



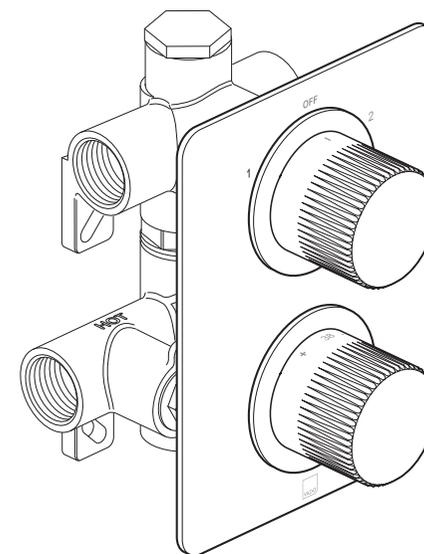
where inspiration flows

SAFARI

Installation Guide
Concealed 2 and 3 outlet thermostatic valve

This instruction booklet covers model:
SAF-148D, SAF-148D/2, SAF-148D/3.
SAF-248D, SAF-248D/2, SAF-248D/3.
(All finish options)

SAF-TRIM-KIT



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Important - please read

Please read these instructions carefully before starting installation and keep for future reference.

Remove all packaging and check the product for missing parts or damage before starting installation.

Any alterations made to this product and fittings may infringe water regulations and will invalidate the guarantee.

The installation must comply with all Local/National Water Supply Authority Regulations/Byelaws and Building and Plumbing Regulations.

To be installed in accordance with BS EN806.

We strongly recommend that you use a qualified and registered plumber.

General installation

This fitting is a mixing device and therefore operating pressures (hot and cold supply) should be kept as balanced as possible in order to assure optimum efficiency.

When installed, the fitting must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999 and Scottish Byelaws 2004.

For further information, contact the Water Regulations department of your local water supplier (see the WRAS website www.wras.co.uk for details) or the Water Regulations Advisory Scheme by email (info@wras.co.uk) or telephone: 01495848454.

Before making any inlet pipe connections, all supply pipes MUST be thoroughly flushed to remove debris. Failure to do so could result in damage or low flow from the mixer unit.

The fitting of strainers is recommended as close as practicable to the water supply inlets of the thermostatic mixing valve.

The fitting of isolation valves is required as close as is practicable to the water supply inlets of the thermostatic mixing valve.

Please take great care when installing this mixer not to damage its surface.

If the concealed valve is connected to pipework that is fixed by soldering, it is essential the concealed valve is protected to prevent the check valves, thermostatic cartridge and headworks being exposed to elevated temperatures which can cause internal damage.

Please note: if installing in an enclosed environment, access should be left for servicing and maintenance. No costs relating to inadequate access can be accepted.

Please note: installation for the SAF-248D is shown throughout this guide, please follow the same instructions to install the SAF-148D.

Operating Specifications

Operating Pressure

Minimum operating pressure for shower **0.2 bar**

Minimum operating pressure for bath **1 bar**

Maximum operating pressure **5 bar**

Operating specifications

Conditions of use for Type 2 valves

	High Pressure
Maximum Static Pressure (Bar)	10
Flow Pressure, Hot & Cold (Bar)	0.5 to 5
Hot Supply Temperature (°C)	55 to 65
Cold Supply Temperature (°C)	Equal to or Less than 25

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

Valve designation: HP-S-T.

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.

Recommended outlet temperatures

The industry recommends the following mixed water outlet temperature for use in all premises:

44° C for bath fill but see notes below;

41° C for showers;

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.

Operating Specifications

In-service testing:

It is recommended that all TYPE 2 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.

Cold water isolation test:

The purpose of the cold-water isolation test is to ensure that the thermal performance of the TMV is adequate at the time of installation and annually thereafter.

Procedure:

1. Operate the TMV and achieve a normal flow rate for the application and record the initial mixed water outlet temperature.
2. Isolate the cold-water supply to the valve.
3. Collect the water discharged from the TMV outlet for 5 seconds.
4. Continue to collect the water discharged from the TMV outlet in a second vessel for a further period of 30 seconds.
5. Re-open the cold-water supply, after 30 seconds measure the mixed water temperature.

Acceptance criteria (Shower):

The volume collected in the first period of 5 s shall not exceed 200 ml.

