

9. Guarantee & Registration

9.1 Guarantee

All products are manufactured to the highest standards and 5-year guarantee covers any defect in manufacture.

Any part found to be defective during the above guarantee period will be replaced without charge providing that the product has been installed in accordance with our instructions, used as intended and maintained/serviced as recommended.

In the unlikely event that any problems are encountered with this product's performance on installation, you must obtain guidance/authorisation from our Customer Service Department before any remedial action is taken and be able to supply proof and date of purchase.

The guarantee excludes damage caused by accident, misuse or neglect and does not cover the following:

- Those components subject to wear and tear such as 'O' rings and washers etc,
- Damage caused by faulty installation, Damage caused by any waterborne debris,
- Damage caused by improper cleaning products,
- Damage caused by the use of non-Bristan parts,
- The product being used for a purpose other than intended.

The company reserves the right, in the event of a claim not covered by the guarantee, to charge the claimant for parts and labour at current rates. This guarantee is given in addition to and does not affect your statutory rights.

In the interests of continuous product development we reserve the right to alter the specification as necessary.

9.2 Registration

To register your product with us please complete and return the enclosed registration card.

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BRISTAN

1901 Thermostatic Shower Valve (N CSHXVO C / G)

Fitting Instructions & Contents List

This product has been approved by the Bathroom Manufacturers Association (BMA) under its labelling Water Efficient Product Labelling Scheme. By installing this product, you will be able to reduce the amount of water you use in your home and the amount of energy you use to heat it; a boost for the environment and your pocket.



Before starting any installation project please consider:

Prior to drilling into walls, check there are no hidden electrical wires, cables or water supply pipes with the aid of an electronic detector. If you use power tools do not forget:

- Wear eye protection
- Unplug equipment after use



Please keep these instructions for future reference and the request of replacement parts

CONTENTS

Section	Description	Page No:
1.	Introduction & Water Pressure	1
2.	Specification	2
3.	Pack Contents Checklist	3
4.	Installation	4
5.	Setting	5
6.	Operation	6
7.	General Fault Diagnosis	6
8.	Cleaning & Maintenance	7
9.	Guarantee & Registration	Back Page

1. Introduction

Your Bristan dual control shower valve is a thermostatic mixer incorporating a wax capsule thermostat to ensure constant showering temperatures. This valve had been designed to comply with BS EN 1287:1999 & BS EN1111:1999. Manufactured to the highest quality standards. These instructions are for your guidance to a safe and successful installation and should be left with the user. All products manufacture and supplied by Bristan are safe provided they are installed, used correctly and receive regular maintenance in accordance with these instructions. The installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

WATER PRESSURE

This mixer is suitable for use at all supply pressures. However for optimum use both the hot and cold supplies should be reasonably balanced.

Operating Pressures: Min 0.2 bar, Max 10.0 bar (static).

If the fitting is installed at low pressure (tank fed), then the minimum distance from the highest installed position of the shower head to the underside of the cold tank should be 2 metres to ensure adequate shower performance.

This mixer should be installed in compliance with the Water Regulations. Where the supplies are unbalanced, i.e. hot water from cylinder tank / cold from the mains, approved check valves must be fitted in the supply pipes.

For further details contact your Local Water Authority.

IMPORTANT - PLEASE READ

This fitting needs to be installed in accordance with the following Installation Requirements and Notes (IRN) to ensure they meet the requirements of the Water Supply (Water Fittings) Regulations 1999 and the Scottish Byelaws 2004.

IRN R001

See text of entry for Installation Requirements or Notes.

8.8 Resetting the Maximum Temperature (See Fig. 4)

8.8.1 Turn on the water supplies and fully open the flow control, let the water run long enough to ensure that the hot water supply is at its maximum temperature.

8.8.2 (See Fig.4) Remove the temperature control handle and shroud (43 & 42) by removing the indice (45), remove the (44) and pulling the handle and shroud (43 & 42) off the spindle (A).

8.8.3 Turn the spindle (A) anti-clockwise to increase the temperature and clockwise to reduce it and set to preferred maximum temperature setting.

8.8.4 Refit the handle and shroud (43 & 42) so that the stop pin is at the maximum position then refit the grub screw (44) and cap (45).

