) The boiler system does not give enough hot water.</p> <p>c) The hot water inlet is restricted.</p>	<p>a) Set the regulation handle towards the hot water side.</p> <p>b) Increase the temperature of the water fed from the boiler.</p> <p>c) Check for any restriction on the pipeline.</p>
4. Water too hot.	<p>a) There is not enough cold water flowing through the mixer.</p> <p>b) The cold water inlet is restricted.</p>	<p>a) Set the regulation handle towards the cold water side.</p> <p>b) Check for any restriction on the pipeline.</p>
5. Temperature varies during use.	<p>a) Temperature has decreased below the minimum required.</p>	<p>a) Wait for the hot water to be restored.</p>
6. Fluctuation of temperature of the mixer water	<p>a) Inverted connections.</p> <p>b) Inverted mixer.</p>	<p>a) Use a "reverse" cartridge.</p> <p>b) Invert the mixer</p>
7. Increasing of the temperature by turning clockwise. Decreasing of the temperature by turning anti-clockwise	<p>a) Inverted connections.</p> <p>b) Inverted mixer.</p>	<p>a) Use a "reverse" cartridge.</p> <p>b) Invert the mixer.</p>

Line Drawings



INSTALLATION REQUIREMENTS

This valve is suitable for All Pressure heating systems.

Prior to installing your Thermostatic mixing valve it is important to fully understand the site installation conditions and the location where you intend to install your product. This Thermostatic mixing valve is designed to be used within the following systems:-

Gravity Fed Hot and Cold

Wherever possible for the best performance of the product, it is always best practice to have equal pressures supplied to both hot and cold inlets. However this product will only work up to a maximum 5 to 1 pressure differential.

Unvented Systems

Pumped Systems

Gas Combination Boiler

Your product should be fitted in compliance with the Water Supply (Water Fitting) Authority Regulations 1999. If you are unsure as to what the regulations require, You can contact your Local Water Authority or the Institute of Plumbers for further details.

OPERATING SPECIFICATIONS

	High Pressure	Low Pressure
Maximum Static Pressure - Bar	10	10
Flow Pressure, Hot & Cold - Bar	0.5 to 5	0.1 to 1
Hot Supply Temperature - °C	55 to 65	55 to 65
Cold Supply Temperature - °C	Equal to or Less than 25°	Equal to or less than 25°

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

The valves designation of use is for Low Pressure (LP-S) BS EN 1287, High Pressure (HP-S) BS EN1111 and the recommended mixed water outlet for showers at point of discharge is 41°C

For gravity systems a minimum distance of 5 meters is required between the bottom of the storage tank and the shower head. Failure to ensure this criteria is met may cause the Thermostatic mixing valve to work incorrectly. 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 check valves with strainers are inserted in the inlet connections in order to prevent back flow.

RECOMMENDED OUTLET TEMPERATURES

The NSF TMV Scheme recommends the following set maximum mixed water outlet temperatures for use in all premises:

41°C for showers

The mixed water temperature must never exceed 46°C

The maximum mixed water temperature can be 2°C above the recommended maximum set outlet temperatures.

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 the 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°C 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 should 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.

Important points to note before commencing installation of your shower mixer. You should have:-

1. Check the contents of the box and all parts are present and correct.
2. Check to ensure the minimum operating conditions can be met.
3. The correct tools to perform a trouble free installation
4. Considered the surrounding environment where the installation is to take place and any potential hidden dangers.
5. Isolate both the hot and cold water supplies

OPERATING YOUR SHOWER VALVE

Front Lever Operates The Temperature

Rear Lever Operates Flow

In-service testing:

It is recommended that all TMV2 approved valves are tested and evaluated against the commissioning setting results once a year. Whilst this is a recommendation in user / owner domestic dwellings, a duty of care obligation should be considered in commercial bathroom or subletting situations. When in-service testing is undertaken the following performance checks shall be carried out.

- 1) The supply conditions (temperatures & pressures) are broadly the same as they were at the time of installation.
- 2) Measure the mixed water temperature at the outlet(s).
- 3) Carry out the cold water isolation test.

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 cold water isolation test criteria is achieved, then the valve is working correctly and no further service work is required. If the performance falls outside of that acceptance criteria then service or adjust the valve in line with the manufacturer's instructions.

Note:

Any TMV that has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturers' instructions.

Commissioning, maintenance and in-service test records must be kept for public buildings in accordance with any water safety plan.

COMPONENTS

COMMISSIONING

Check the following:

The designation of the thermostatic mixing valve matches the application.

The supply pressures are within the valves operating range.

The supply temperatures are within the valves operating range.

Isolating valves (and strainers preferred) are provided.