The volume collected in the second period of 30 s shall not exceed an additional 300 ml.

After restoration of the cold-water supply (30 s) the mixed water outlet temperature shall not differ by more than 2°C from the initial set mixed water temperature.

Notes

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.

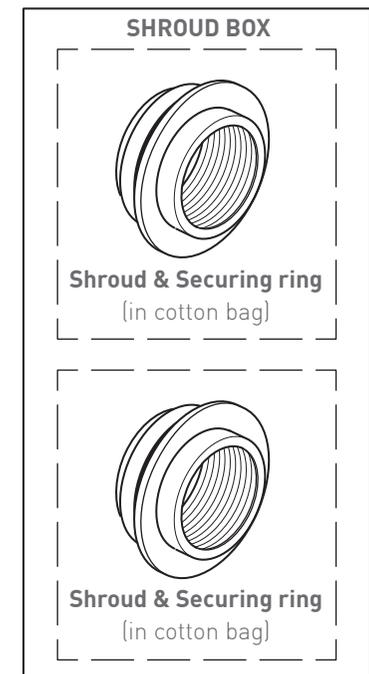
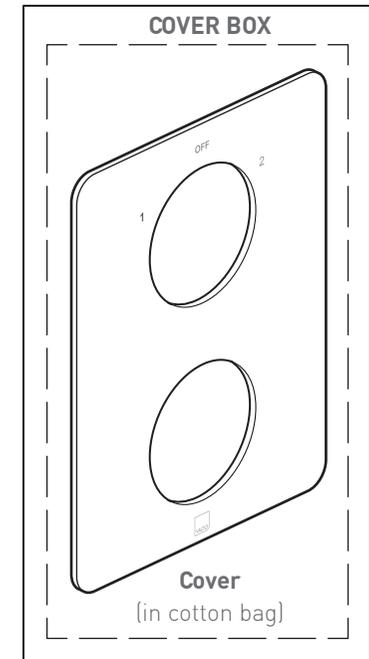
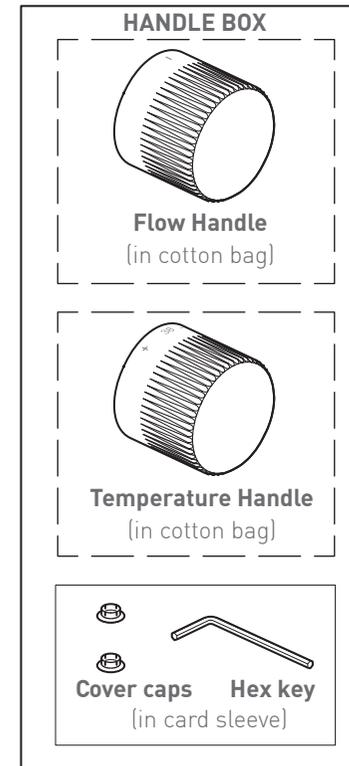
Any TMV that has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturers' instructions.

