TROUBLE SHOOTING

1) REDUCED FLOW RATE

Cause: The inlet filters of the ixer and/or the cartridge are obstructed.

Solution: Cleaning filters and/or cartridge: refer to "CARTRIDGE CHANGE AND CLEANING"

Cleaning mixer filters: refer to "FILTER CLEANING"

2) WRONG SETTING OF THE CARTRIDGE

Cause: The mixer is factory preset at 3bar and at a temperature of 60-65°C for hot water and 10-15°C for the cold one corresponding to a mixing temperature of 38°C . In every domestic installation temperatures and inlets pressures can differ from those of production.

Solution: Take the water temperature, using a common thermometer for domestic use Remove the temperature control handle, Turn the broached ring of the cartridge until the blended water reaches the desired temperature, Re-assemble the temperature control handle.

3) CONTINUOUS TEMPERATURE OSCILLATIONS

Cause: The Mixer has been installed with the inverted inlets

Solution: Close the main water supply, Remove the valve body: refer to "FILTER CLEANING", Rotate the valve body reverse the inletses, Re-install the valve body.

4) INCORRECT WORKING OF THE MIXING

Cause: The filters of the cartridge are dirty

Solution: Refer to the "CARTRIDGE CHANGE AND CLEANING"

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SOL Bar Shower
SOLBEF

Installation Instructions & Maintenance Guide

Technical Specifications:

Supply:
Suitable for All Pressure Systems

Working Pressure:
0.2 - 5.0bar

Operating Temperature:
Hot: Max 65°C
Cold: Min 5°C

Inlet Connections:
15mm Compression

Cartridge/Valve Type:
Thermostatic

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GENERAL CHARACTERISTICS

This valve is suitable for all water heating systems provided it is installed correctly

Please refer to installation diagram.

In case of instantaneous heaters hot water flow has to meet at least the minimum flow required by heater and maintain the flame.(Specified by heater manufacturers).

OPERATING SPECIFICATIONS

	High Pressure
Maximum Static Pressure - Bar	10
Flow Pressure, Hot & Cold - Bar	1 to 5
Hot Supply Temperature - °C	52 to 65
Cold Supply Temperature - °C	5 to 20
Temperature Differential - °C	**10**

NOTE: Valves operating outside these conditions cannot be guaranteed by the scheme to operate as Type 3 valves.

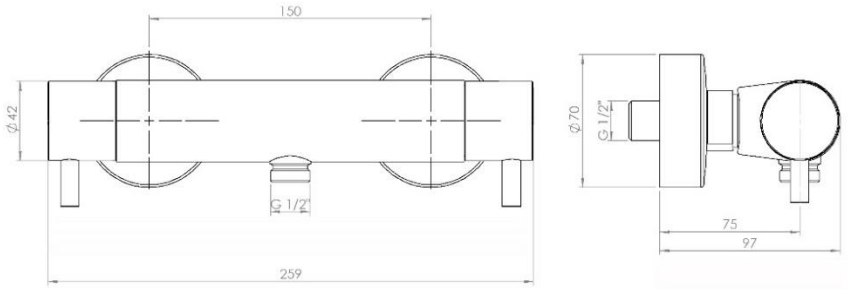
Operating pressure (on hot and cold line) should be kept as balanced as possible in order to assure maximum efficiency

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

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 backflow.

PLUMBING RECOMMENDATIONS

- An independent hot and cold water supply is required for the shower system (do not pipe off ring main) please refer to installation diagrams.
- Large runs of pipework will cause frictional loss of pressure
- The recommended pipe work from both cylinder and water tank should be 22mm minimum for low-pressure systems.
- If more than one shower valve is installed the minimum feed from tank and cylinder should be 28mm. (Ensure adequate supply of both hot and cold water can be maintained).
- Isolation valves are required and must be fitted as close as possible to the mixer.



Care & Cleaning

- Never use abrasives or abrasive cleaning agents to clean this product. Clean regularly with contamination free warm soapy water and a damp soft cloth. Do not use products containing chlorine bleach or hydrochloric acid as these can damage the product. Always rinse the product thoroughly after cleaning to remove cleaning products that can damage the shower.
- If these instructions are followed we believe this fitting will give you many years of satisfactory use.

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

NOTE: In-service tests should be carried out with a frequency, which identifies a need for service work before an unsafe water temperature can result. In the absence of any other instruction or guidance, the procedure described in Annex F may be used

Annex F (informative)

General

In the absence of any other instructin or guidence on the means of determining the appropriate frequency of in-service testing, the following procedure may be used:

a) 6to8 weeks commissioning carry out the tests detailed in in-service tests"

b) 12 to 15 weeks after commissioning carry out the tests detailed in "in-service tests"

Depending on the results of the above tests, several possibilities exists:

a) If no significant change(e.g<1) in mixed water temperatures are recorded between commissioning and 6-8 week testing, or between commissioning and 12-15 weeks testing the next in-service test can be deferred to 24-28 weeks after commissioning.

b) If small changes (eg 1-2) in mixed water temperatures are recorded in only one of these periods, necessitating adjustment of the mixed water temperature, then the next in-service test can be deferred to 24-28 weeks after commissioning.

c) If small changes (eg 1-2) in mixed water temperatures are recorded in both of these periods, necessitating adjustment of the mixed water temperature, then the next in-service test can be carried out at 18-21 weeks after commissioning.

d) If significant changes (eg >2) in mixed water temperatures are recorded in either of these periods, necessitating service work, then the next in-service test should be carried out at 18-21weeks after commissioning.