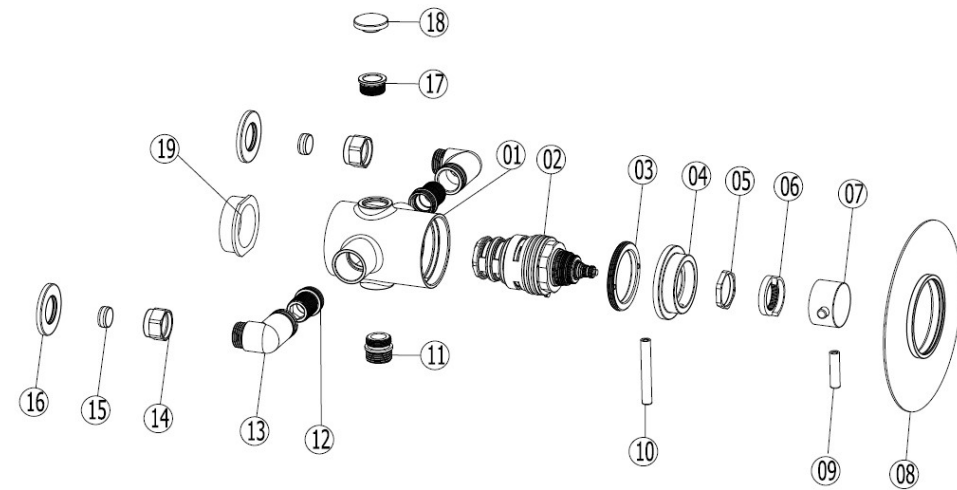
If all these conditions are met, proceed to set the mixed water temperature

It is a requirement that all TMV2 approved valves shall be verified against the original set temperature results once a year. When commissioning/testing is due the following performance checks shall be carried out.

Measure the mixed water temperature at the outlet

Carry out the cold water supply isolation 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.

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



- 1 Valve Body
- 2 Thermostat Cartridge
- 3 Cartridge Cap
- 4 On/Off Handle Cap
- 5 Mounting Nut
- 6 Positioning Gear
- 7 Temperature Control Handle
- 8 Concealing Plate
- 9 Temperature Control Lever
- 10 On/Off Lever
- 11 Connector
- 12 Adjustable Connector
- 13 Elbow
- 14 Inlet
- 15 Olive
- 16 Wall Cover
- 17 Blocker
- 18 Cover
- 19 Fixing Seat

INSTALLATION

Concealed

The hot water inlet must be on the left side of the mixer

- Plumb the hot and cold water pipes and mixed water outlet to the desired mixer position. Please refer to the specification drawings showing the position of the mixer inlets, outlet and how to determine the centre of the mixer wall mounting plate.
- Fit the inlet and outlet compression fittings to the ends of the pipework.
- Remove the mixer wall mounting plate via the grub screws from the rear of the mixer.
- Place the mixer wall mounting plate in the correct position and mark the fixing holes.
- Drill the fixing holes in the wall and insert the wall plugs.
- Place the mixer wall mounting plate onto the wall and secure into position with the fixing screws.
- Place the mixer into the wall plate and secure into position with the three grub screws.
- Fit the hot and cold inlet and mixed water outlet pipework to the mixer.
- Tighten the mixer connections.
- Fit the front cover plate.

exposed

The hot water inlet must be on the left side of the mixer

- Plumb the hot and cold water pipes and mixed water outlet to the desired mixer position. Please refer to the specification drawings showing the position of the mixer inlets, outlet and how to determine the center of the mixer wall mounting plate.
- Remove the mixer wall mounting plate via the grub screws from the rear of the mixer.
- Place the mixer wall mounting plate in the correct position and mark the fixing holes.
- Drill the fixing holes in the wall and insert the wall plugs
- Fixing the mixer wall mounting plate with the three screws
- Place the wall covers on the two inlet pipes.
- Place the mixer into the wall plate and secure into position with the three grub screws.
- Fit the hot and cold inlet and mixed water outlet pipework to the mixer.
- Tighten the two chrome nuts

Maintenance & Commissioning

CHANGING THE CARTRIDGE AND CLEANING

Through continued use over time impurities and lime scale could restrict the flow of water through the filters of the cartridge.

To clean it follow the instructions below:

- Shut off water supply to both inlets.
- Remove the lever (1), the grub screws (2) and remove the temperature knob (3)
- Remove the stepped metal washer (4)
- Remove the screws (5) with an Allen key 2,5 mm, remove the ring (6), the teflon ring (7) and take off the closure ring (8).
- Unscrew the cartridge (9) with a 30mm spanner
- Wash the filters under running water or leave to soak in vinegar or de-scaling agent
- Before re-assembling the cartridge (9), clean its housing and grease the O-rings on the cartridge
- Re-assemble the cartridge (9), the closure ring (8), the teflon ring (7) and the ring (6) and the screws (5)
- Re-assemble the stepped plastic washer (4) according to the drawing and turn spindle (A) until you reach required temperature (38°C)
- Re-assemble the temperature knob (3), the grub screw (2) and the lever (1).

