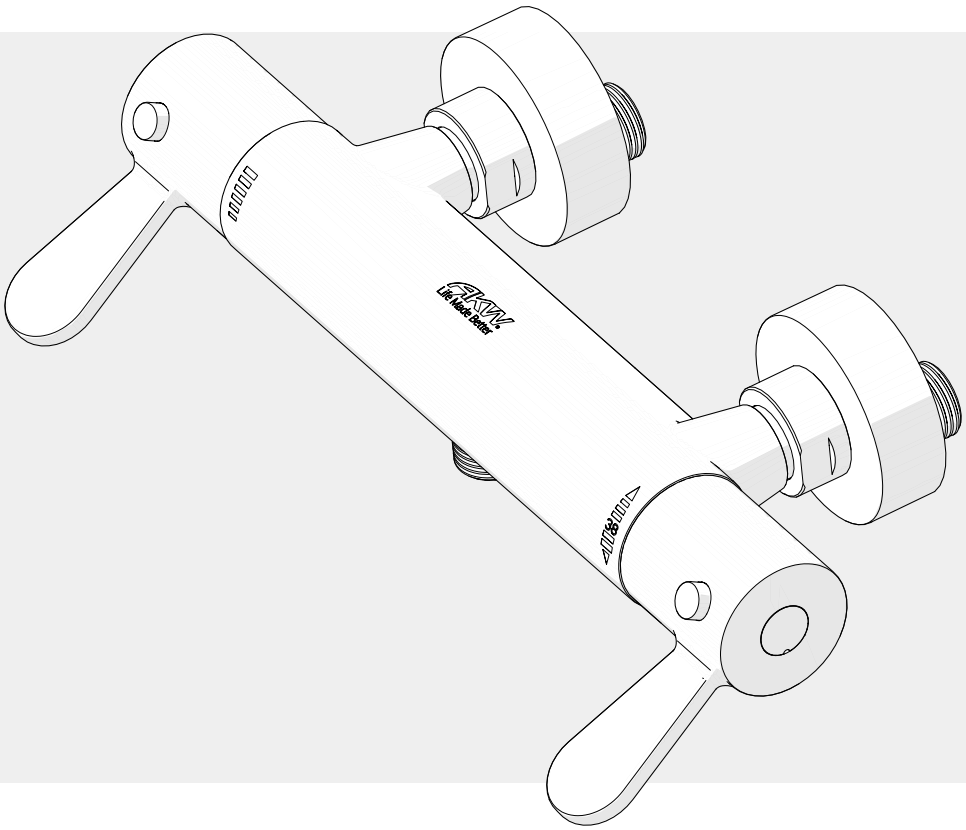
Arka Thermostatic TMV3 Mixer Shower

INSTALLATION INSTRUCTIONS

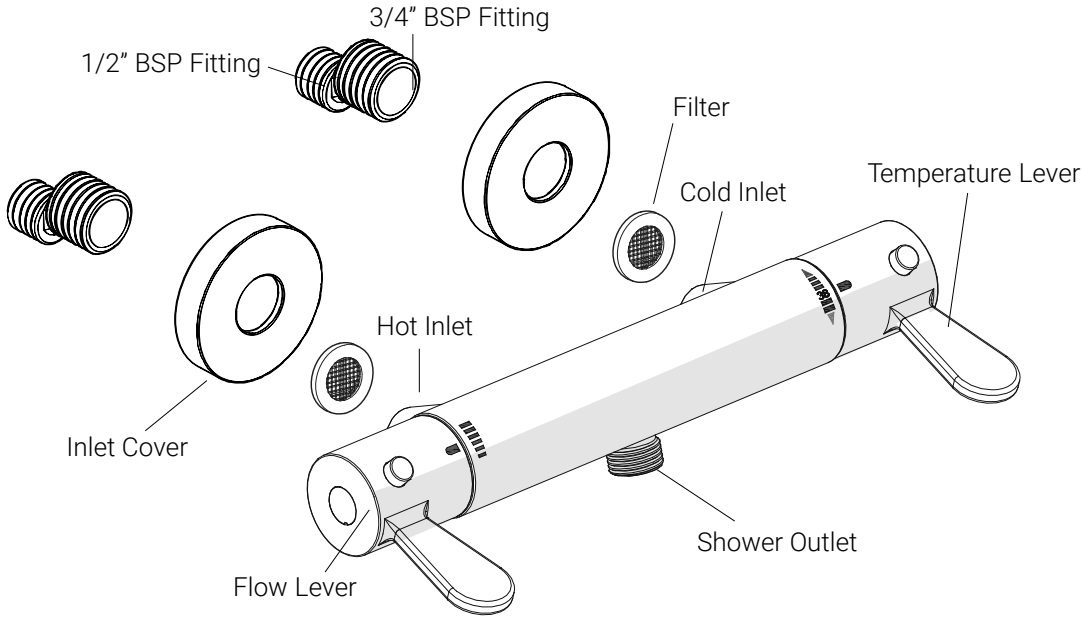


Stock Code
25421-2

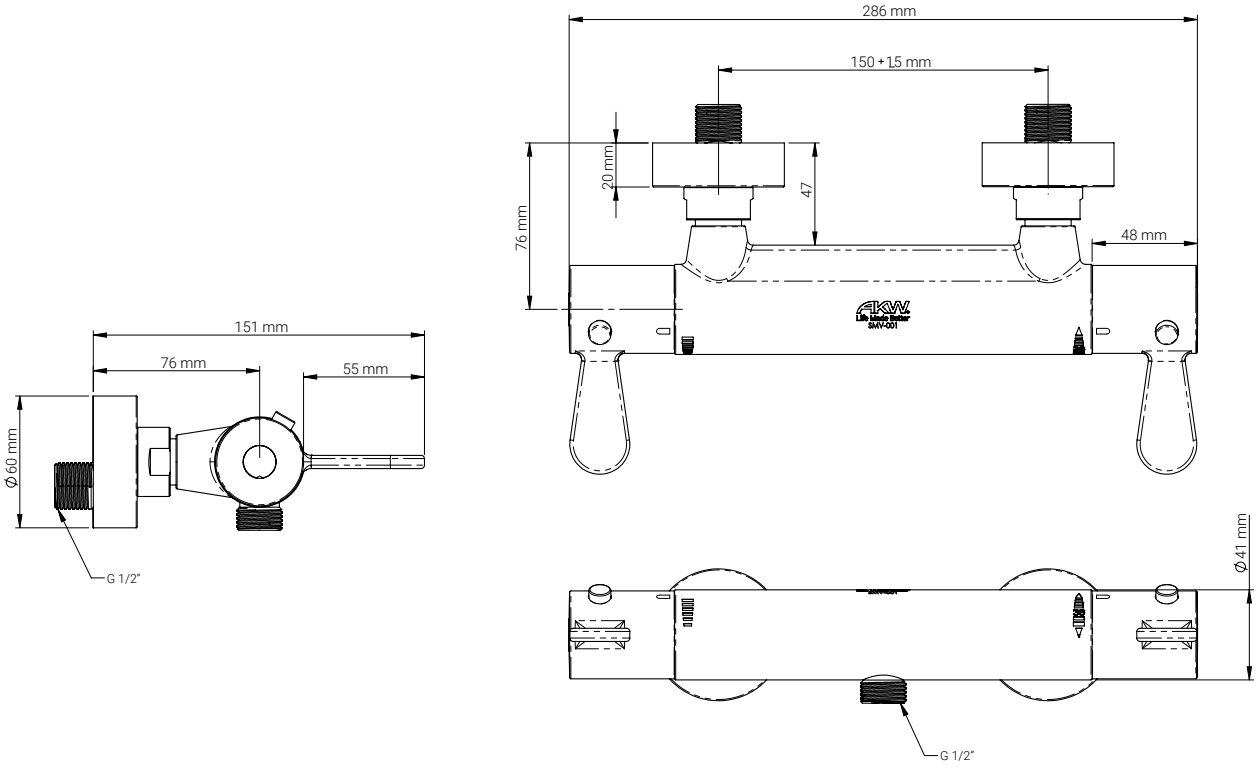
Please read all instructions before installation and leave this document with the end user for future reference as it contains important warranty information

Components & Dimensions

Components



Dimensions



Please check that all components are present from the packaging box prior to installation of this product. If anything is missing or damaged please contact General Enquiries - see back page.

Specifications

Minimum Dynamic Pressure	0.2 Bar
Maximum Dynamic Pressure	5 Bar
Maximum Static Pressure	10 Bar
Dimensions for Fitting	150 mm, +/-15 mm
Concealed & Exposed Water Entry	Back
Inlet Connectors	3/4" - 1/2" BSP
Valve Type	Thermostatic Bar Shower Mixer with Independent Flow & Temperature Control
Approvals	TMV3, WRAS
Maximum Pre-Set Temperature	38 °C
Maximum Pressure Difference (Between Hot & Cold Water Supply)	1 Bar
Maximum Flow (@ 3 Bar)	20 L/Min

Do not choose a position where the shower could become frozen. Do not connect this mixer shower to any form of tap or fitting not recommended by the manufacturer. Do not allow the inlet pressure or flow rates to operate outside the guidelines laid out in 'site requirements'.

This product is precision-engineered and should give continued superior and safe performance, provided that:

1. It's installed, commissioned, operated and maintained in accordance with the recommendations given in this manual and must be conducted by designated, qualified and competent personnel.

2. Installation must comply with all local/national water supply authority regulations/by-laws and building and plumbing regulations.

3. Periodic attention is given, as necessary, to maintain the product in good functional order. This product is designed to deliver water consistently at a safe temperature. In keeping with every other mechanism, the Vettora mixer cannot be considered as being functionally infallible therefore the Vettora mixer cannot totally replace the vigilance of nursing/ supervisory staff where that is necessary.