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

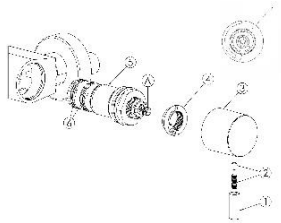
INSTALLATION

- IMPORTANT: Rinse pipe work carefully prior to fitting the mixer.
- Install mixer with the water outlet facing downwards and the temperature control to the right. The Center between the water inlets is 150mm.
- The hot water supply connects to the left hand marked with a red dot. The flexible shower hose fits the outlet at the bottom of the mixer.
- Place sealing washers inside mixer nuts. Screw unions into mixer nuts and tighten with 30mm spanner.
- Turn on water supply and check for leaks.

CLEANING OR REPLACE CARTRIDGE

To remove the thermostatic cartridge (Fig.1)

- Shut off water supply to both inlets
- Remove the temperature control lever (1), remove grub screws (2) with allen key2,5, take off temperature control (3) and plastic stop ring (4).
- Remove the cartridge (5) with a spanner 30mm.
- Clean filters (6) under running water or in vinegar for one night.
- Grease the "O"rings and reassemble the cartridge in to the body, replace the plastic stop ring (4), according to the drawing and turn spindle (A) until you reach required temperature 38°C
- Re-fit temperature control knob (3).Re-fit the grub screws(2) and control lever(1).



TEMPERATURE SETTING

The mixer has been set in the factory under balanced pressures at 38°C. Where conditions are different from the above the temperature of the mixed water may vary from setting. You can adjust the claibration of the mixer to suit individual requirements, turning the broached rod (A) anti-clockwise in order to increase the outlet water temperature, clockwise to decrease it.

METHOD FOR COMMISSIONING THERMOSTATIC MIXING VALVES

PURPOSE

Since the installed supply conditions are likely to be different from those applied in the laboratory test it is appropriate at commissioning, to carry out some simple checks and tests on each mixing valve to provide a performance reference point for future in-service tests.

PROCEDURE

Check that:

a) The designation of the thermostatic mixing valve matches the intended application.

b) The supply pressure are within the range of operating pressures for the designation of the valve.

c) The supply temperatures are within the range permitted for the valve and by guidance information on the prevention of legionella ect.

Adjust the temperature of the mixed water in accordance with the manufacturer's instructions and the requirement of the application and then carry out the following sequence:

a) Record the temperature of the hot and cold water supplies

b) Record the temperature of the mixed water at the largest draw-off flow rate

c) Record the temperature of the mixed water at a smaller draw-off rate, which shall be measured.

d) Isolate the cold water supply to the mixing valve and monitor the mixed water temperature

e) Record the maximum temperature achived as a result of (d) and the final stabilised temperature

NOTE: The final stabilised mixer water temperature should not exceed the values in the table

f) Record the equipment, thermometer ect. Used for the measurements

Guide to maximum stabilised temperatures recorded during site test

Application	Mixed water temperature °C
Bidet	40
Shower	43
Washbasin	43
Bath (44°C fill)	46
Bath (46°C fill)	48

In Service Testing

Purpose

The purpose of in-service test is to regularly monitor and record the performanceof the thermostatic mixing valve. Determination in performance can indicate the need for service work on the valve and/or the water supplies.

Procedure

Using the same measuring equipment or equipment to the same specification as used in the commissioning of the valve, adjust the temperature of the mixed water in accordance with the manufacturer's instructions and the requirement of the application. Carry out the following sequence:

a) Record the temperature of the hot and cold water supplies

b) Record the temperature of the mixed water at the largest draw-off flow rate

c) Record the temperature of the mixed water at a smaller draw-off rate, which shall be measured.

If the mixed water temperature has changed significantly from the previous test result (e.g.>1) record the change and before re-adjusting the mixed water temperature check:

a) That any in-line or integral strainer are clean

b) Any in-line or integral check valves or other anti-back siphonage devices are in good working order

c) Any isolating valves are fully open

With an acceptable mixed temperature, complete the following procedure:

a) Record the temperature of the hot and cold water supplies

b) Record the temperature of the mixed water at the largest draw-off flow rate

c) Record the temperature of the mixed water at the smaller draw-off flow rate, which shall be measured

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

e) Record the maximum temperature achived as a result of (d) and the final stabilised temperature

f) Record the equipment, thermometer etc. used for the measurements

If at step (e) the final mixed water temperature is greater than the valves in the table and/or the maximum temperature exceeds the corresponding valve from the previous results by more than about 2, the need for service work is indicated.