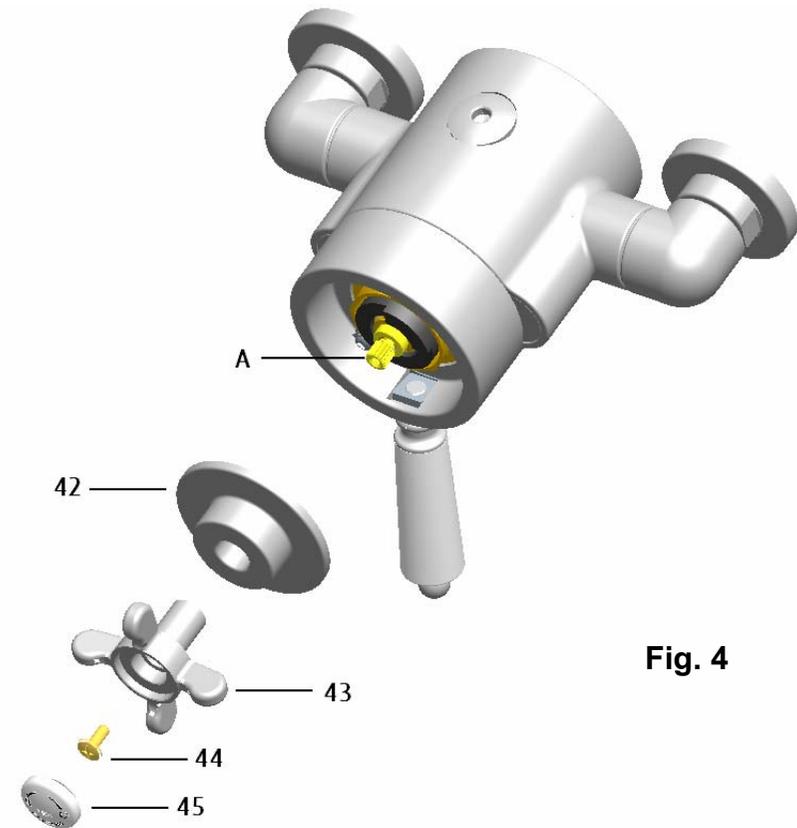


Fig. 4

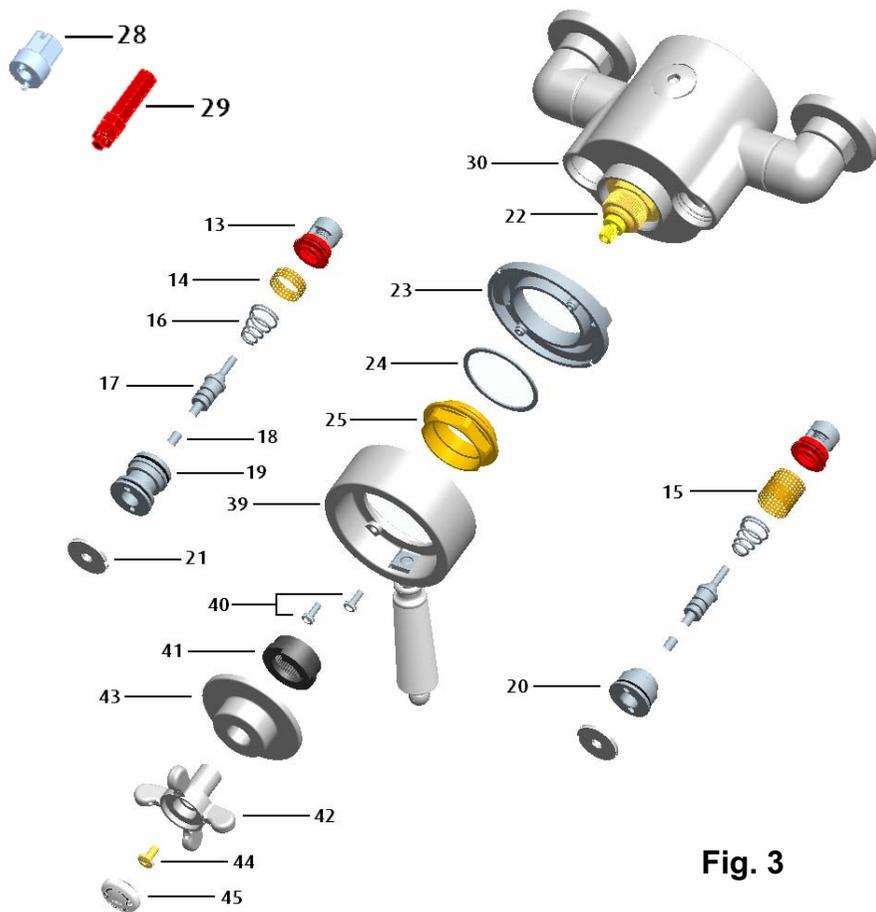


Fig. 3

8.6 Cleaning the Filters (See Fig. 3)

8.6.1 With the handles and cam removed, prise off the chrome caps (21) and unscrew the pin guides (19 & 20) with the maintenance tool (28). Remove the pins (17), and the caps (18), springs (16) and the filters (14 & 15).

8.6.2 Clean the filters and reassemble ensuring any debris is flushed from the body.

8.7 Flow Valve Maintenance (See Fig. 3)

IMPORTANT NOTE: ISOLATE THE WATER SUPPLY TO THE SHOWER VALVE TO CARRY OUT THIS PROCEDURE.

8.7.1 With the handles and filters removed. Unscrew the valves (13) with the maintenance tool (29) or a 10mm hexagonal key (not supplied).

8.7.2 Clean the valve seating washers, check that the valves are moving freely and reassemble.

IRN R040

Schedule 2-15 (1)

The fitting shall be installed so that its outlet discharges above the spill-over level of any fixed appliance as indicated below:-

For backflow protection in domestic or installations up to, and including, Fluid Category 3.

1.	2.
Size of tap or combination fitting.	Vertical distance of outlet above spill-over level.
1. Not exceeding 1/2in	20mm
2. Exceeding 1/2in but not exceeding 3/4in	25mm
3. Exceeding 3/4in	70mm

If the fitting cannot be installed as indicated in the table it shall be installed:

- a) with an approved double check valve assembly or some other no less effective backflow prevention device immediately upstream of the inlet; or
- b) so that it draws water by gravity only from a cistern, or cylinder having a permanently open vent pipe, and the distributing pipe supplies no other fittings (other than a draining tap) at a lower level.

For backflow protection in premises or installations up to, and including Fluid Category 5.

The vertical distance of the outlet above the spill-over level shall be not less than 20mm or twice the diameter of the inlet pipe to the fitting, which ever is the greater. If the fitting cannot be installed as indicated it shall be installed with a backflow