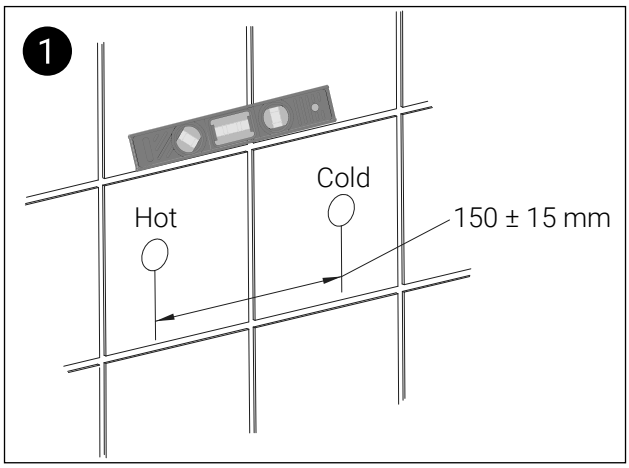
Provided it is installed, commissioned, operated and maintained within these recommendations, the risk of failure is not eliminated but can be reduced to a minimum.

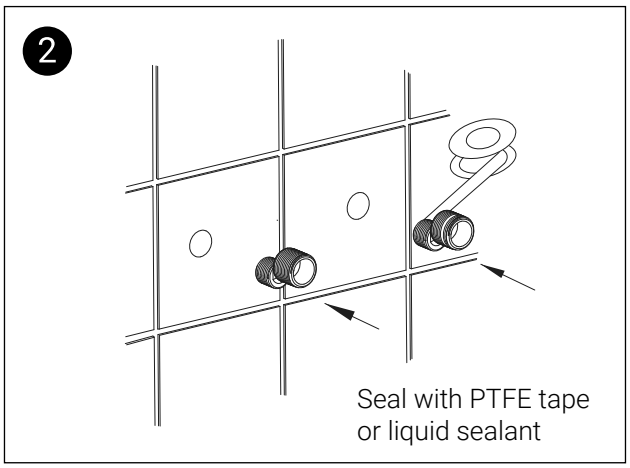
Installation

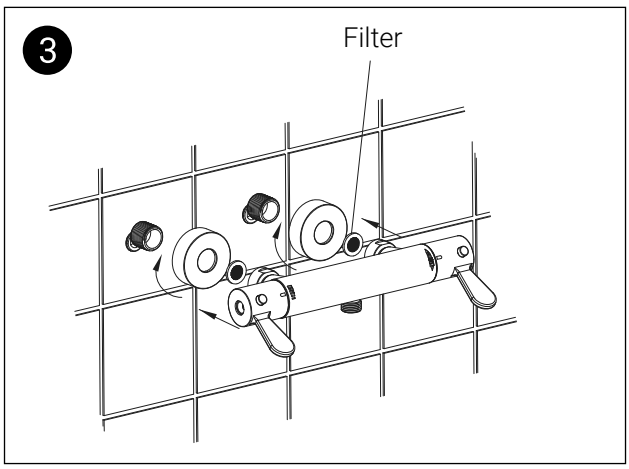
All pipe work must be flushed out and routed as protruding before installing the shower mixer. The hot and cold supply pipes must be anchored rigidly and must be mounted to a solid wall type to support the valve and stop any movement after installation. The inlet centres on the shower valves are 150mm. Minimise pipework wherever possible. Recommended minimum supply line pipe diameter is 1/2" or 15mm.

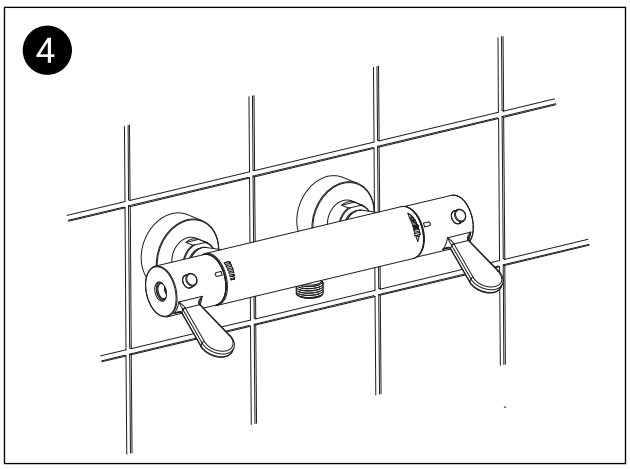
If it is intended to operate the shower in areas of hard water (above 200-ppm temporary hardness), a scale inhibitor may have to be fitted. For best performance the shower-handset MUST be regularly cleaned to remove scale and debris.

