

Handle & plate design  
may vary depending on  
model chosen

# Dual Control Concealed & Exposed Thermostatic Shower Valve

## Installation & Operating Guide



Please leave this Instruction Manual with the end user

**WRAS**  
APPROVED  
PRODUCT

INS004 REV0

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## 1. IMPORTANT INFORMATION

- Thank you for purchasing this high quality dual control thermostatic shower valve. To ensure you get the very best use from this product, please read this installation guide thoroughly.
- In order for the valve to operate it must be installed within certain conditions.
- This shower valve has separate controls for temperature & water flow control, and has been designed for concealed & exposed wall installations. The product is suitable for use on all plumbing systems including gravity, pumped, fully modulating combination boilers and unvented systems.
- Please make sure that any auxiliary products (e.g. shower kits) are suitable for connection to this product.
- Debris in the new pipe work can get into the cartridges. This is easily avoided by thoroughly flushing the pipe work **BEFORE** connecting the shower valve to the water supplies.
- This shower valve is suitable for use with all water supply systems up to a maximum dynamic water pressures of 5 bar (**balanced water pressures are desirable for best performance**). Pressures above this limit may require the fitting of pressure reducing valves into the incoming mains household water supply.
- This product must be installed in such a way as not to cause water damage during use. **We recommend that this product is fitted by a fully qualified installer. The installation must comply with all current water byelaws.**
- **NB. If you experience any difficulty with the installation or operation of your new shower valve, please refer to 'Fault Diagnosis' at the back of this guide.**

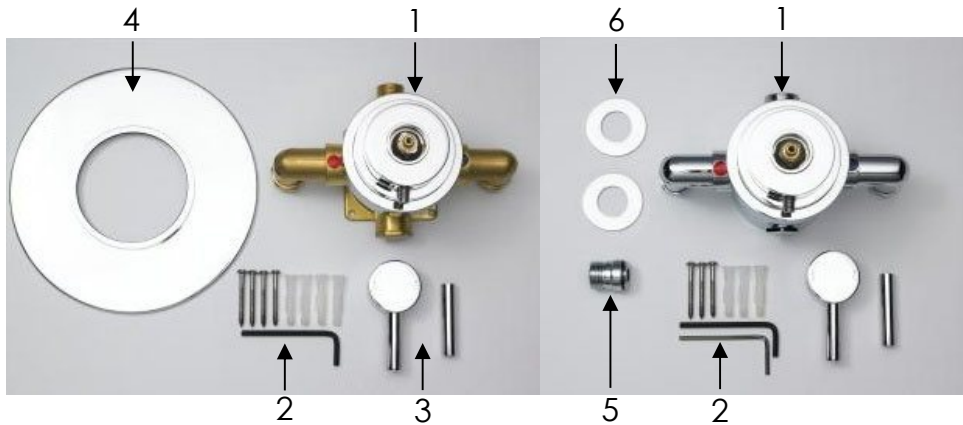
## 2. CLEANING & AFTER CARE

This product is made using high quality chrome plating, and this should be maintained using a clean damp cloth. No abrasive agents or materials should be used, and **any misuse will invalidate your guarantee.**

This precision made thermostatic shower valve will continue to give years of use provided it has been installed & operated in accordance with these fitting instructions. Failure to do this will invalidate any guarantees.

## 3. BOX CONTENTS

4. Please note: Handles & plate may vary depending on the model supplied.

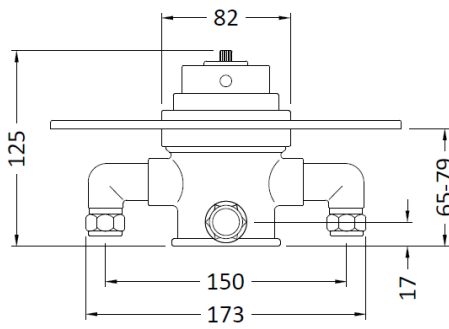


1. Main thermostatic shower valve body with removable check valves and strainers in the elbows of the product.
2. Fixing pack with Allen key.
3. Chrome thermostat handle & flow lever.
4. Chrome concealing plate.
5. Chrome ½" BSP adaptor.
6. Chrome inlet wall flanges.