2. Specification

Inlet Connections: 15mm compression with 150mm between centres.

Water Pressures: Min. 0.2 bar - Max. 10 bar.

Maximum recommended imbalance between hot and cold supply should not exceed a ratio of 5:1.

Maximum Outlet Temp: Factory Set to 42°C at the final stop.

(can be re-set to suit site conditions)

Conditions of use for Type 2 valves	High Pressure (HP)	Low Pressure (LP)
Maximum Static Pressure - Bar	10	10
Flow Pressure, Hot & Cold - Bar	0.5 to 5	0.1 to 1
Hot Supply Temperature Range - °C	55 to 65	55 to 65
Maximum Cold Supply Temperature - °C	25°C	25°C

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

DESIGNATION OF USE = (HP-S & LP-S)

LP if tested against BS EN 1287, HP if tested against BS EN 1111 and HP & LP if tested against both standards. If designation for use is for HP only and if water supply is fed by gravity then the supply pressure should be verified to ensure the conditions of use are appropriate for the valve. If designation for use is for LP applications the minimum supply pressure for the application is 0.2 bar.

Recommended outlet temperatures

The BuildCert TMV scheme recommends a maximum mixed outlet temperature of 41°C for shower in all premises. 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. 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.

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 recommended 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.

NOTE: The inlet hot water temperature must be at least 10°C above the required blend temperature and the maximum hot water supply should not exceed 80°C.

Installation Requirements

As isolation valves are not provided, the fitting of the isolation valves is required as close as is practicable to the water supply inlets of the thermostatic mixing valve.

Commissioning Notes:

The first step in commissioning a thermostatic mixing valve is to 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.