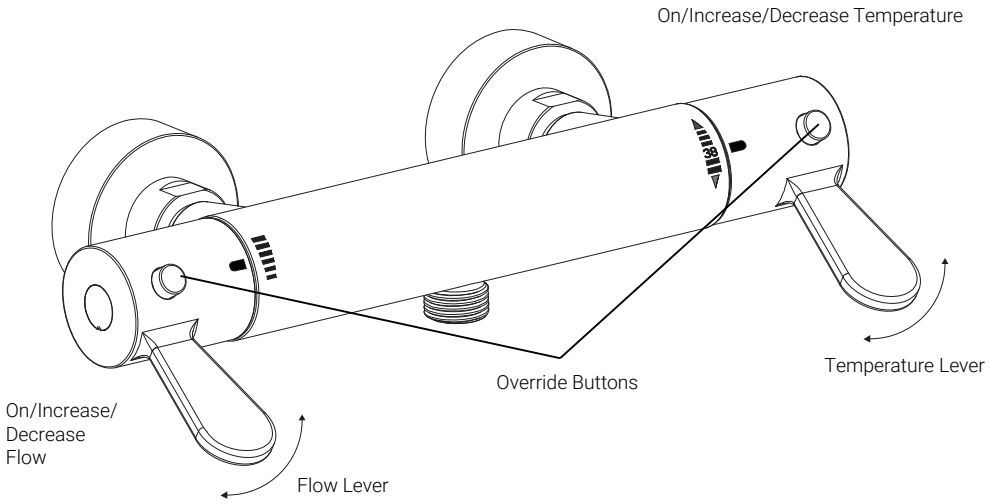
1. Mark out and drill two holes 150 ± 15 mm away from each other for the inlet pipes to feed through. Make sure that the holes are levelled.
2. The inlet threaded connection should be made only with a PTFE tape or liquid sealant. Do not use oil-based, non-setting jointing compounds.
3. Assemble the inlet cover, filter and 1/2" - 3/4" BSP fitting, and check valve (remove with a 9 mm hex key) and then finally the bar mixer itself.
4. Clean with a cloth and warm soapy water when everything is secure.











The maximum temperature is factory pre-set to approximately 41 °C under ideal installation conditions at the factory.

To check or change this setting, refer to Adjust temperature setting information given on page 8 in section: “Commissioning”.

Adjusting the Temperature
The temperature is controlled by rotating the temperature lever on the right side of the mixer. The temperature is limited to a comfortable showering level of 38 °C. To obtain a higher temperature, press the override button on the temperature lever and continue to rotate the lever. The maximum override temperature must be set to 41 °C.

Adjusting the Flow
The flow is controlled by rotating the flow lever on the left side of the mixer.
For water economy reasons, the flow is limited by a stop. To obtain a higher flow, press the override button on the flow lever and continue to rotate the lever.

Commissioning

Application	Abbreviated Designation	Mixed Water Temperature (°C)
Shower	-HP-S, LP-SE	41 Maximum

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

Procedure

Check that:

a. The designation of the SMV-001 mixing valve matches the intended application.

b. The supply pressures are balanced and within the range of operating pressures for the designation of the valve.

c. The supply temperatures are within the range permitted for the valve.

To adjust the temperature of the mixed water see page 8 and then carry the following sequence out:

a. Record the temperature of the hot and cold water supplies (see page 13).
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 flow rate.
d. Isolate the cold water supply to the mixing valve and monitor the mixed water temperature.
e. Record the maximum temperature achieved as a result of (d) and the final stabilised temperature.
f. Record the equipment, thermometer etc. used for these measurements.

Maximum Temperature
The maximum blend temperature obtainable by the user should be limited to prevent accidental selection of a temperature that is too hot.
The SMV-001 mixer valve is fully performance tested and the maximum override temperature is pre-set to 41°C under ideal installation conditions at the factory. Site conditions and personal preference may dictate that the maximum temperature be reset following installation.

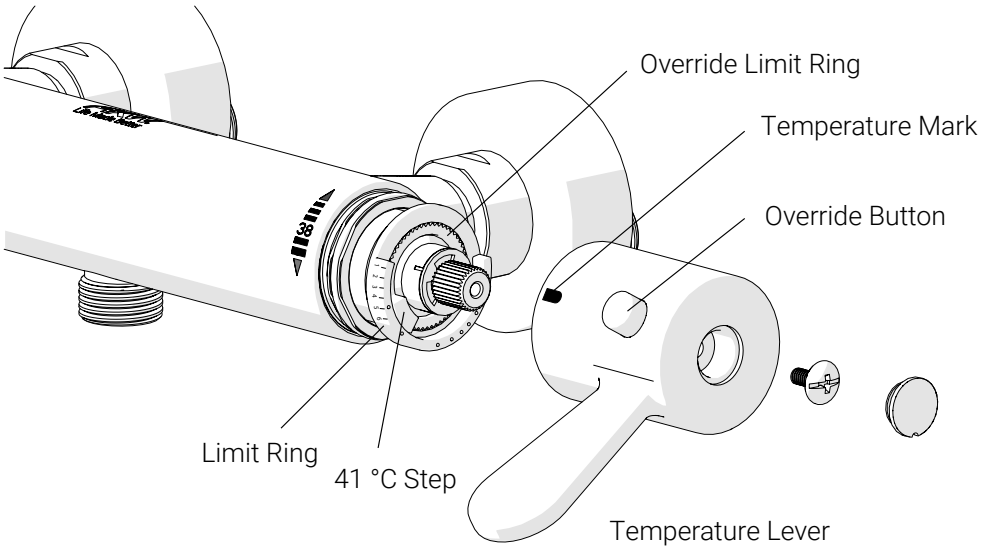
Maximum Temperature Setting
Make sure that an adequate supply of hot water is available at the hot inlet of the SMV-001 Mixer. The minimum temperature of the hot water must be at least 10°C above the desired blend temperature. However, during resetting, this should be close to the typical storage maximum to offset the possibility of any blend shift due to fluctuating supply temperatures.
Make sure that both inlet isolating valves are fully open.
Temperatures should always be measured using a thermometer with proven accuracy.