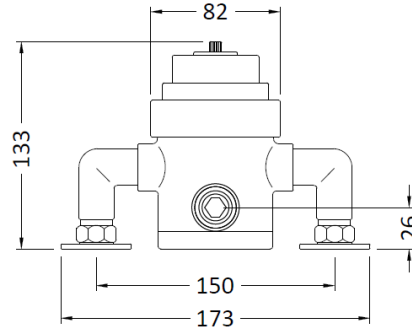
Other items that you will require which are not supplied include (this is not an exhaustive list): Isolation valves, Screwdrivers, Adjustable Wrench, Bucket (for flushing out pipework), Thermometer, Silicone and a Spirit level.

## 5. DIMENSIONS

ALL DIMENSIONS ARE APPROXIMATE



CONCEALED VALVE

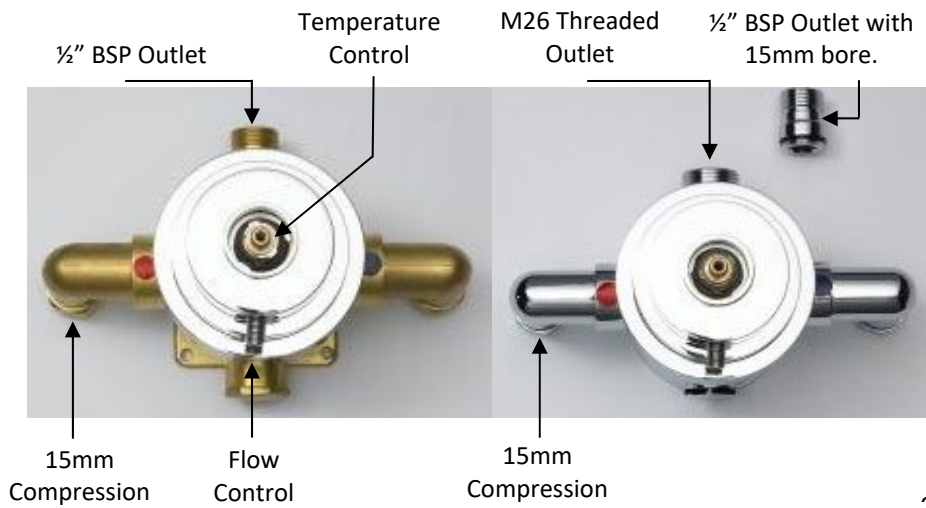


EXPOSED VALVE

## 6. PLUMBING CONNECTIONS

The pipework on site running to the valve should be plumbed with the hot on the left and the cold on the right.

The hot inlet of the valve must be connected to the hot pipework. The hot inlet of the valve will be marked.



## 7. INSTALLATION

1. Before installation, please read the Conditions of Use and Commissioning section and ensure the supply system conditions comply.
2. You must install accessible isolation valves in the HOT & COLD water supply lines for servicing purposes.
3. The plumbing connections on the inlets are 15mm compression. The outlets are ½" BSP for the concealed valve and M26 for the exposed valve in order to take 18mm diameter riser tubes. One 1/2" BSP adaptor is also supplied in the box. This has a 15mm bore size in order to make a compression fitting on to 15mm pipe.
4. Determine the fixing position for the valve with 150mm inlet centres.
5. For concealed showers a recess will be required in the wall in order to fit the valve. The recess will need to be between 65 and 79 mm deep in order for the face plate to be fitted.

For exposed installations, secure the valve back plate to the wall in the correct position.