Contents of Packaging

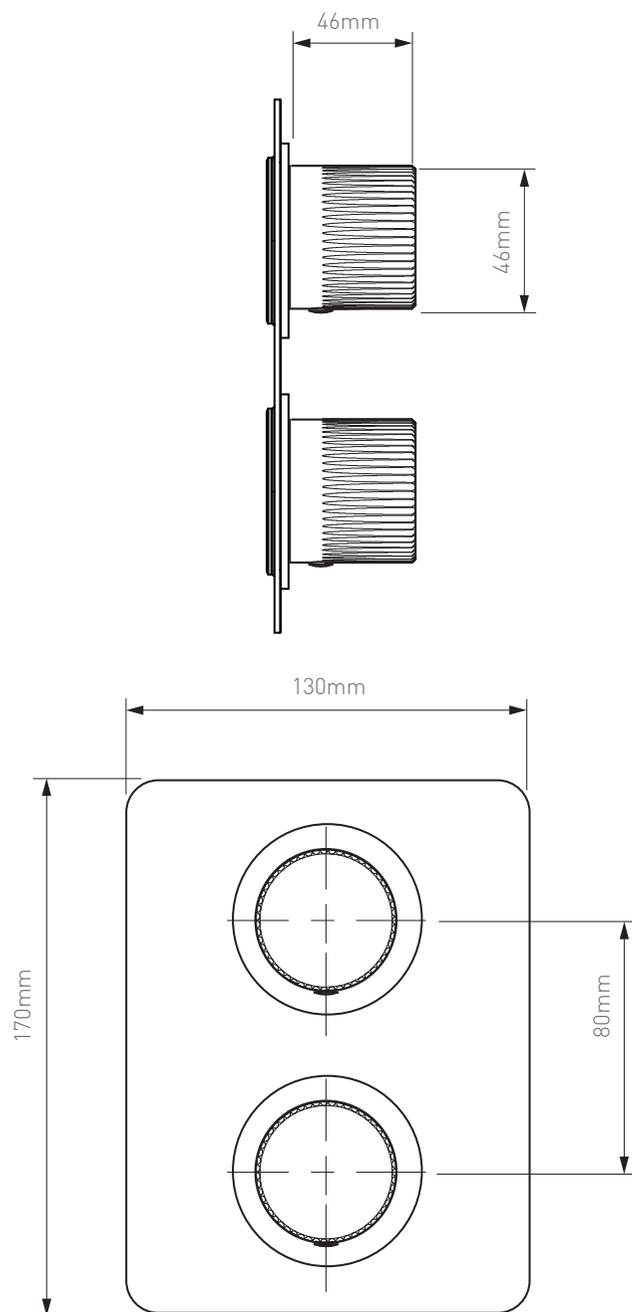


Installation guide & User manual to suit your model

Please note for illustration purposes 248D-2 is shown



Dimensions



Commissioning

Please 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 within these installation instructions.

Note: mix water temperature at terminal fitting should never exceed 46° C.

The valve has been factory set under balance pressures and hot water supply at 65°C. When your specific operating conditions are significantly different from the above, the temperature of the water may vary from the setting.

When the difference is too great, you can adjust the calibration of the valve to suit individual requirements of the installation:

1. Check the temperature of the water being delivered from the outlet with a thermometer, when the stop arm is located at 12 o'clock.

Note: temperature readings should be taken at normal flow rate after allowing for the system to stabilise.

2. If the temperature is not 38°C proceed to reset the calibration as follows:

Remove the stop arm (**see Fig. 1**).

Ensure the step on the stop ring is located at 12 o'clock (**see Fig. 2**)

Do not remove the plastic stop ring. Turn the spline of the thermostatic valve clockwise to decrease the temperature and anti-clockwise to increase the temperature until 38°C is achieved at outlet.

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

Replace the stop arm making sure that the arm is against the step (**see Fig. 3**)

When the handle is attached (see page 9) ensure the temperature does not exceed 46°C when turned entirely anti-clockwise.

Check that the temperature is consistent by turning the mixing valve on & off, a number of times and then re-check the mixed water outlet temperature. If the mixed water outlet is stable, then proceed to undertake the cold-water isolation test.