Step 1: Adjusting the temperature setting

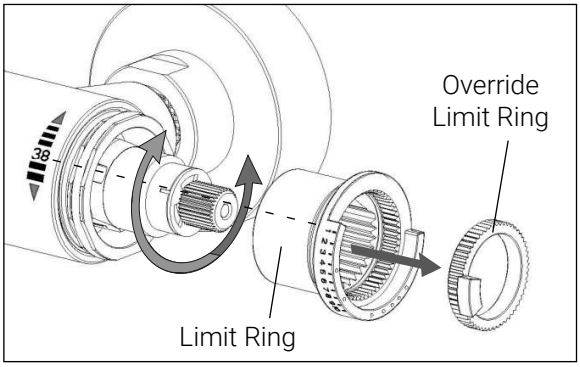
For a TMV3 installation, the maximum blended temperature should be set to 41 °C.
For a non-TMV3 installation, the maximum blended temperature can be set to above 41 °C.

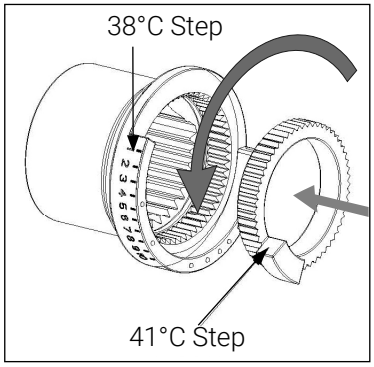
1. Turn the temperature lever to the 38 °C mark and test that the temperature of the water from the shower outlet is 38 °C. If the water is not 38 °C, proceed with the following procedure.
2. Turn the temperature lever to the fully cold position.
3. Hold the temperature override button down and slowly turn the lever until the output water reaches 38 °C.
4. Wait for the water temperature to stabilise. Turn the flow lever to the off position.
5. Without turning the temperature lever, unscrew the screw and remove the paddle lever.
6. Remove and rotate the Limit Ring until the 38 °C step is in line with the notch on the valve and the 38 °C number mark on the shower mixer body.

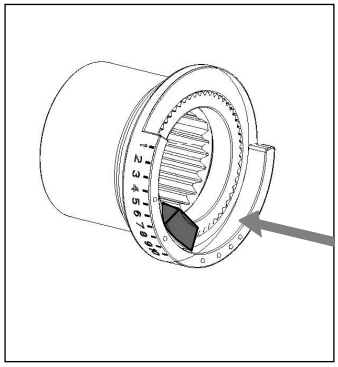
Replace the lever with the temperature mark aligned with the 38°C position on the shower mixer.