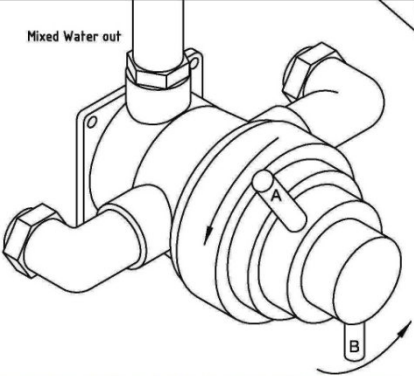
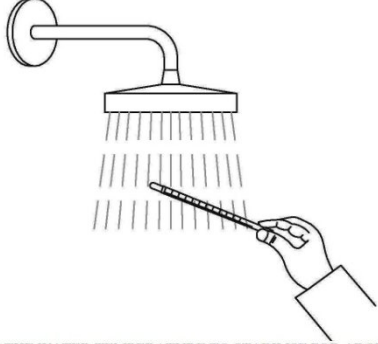
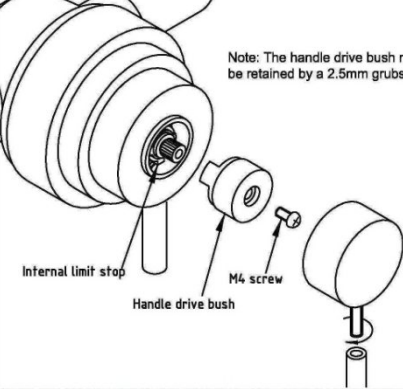
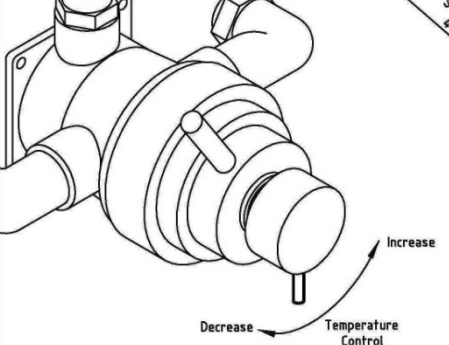
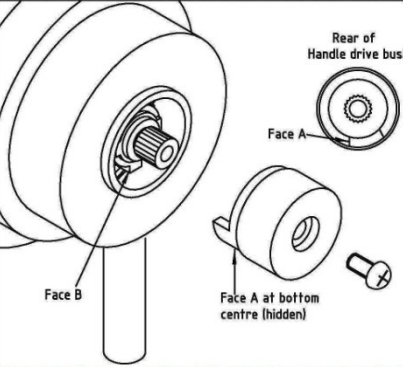
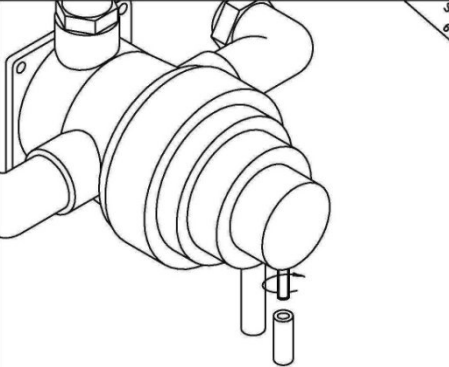
6. The shower valve can now be mounted. For concealed shower valves, ensure the valve body is mounted to the correct depth from the finished wall surface. The cover plate should cover the recess made for the shower valve body. Make sure there is adequate clearance around the shower valve for servicing purposes when the plate is removed.

For exposed shower valves mount the valve body on to the back plate.

**If you wish to install the valve with the outlet facing down, simply remove the ½" BSP outlet from the top and remove the hexagonal blanking cap from the bottom and swap them over.**