Fig. 1

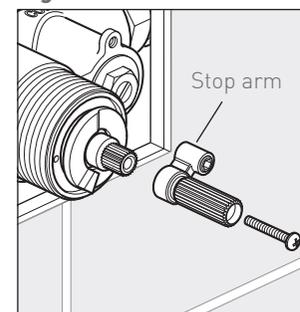


Fig. 2

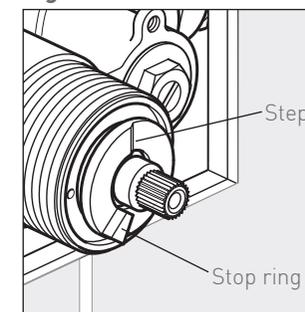
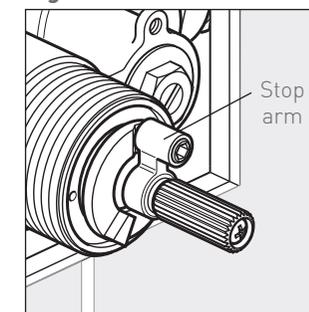
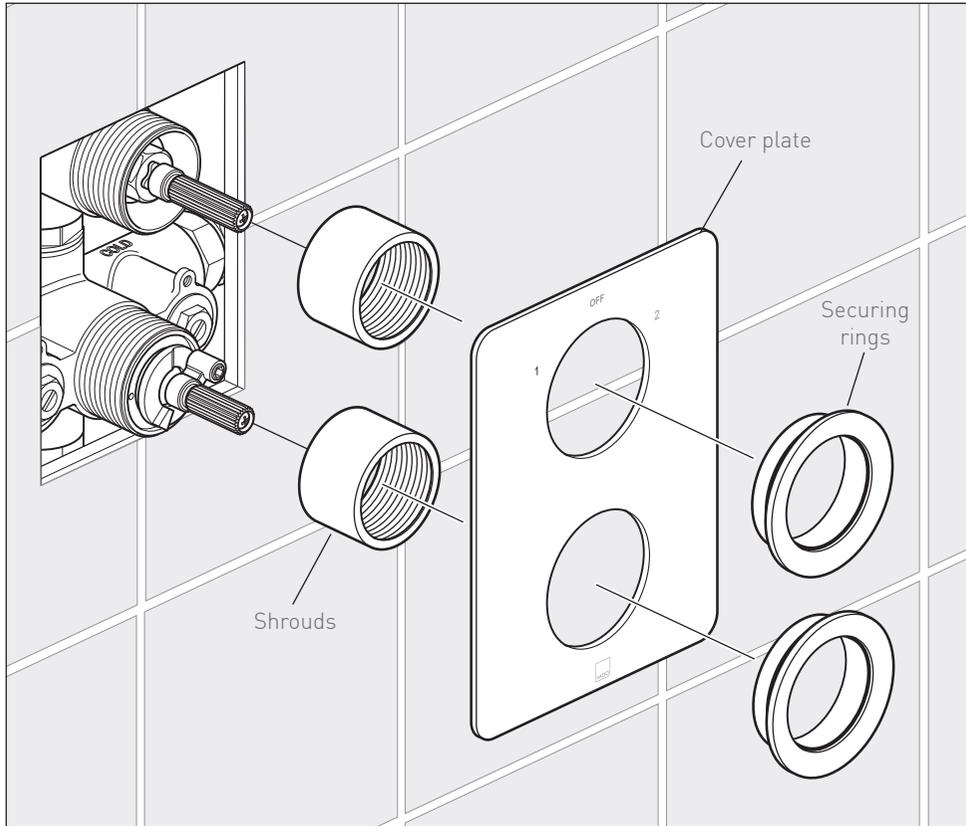


Fig. 3



Installation



Screw shrouds on ensuring they sit proud of the finished wall. The shrouds can be turned/adjusted to achieve this.

Carefully place the cover plate over the shrouds, once the plate is flush with the wall, secure with securing rings.

Apply a thin bead of silicone around the outside to seal against the tiled surface.

Handle installation

Flow control handle (top).

Identify the flow control handle.

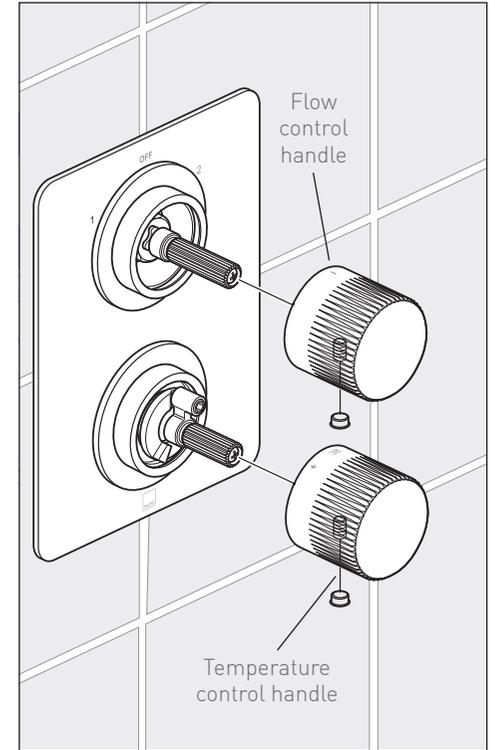
Carefully slide the flow control handle onto the splines of the top valve, with the screw hole at 6 o'clock. Secure the handle with the grub screw on the underside using the supplied hex key.

Push on the screw cover cap.

Temperature control handle (bottom).

Carefully slide the temperature control handle onto the splines of the bottom valve, with the screw hole at 6 o'clock. Be careful not to turn the spline of the valve. Secure the handle with the grub screw on the underside using the supplied hex key.

Push on the screw cover cap.



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