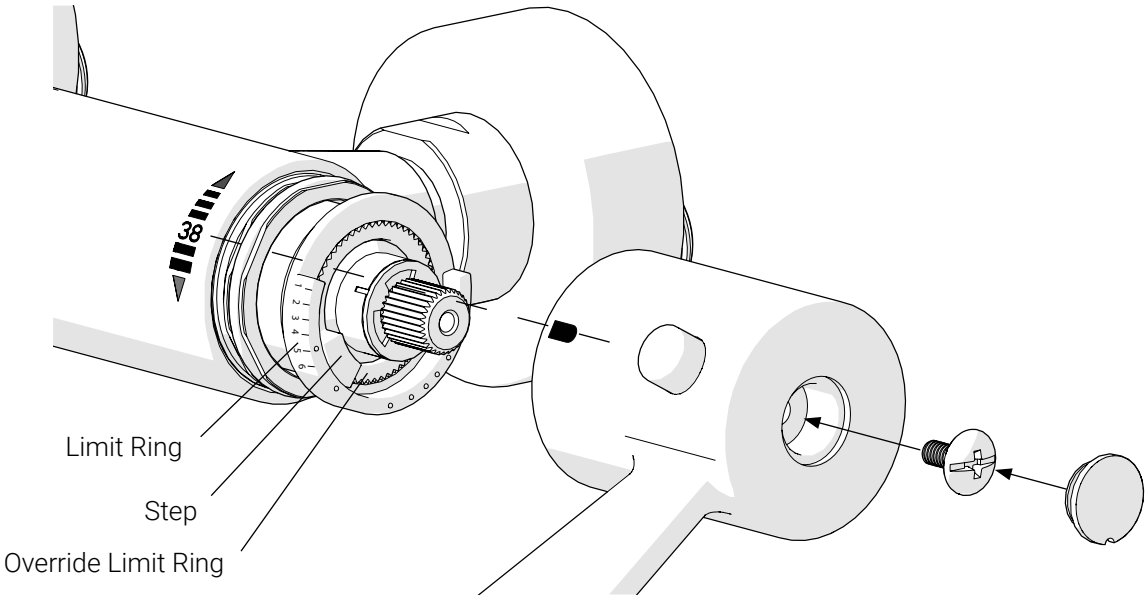


7. Hold the temperature override button down and turn the lever to maximum temperature. Measure the stabilised water temperature. If the temperature is not 41 °C, set the lever with the temperature mark aligned back in the 38 °C position and remove the lever.
   Remove and rotate the Override Limit Ring accordingly to the steps in the table below and repeat this process until the maximum override temperature is set at 41 °C.









Step No.	Temperature °C
1	40
2	41
3	41
4	42
5	43
6	44
7	45
8	46

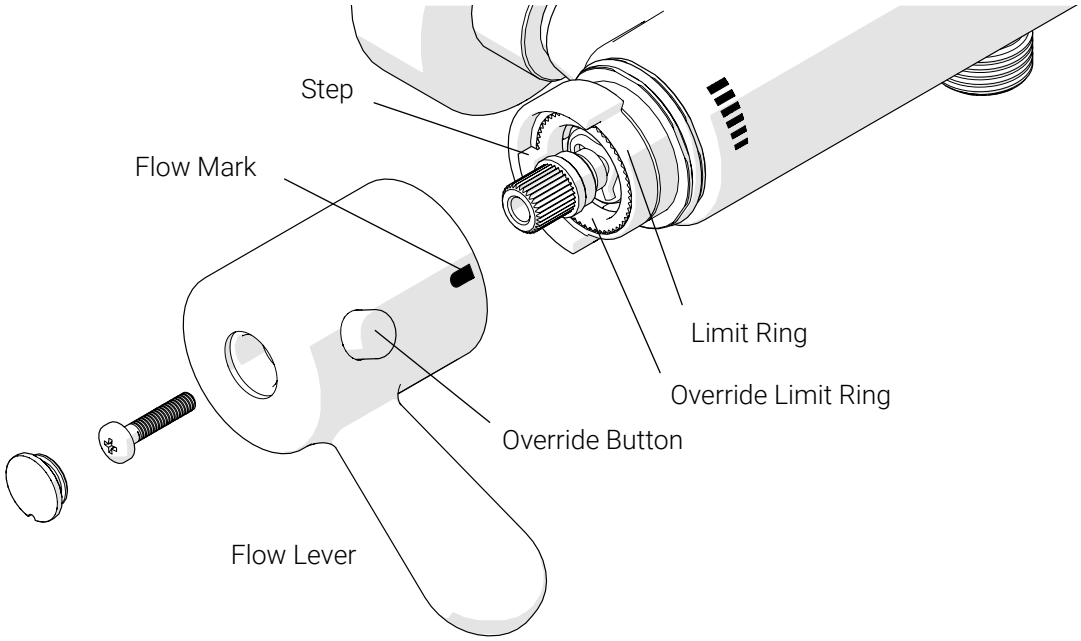
Note: for non-TMV3 applications, the Override Limit Ring may be adjusted beyond 41 °C.

8. Finally, replace the lever without turning it, in-line with the 38 °C mark and tighten the screw. Test that the temperature of the water from the shower outlet is now set at 38 °C without using the override button.
   Test the maximum temperature by pressing the override button and turning the lever to hottest position. This must be set to 41 °C. If the temperature is not 41 °C, re-adjust the Override Limit Ring accordingly by removing the lever again. Only when then temperatures are set, then replace the cover cap.

Adjusting the flow rate setting

If the pre-set flow rate is not appropriate, you may choose to adjust it.
For example, you may choose to lower the flow rate to save water.
Both Normal and Maximum Override flow rate positions may be adjusted.

1. Turn the Flow Lever to the fully off position. Unscrew and remove the flow lever without turning it. Replace the Flow Lever at the desired off position.
2. Hold the Override Button down and slowly turn the Lever until the output water reaches the desired normal flow rate position. Record the flow mark position on the shower mixer.