Accessible isolating valves (and strainers preferred) are fitted.

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

3. Pack Contents Checklist

- | | |
|-----------------------|----------------------------------|
| 1 x Shower Valve | 1 x Surface Mounted Fixing Plate |
| 2 x Elbows | 1 x Shower Fixing Screw Pack |
| 2 x Maintenance Tools | |

4. Installation

4.1 Pre-Installation

4.1.1 Identify all components and check for completeness, particularly before commencing installation.

4.1.2 This mixer should be installed in compliance with Water Regulations. For further details contact your Local Water Authority.

4.1.3 This mixing valve is suitable for use with the following systems:

- Gravity Fed Hot & Cold (Equal Pressure)
- Gravity Fed Hot & Mains Cold (Differential Pressure Maximum Ratio 5:1)
- Un-vented Systems
- Thermal Store Systems
- Gas Combination Boiler
- Pumped System

Please Note: On gravity systems the minimum distance from the underside of the cold-water storage tank to the shower head must be at least 1 metre.

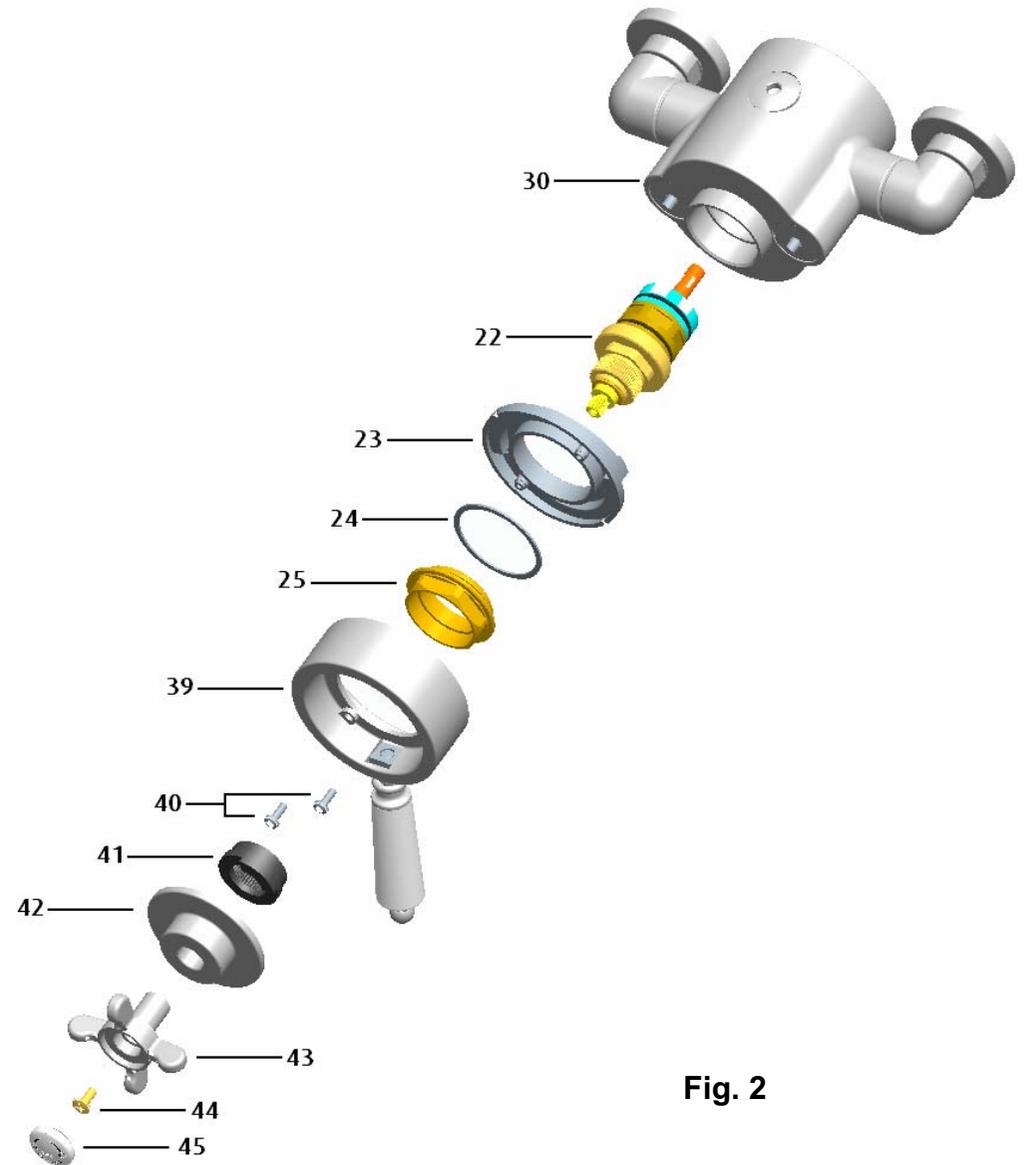


Fig. 2

8. Cleaning & Maintenance

8.1 Cleaning

Your fitting has a high quality finish and should be treated with care to preserve the visible surfaces.

All surface finishes will wear if not cleaned correctly, the only safe way to clean your mixer is to wipe with a soft damp cloth. Stains can be removed using washing up liquid. All bath cleaning powders and liquids will damage the surface of your fitting, even the non-scratch cleaners.

8.2 Regular Maintenance

We advise that the valve is regularly serviced, particularly in hard water areas. It is also important to clean the handset regularly in hard water areas to maintain an even spray/flow of water.

Note: The Maintenance procedures detailed in section 8.3, 8.4, 8.5, 8.6 and 8.8 can be done without isolating water supplies to the shower.

8.3 Cartridge Removal (See Fig. 2).

8.3.1 Remove the temperature control handle and shroud (43 & 42) by removing the cap (45) and the grub screw (44) and pulling the handle off the spindle of the cartridge (22)

8.3.2 Unscrew the 2 handle retaining screws (40) and pull the flow control handle (39) off the valve.

8.3.3 Unscrew the retaining nut (25) and remove the slip ring (24), cam (23) and the temperature stop ring (41).