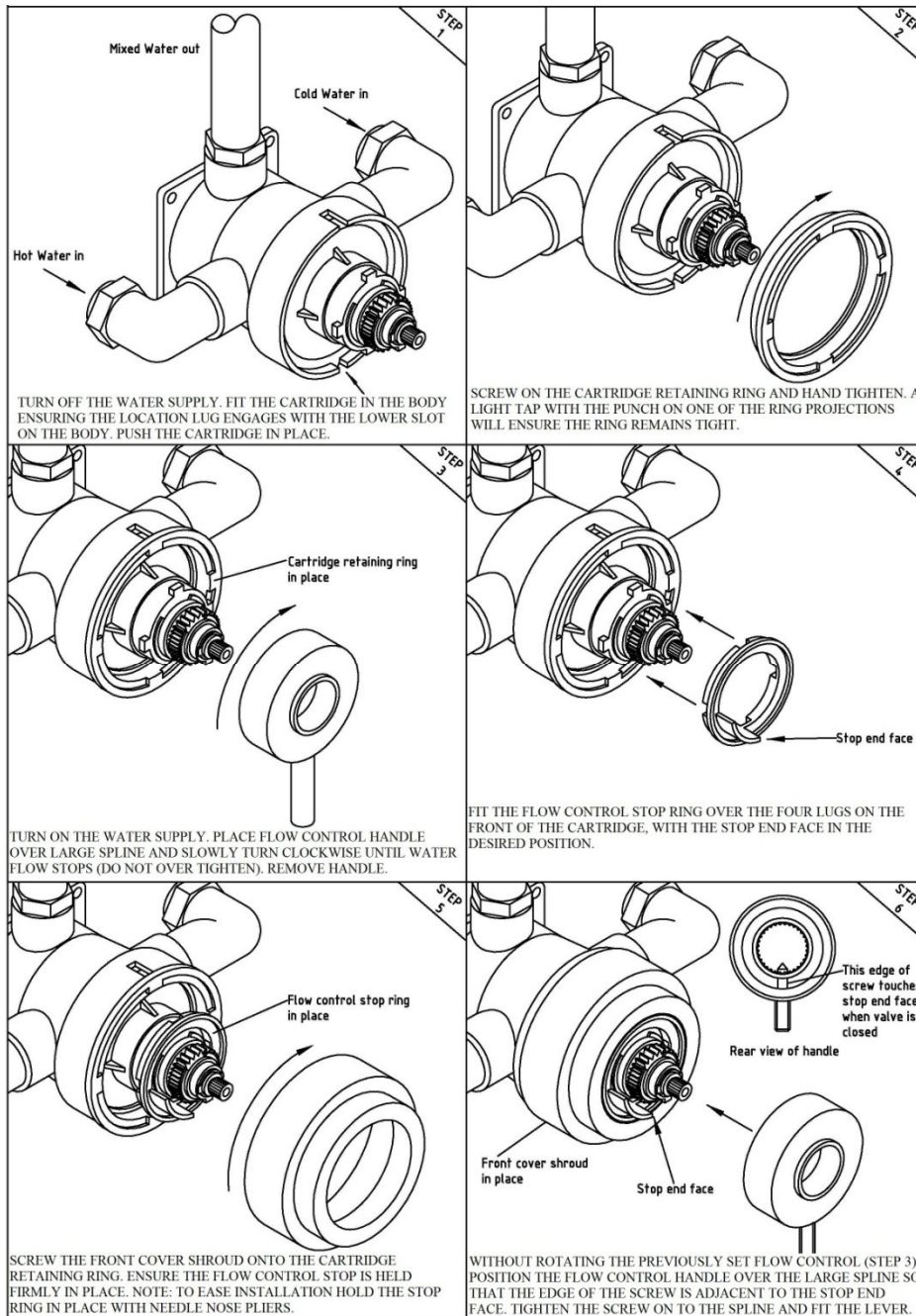
7. Now that the shower valve body is securely mounted onto the wall, the pipework can be flushed through in order to remove any debris before the valve is connected. **Failure to do this could invalidate the guarantee.**
8. The plumbing connections should then be made to the HOT & COLD water inlets (which are clearly marked). **If for some reason the pipework feeds on site are the wrong way around, the cartridge can be taken out of the valve body turned 180° and placed back in the valve body.**
9. Make the plumbing connection to the valve outlet. This will take the water to the chosen auxiliary product (shower kit) you have selected to run with this shower.
10. Turn on the water supply and check for leaks.
11. Check the max water temperature from the terminal fitting with a thermometer. We recommend that the maximum terminal outlet temperature is 41°C. If the water temperature is not suitable please see the Temperature Adjustment Section. **The mixed water temperature at the terminal fitting must never exceed 46°C.**
12. Make sure the water flow shuts off when the valve is in the off position. If not please see the flow control setting section.
13. The valve can now be commissioned. Please see the Conditions of Use & Commissioning section.
14. If a concealed valve is being installed the face plate will need to be put in place. To do this apply a small bead of silicone behind the chrome concealing plate, this will give a water tight seal so water cannot ingress into the wall cavity. Slide the plate into position over the chrome sleeve and fit up against the finished wall surface. If an exposed valve is being installed, apply a bead of silicone behind both wall flanges to give a watertight seal.
15. Fit the chrome control handles. The thermostatic control handle is clearly marked with H & C.