3. Remove the Flow Lever and adjust the Limit Ring so that it is aligned with the flow mark position. This will set the maximum normal flow rate position before the override button is depressed.
4. Replace the Flow Lever and turn the lever to the desired maximum override flow rate position whilst holding down the Override Button. Record the flow mark position on the shower mixer. Remove the Flow Lever and adjust the Override Limit Ring so that the step is aligned with the flow mark position. This will set the maximum override flow rate position when the override button is depressed.
5. Replace the Flow Lever without turning it so that the flow mark is aligned with the maximum override mark position recorded on the shower mixer.
   If the normal or maximum override flow rates are incorrect, then re-adjust accordingly.
   Finally replace, tighten the screw, and replace cap.

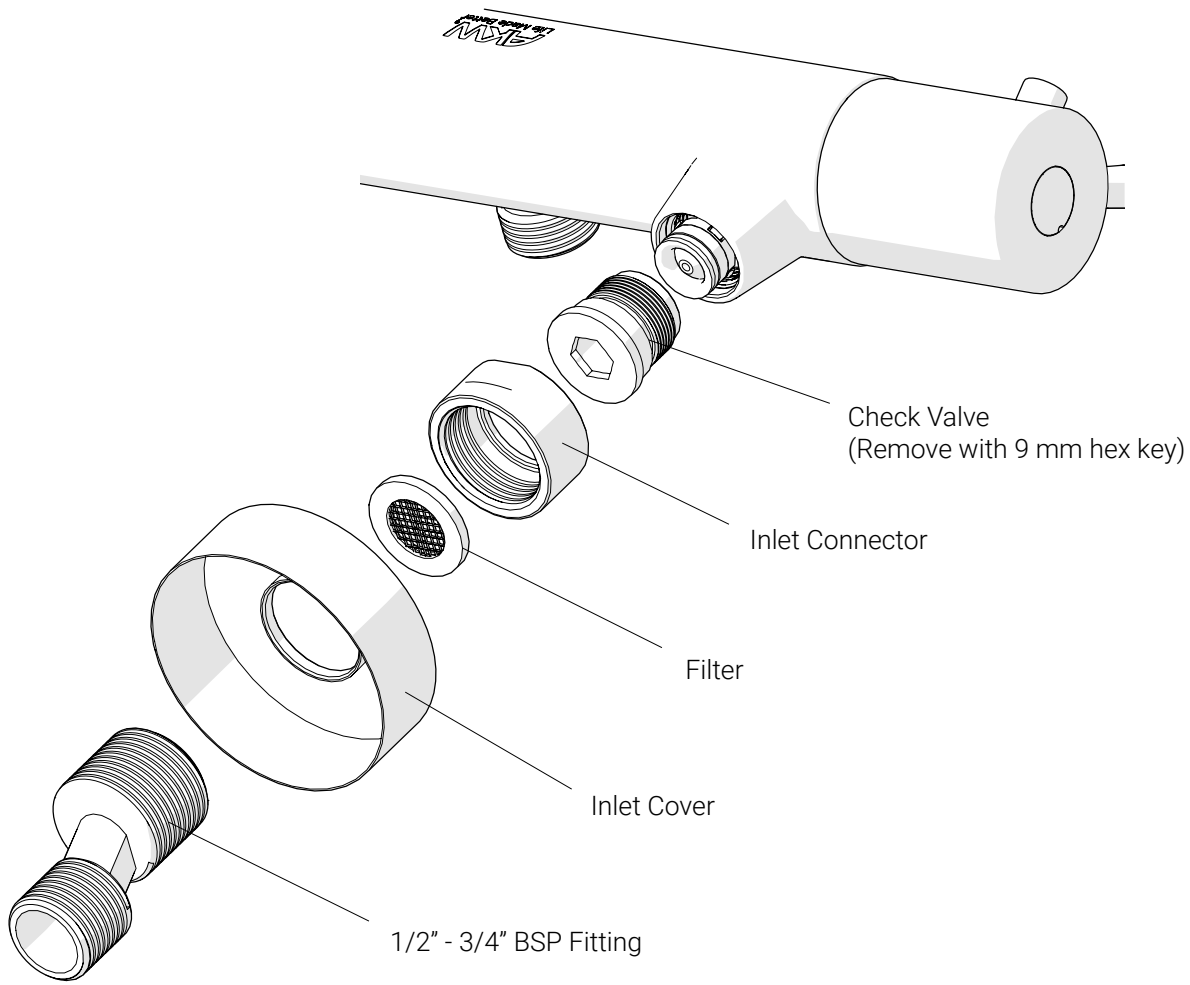
Note: record the commissioning tests on page 13

Maintenance & Servicing

SMV-001

Connections:
1. Turn the hot and cold water supplies off.
2. Disassemble the shower mixer, clean the filter thoroughly
3. After re-assembling the shower mixer, clean the surface with a cloth and warm soapy water only.

Note:
Do not use scourers or abrasive cleaners which may affect the surface finish.
Never use corrosive acidic or alkaline cleaning materials on fittings or surfaces.
Always flush cleaning materials away with copious amounts of water and wipe down.



In-Service Testing & Troubleshooting

The purpose of in-service testing is to regularly monitor the thermal performance of the SMV-001 mixer valve. Deterioration in performance can indicate the need for service work to be carried out on the system.