8.3.4 Unscrew the cartridge (22) anticlockwise to remove from the shower body (30).

8.4 Cartridge Maintenance

8.4.1 Place the cartridge in a bowl and carefully add some hot water (just off the boil) and vinegar to de-scale the cartridge. Leave until the water has cooled.

8.4.2 Then remove the cartridge and rinse with clean water.

8.5 Refitting the Cartridge

8.5.1 Grease the seals with silicon grease and carefully refit the cartridge into the body.

8.5.2 Refit the cam (23) slip ring (24) and the retaining nut (25). Refit the temperature stop (41) with the raised section between 9 O'clock and 12 O'clock.

8.5.3 Refit the flow control handle (39) to the cam (23) and secure with the 2 screws (40).

8.5.4 Reset the maximum temperature and refit temperature handle (see 8.8 on page 10)

Prior to installation identify the supply system and the approximate supply pressures, and using the following table determine if flow limiters have to be fitted to the inlet elbows:

Pressure / Supply	Cold Pressure (bar)	Hot Pressure (bar)	Cold Elbow	Hot Elbow
Low Balanced or Unbalanced	0.1 to 1	0.1 to 1	No	No
Unbalanced	Above 1	0.1 to 1	Yes	No
High Balanced	Above 1	Above 1	Yes	Yes

4.1.4 To fit the flow limiter(s) into the elbows, unscrew the inlet nut and remove the olive. Install the flow limiter (small diameter first) into the elbow inlet.

4.1.5 To fit the elbows push the elbows in to the body and position the elbow in the direction that the water feed will be coming from. Lock the elbow in position with the grub screw using the 2.5mm hexagonal key (not supplied).

4.1.6 Before connecting the mixer, water should be flushed through the system to remove all debris.

4.2 Installation

Prior to drilling into walls, check there are no hidden electrical wires, cables or water supply pipes with the aid of an electronic detector. If you use power tools do not forget:



- Wear eye protection
- Unplug equipment after use

4.2.1 Screw the backplate to the wall with screws and wall plugs. If the wall is tiled, to avoid the possibility of cracking we recommend that the end of the plug be sunk below the tile and the gap filled with silicon sealant.

With hot supply on the left, cold water on the right, when viewed from the front. (A removable red label indicates hot inlet and the 'Bristan' logo should be on the top of the valve body after installation).