## 8. TEMPERATURE ADJUSTMENT

|   |  |
|---|--|
| <p><b>STEP 1</b></p>  <p>Mixed Water out</p> <p>TURN FLOW CONTROL A ANTICLOCKWISE TO THE MAX FLOW POSITION. TURN FLOW CONTROL B ANTICLOCKWISE UNTIL IT CONTACTS THE INTERNAL LIMIT STOP.</p>   | <p><b>STEP 2</b></p>  <p>ALLOW THE WATER TEMPERATURE TO STABILISE FOR ABOUT 3 MINS AND THEN CHECK THE TEMPERATURE. PROCEED TO STEP 3 IF TEMPERATURE IS NOT 41 DEGREES C.</p>   |
| <p><b>STEP 3</b></p>  <p>Note: The handle drive bush may also be retained by a 2.5mm grub screw.</p> <p>Internal limit stop</p> <p>Handle drive bush</p> <p>M4 screw</p> <p>SHUT OFF THE WATER FLOW. UNSCREW THE DECORATIVE LEVER FROM THE TEMPERATURE HANDLE &amp; SLACKEN THE LOCKING SCREW BELOW IT. REMOVE THE HANDLE. REMOVE THE M4 SCREW &amp; HANDLE DRIVE BUSH.</p>  | <p><b>STEP 4</b></p>  <p>Increase</p> <p>Decrease</p> <p>Temperature Control</p> <p>REFIT THE HANDLE DRIVE BUSH INTO THE HANDLE USING THE SCREW AT THE SIDE OF THE HANDLE. TURN ON THE WATER FLOW. REFIT THE TEMPERATURE CONTROL HANDLE SO THAT IT JUST ENGAGES THE SPLINE OF THE SPINDLE. SLOWLY TURN THE HANDLE IN THE APPROPRIATE DIRECTION UNTIL THE REQUIRED TEMPERATURE IS REACHED. ALLOW THE TEMPERATURE TO STABILISE. REMOVE THE HANDLE WITHOUT TURNING.</p> |
| <p><b>STEP 5</b></p>  <p>Rear of Handle drive bush</p> <p>Face A</p> <p>Face B</p> <p>Face A at bottom centre (hidden)</p> <p>REMOVE THE HANDLE DRIVE BUSH FROM THE HANDLE. WITHOUT ROTATING THE TEMPERATURE SPINDLE, REPLACE THE HANDLE DRIVE BUSH ON THE SPINDLE SO THAT FACE A IS AGAINST FACE B. THIS PREVENTS FURTHER ANTICLOCKWISE MOVEMENT OF THE SPINDLE THUS MAINTAINING A SAFE TEMPERATURE. RETAIN WITH THE SCREW.</p> | <p><b>STEP 6</b></p>  <p>REFIT THE TEMPERATURE HANDLE, TIGHTEN THE SIDE SCREW ON TO THE HANDLE DRIVE BUSH AND FIT THE DECORATIVE LEVER.</p>  |



## 9. FLOW CONTROL SETTING



## 10.CONDITIONS OF USE & COMMISSIONING

Conditions of use for Type 2 valves:

|                                 | 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.

### **Designation of use:**

High Pressure Shower.

Low Pressure Shower.

### **Recommended outlet temperatures**

We recommend the following set maximum mixed water outlet temperatures for use in all premises:

44°C for bath fill but see notes below;

41°C for showers;

41°C for washbasins;

38°C for bidets.

The mixed water temperatures 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 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.

**Commissioning notes for 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.
4. Isolating valves (and strainers preferred) are provided.

If all these conditions are met, proceed to set the temperature as stipulated in the manufacturer installation instructions.

It is recommended that all valves shall be checked 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.

**Note:**

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.

## 11. FAULT DIAGNOSIS

| FAULT   | POSSIBLE CAUSE   |
|---|--|
| After installation, shower only runs HOT or COLD    | <ol style="list-style-type: none"> <li>1. Hot and cold water supplies are plumbed to the wrong sides of the valve. The valve body needs to be plumbed so that the hot supply goes to the hot side of the valve. If the pipework on site is the wrong way around the cartridge will need to be taken out and turned 180° as suggested earlier.</li> </ol> |
| Shower will not run hot enough when first installed | <ol style="list-style-type: none"> <li>1. Check Hot Water supply temperature.</li> <li>2. Maximum temperature needs adjusting. See Temperature adjustment section above.</li> <li>3. Operating Conditions are incorrect.</li> <li>4. Blockage in hot side of the system.</li> </ol>  |
| Hot water in cold & vice versa                      | <ol style="list-style-type: none"> <li>1. Make sure serviceable in line check valves have been fitted. Check &amp; clean them if they are already installed.</li> </ol>  |
| Low flow from the Valve                             | <ol style="list-style-type: none"> <li>1. Flow Control Setting needs adjustment. Please see Flow Control Setting section.</li> <li>2. Possible blockage in the system.</li> <li>3. Operating Conditions are incorrect.</li> <li>4. Valve being obstructed by debris.</li> <li>5. Valve shut off has activated due to Operating Conditions.</li> </ol>    |
| Leak from valve in the off position                 | <ol style="list-style-type: none"> <li>1. Flow Control Setting needs adjustment. Please see Flow Control Setting section.</li> <li>2. Debris in the valve blocking shut off.</li> </ol>  |
| Fluctuating Flow Rate                               | <ol style="list-style-type: none"> <li>1. Possible blockage in the system.</li> <li>2. Operating conditions are incorrect.</li> <li>3. Dynamic inlet pressures are not balanced.</li> <li>4. Shuttle assembly is faulty.</li> </ol>  |