At intervals of 6-8 weeks and 12-15 weeks after commissioning:

1. Check that supply parameters are still within the expected values and check system for faults.
2. Carry commissioning procedures out using the same test equipment. If the mixed water temperature has changed by a significant amount (more than 1 °C), ensure that the in line filters are clean and that the check valves are working and all isolation valves are fully open.

If no fault can be found, check and record the mixed water temperatures and re-adjust the mixed water temperature to the values in table 3. Complete the commissioning procedure. If the mixed water temperature exceeds the values of the maximum recorded temperature by more than 2 °C, the need for service work is indicated.

Depending on the results of these two tests, the following should be adopted:

a. If a small change (e.g. 1 °C to 2 °C) occurs in one of these tests or there is no significant change (e.g. 1 °C maximum), the next service test should be 24-28 weeks after commissioning.
b. If small changes occur in both tests or a larger change occurs in one test (exceeding 2 °C), the next service test should be carried out 18 to 21 weeks after commissioning.

Fault	Diagnosis
Water temperature is too hot or cold	No hot water reaching the SMV-001 check supply. Inlet tails are reversed - Check connections. Filters are blocked - Check filters Conditions are outside of the specifications. Isolation valve is closed - Check valves. Temperature set too high during commissioning - Check setting. Airlock in the inlet pipework - check for airlocks. Water supply is unbalanced - check that the supply pressure is balanced
Low Flow	Filters are blocked - check filters Isolation valves are closed - check valves. Conditions are outside of the specifications. Supply pressure too low - check the supply is above 0.5 bar
No Flow	No hot water is reaching the SMV-001 - check supply. Filters are blocked - check filters. Isolation valve is closed - check valves
Water goes cold in use	No hot water is reaching the SMV-001 - check the boiler or water tank that is supplying the hot water.
Water is leaking from the SMV-001	Seals worn or damaged - request service.

Product Identification

To be completed be installer.

Product identification label can be found on the outer box packaging.

Model/Part Number _____

SMV-001 Serial Number (SN) _____

Batch Number (BN) _____

Installed on _____

Installed by: _____

Address: _____

Contact: _____

_____

_____

_____

_____

Cleaning and User Care
To preserve the quality surfaces, clean using warm, soapy water only. All surfaces will wear if not cleaned correctly, the only safe way to clean is to use an E-cloth for cleaning all bathroom and kitchen products. Using just water, E-cloth gives a smear free, deep clean by breaking up and holding dirt, which normal cloths leave behind.
Do not use scourers or abrasive cleaners which may affect the surface finish and invalidate your guarantee. Never use corrosive acidic or alkaline cleaning materials on fittings or surfaces. Bathroom cleaning powders and liquids will damage the surface. Always flush cleaning materials away with copious amounts of water and wipe down. For further details see warranty information.

Note: all installation, commissioning and in-service testing must be undertaken by a suitably qualified engineer.

Record Commissioning Tests
Record the following information to provide a performance reference point for future in-service tests.

Date of Commissioning ..... / ..... / .....

Max temperature is set to (factory setting 41 °C) .....°C
Temperature of hot water supply .....°C
Temperature of cold water supply .....°C
Temperature of mixed water at the largest draw-off flow rate .....°C
Temperature of mixed water at the smallest draw-off flow rate .....°C
Mains water supply running pressure (within range 0.5-10 bar) .....Bar
With SMV-001 turned on at a maximum flow and maximum temperature setting, record the water temperature when it has stabilized .....°C

Record details of test equipment (brand, model, serial number and calibration information) used to provide the above information, record on next page if necessary:
.....
.....
.....

Please use same test equipment as previously used for commissioning test.

Record Commissioning Tests				
Date of future servicing				
Record Max Temperature				
Serviced by				

Notes

Notes

Contact Us

AKW
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Warranty

Warranty applies only to manufacturing or material defects, conditional on the one-time correct installation of the product. It does not apply to:

- Inappropriate use or accidental damage.
- Damage or defects that result from incorrect installation.
- Lack of maintenance including the build up of grime or damage resulting from inappropriate cleaning.
- Damage or defects that result from repairs or modifications undertaken by unauthorised persons.
- General wear and tear through usage and does not apply to surface finishes.

Warranty period starts from the date of installation.
To activate your warranty, you must register your product within 30 days of installation. See the T&Cs on our website for further information.

Select 1 of 3 ways to activate your warranty

1. Scan using your Smart Device

2. Visit Online
akw-ltd.co.uk/warranty-information

3. Warranty Card
Fill and complete warranty card and post using the prepaid envelope supplied

What to do if something goes wrong?
In the event that you encounter a problem with this product, follow the trouble shooting guide if applicable, then contact your local installer. If the issue is still unresolved, contact AKW Technical Enquiries who will provide further advice and arrange for a maintenance engineer to visit if necessary. None of the foregoing affects your statutory rights.