4.2.2 Position the wall covering plates onto the inlet nut and place the nuts and olives onto the nuts. Lock the body in position by tightening the grub screws using the 3mm hexagonal key (not supplied).

5. Setting (See Fig. 1)

- 5.1 Turn on the water supplies and fully open the flow control, let the water run long enough to ensure that the hot water supply is at its maximum temperature.
- 5.2 Turn the temperature control anti-clockwise to its maximum position and check the Outlet temperature. This has been factory set at 41°C at balanced supply pressures (0.5 bar).
- 5.3 The maximum temperature can be adjusted to suit site conditions or user preference. To adjust this, follow this procedure:
- 5.4 See Fig. 1 below, remove the temperature control handle and shroud (43 & 42) by removing the indice (45), remove the screw (44) and pulling the handle and shroud (43 & 42) off the spindle (A).
- 5.5 Turn the spindle (A) anti-clockwise to increase the temperature and clockwise to reduce it.
- 5.6 Refit the handle and shroud (43 & 42) so that the stop pin is at the maximum position then re-fit the screw (44) and replace the indice (45).

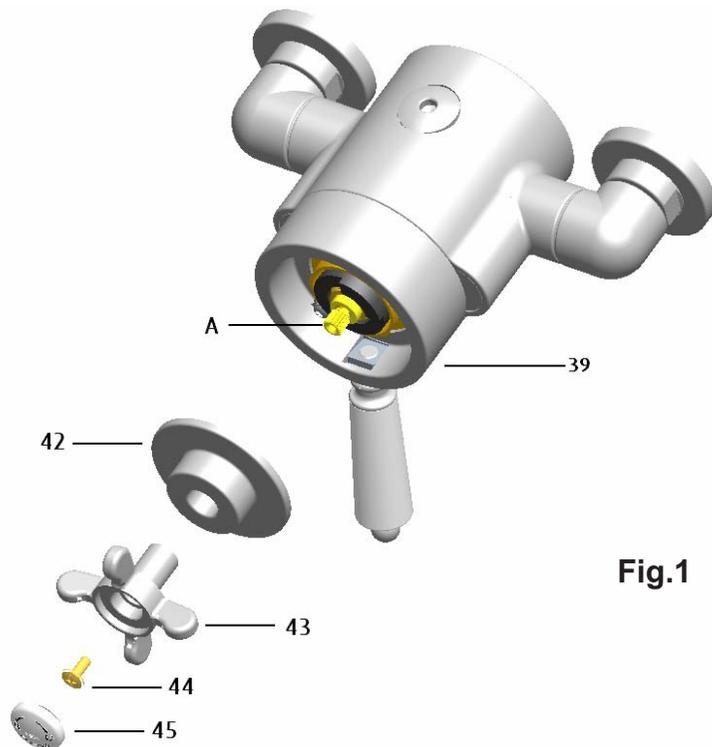


Fig.1

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 the water is still flowing check that the temperature is below 46°C. 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.

NOTES

If there is 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 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 water that is to be tested. Any TMV that has been adjusted or serviced must be re-commissioned and re-tested in accordance with these instructions.

6. Operation

6.1 On / Off - Flow Control

It is important to note that the flow control handle (39, Fig.1) turns through approximately 170 degrees to achieve full and maximum flow anti-clockwise on, clockwise off.

Important: Do not attempt to force the handle past this position as this may cause damage to the valve.

6.2 Temperature Control

The small cross handle (43, Fig.1) controls the temperature. This control stays stationary when the flow control handle is turned.

To adjust the temperature, turn the control anti-clockwise to increase the temperature and clockwise to reduce it.

The valve automatically adjusts for changes in supply temperature and maintains the outlet at the set temperature.

7. General Fault Diagnosis

7.1 If your valve fails to function correctly, the following should be checked:

7.1.1 Check that the hot and cold connections are the correct way around. Hot on the left, cold on the right.

7.1.2 Ensure that the hot water temperature is adequate. The recommended minimum temperature is 60°C.

7.2 If your shower will not turn off:

7.2.1 Check hot and cold inlet valves (13) are free of debris (See 8.7 on page 9).

7.3 If your shower has a low flow rate.

7.3.1 Check that the filters (14 & 15) are not blocked (See 8.6 on page 9).