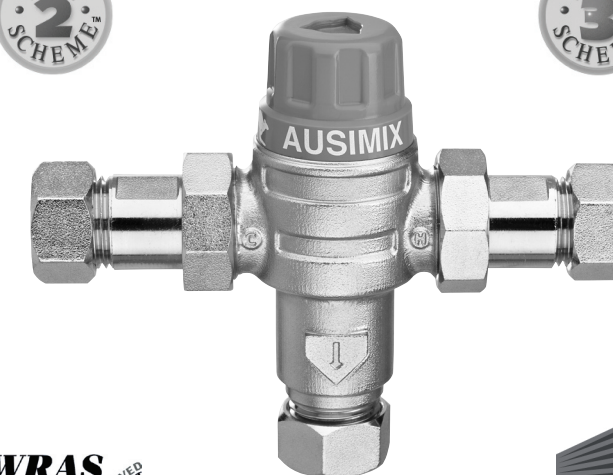


# AUSIMIX TMV2/3

## Thermostatic Mixing Valve

### Installation, Commissioning & Maintenance Instructions

Made in Australia  
TMV2 and TMV3 approved for versatile protection against scalding.



The AusiMix thermostatic mixing valve (15mm & 22mm models) is manufactured to NHS D08 and BS7942-2000 as part of the TMV3 scheme, as well as BSEN 1111 under the TMV2 scheme. Independently tested, the TMV carries: WRAS, TMV2, TMV3 and BuildCert approval.

## 9 Troubleshooting

### Hot water at the cold tap

- Operation of the insert check valves is hindered, check the valve is seated correctly.
- Check valves not fitted.
- Unbalanced hot/cold supply pressure.

### Fluctuating mixed water temperature

- Erratic supply temperatures at the inlets of the valve.
- Starvation of the water supplied at the inlets of the valve.
- Hot and cold connected back to front.

### Erratic flow

- Insufficient water supplies.
- Fluctuations in the supply pressures/temperatures.
- Adverse effect created by other draw off points on the system.

### No flow/reduced flow from valve

- In line filters are blocked.
- Insufficient supply pressure.
- Debris obstructing valve operation.
- Check valves in backwards.

### Valve does not fail safe when tested

- Installation not in accordance with our recommendations.
- The minimum temperature differential not achieved.
- Internal mechanism hindered by debris.

Full and detailed instructions are supplied with service kits and are available on request.

**Failure to comply with these instructions will result in the warranty becoming null and void.**

AusiMix is a trade name owned by  
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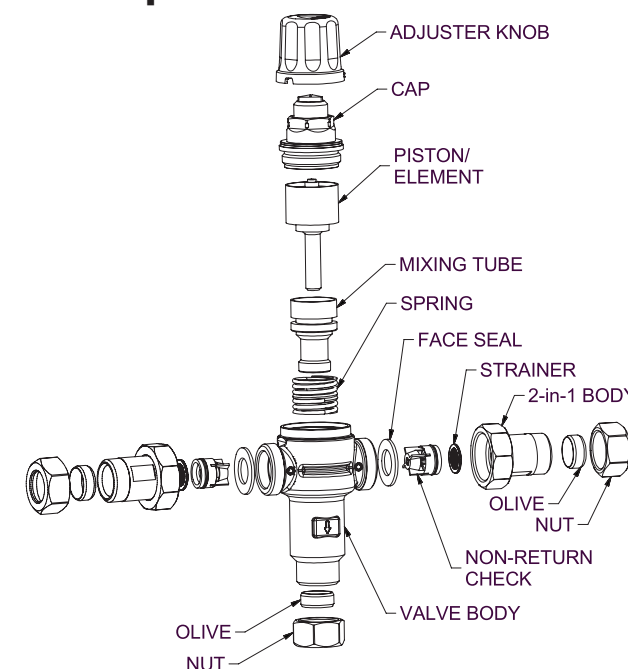
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AUSIMIX-I&M-001-10/12  
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## 7 Cleaning the valve

- Isolate the hot and cold supplies and remove the valve from installation. Please make note of the orientation of the parts as they are removed so that they can be re-assembled in the correct manner.
- Remove the strainers fitted in the hot and cold water inlets and check for damage, rinse in clean potable water.
- To clean the internals of the main valve body first remove the cap, and then carefully remove the valve headwork by unscrewing the large hex nut.
- Slide the piston and thermostat assembly out of the valve body, clean all internal surfaces and o-rings with a weak solution of scale remover approved for use with potable water.
- Using a WRAS approved silicone based waterproof grease, lightly lubricate the o-ring in the body and the external surface of the piston.
- After cleaning, re-assemble the AusiMix TMV2/3 valve. Exercise, re-set and test the valve as laid out in steps F and G of the commissioning section.

## 8 List of parts



**NOTE:**  
When re-assembling the mixing valve, ensure that the components are replaced in the correct order (as illustrated).  
Use only WRAS Approved silicon based waterproof grease.

H. If either test does not show the correct performance, ensure that the supply pressures and temperatures are within the valve's normal working parameters. In addition, check that the hot supply temperature is at least 10°C above the valve's set mixed outlet temperature. If this is not the case then the valve will be slow to shut down on cold water failure.

I. For optimum performance it is recommended that the dynamic pressure be as close to equal as possible. If the dynamic pressures are outside a 10:1 ratio then a pressure reducing valve should be fitted to the higher supply pressure or if preferred, the lower supply pressure boosted.

J. When the AusiMix TMV2/3 valve has been set and tested re-fit the cap.

K. A record of the commissioning settings should be made for comparison with future performance checks.

### Please note:

If there is a residual flow on cold shut off, then this is acceptable providing the temperature of the seeping water is no more than 2°C above the designated maximum water outlet temperature setting of the valve or if the total flow is no more than 120 ml in one minute.

## 5 Maintenance

### TMV3 Application:

To comply with the current NHS guidelines the AusiMix valve should be tested against the original performance results 6-8 weeks after installation. If the temperatures have remained to within +/- 2°C and the hot and cold water supply isolation tests are operating correctly, then a six monthly cycle of performance testing can be implemented.

### TMV2 Application:

The performance of the AusiMix TMV2/3 valve should be checked on an annual basis and verified against the original installation performance. If the water or installation conditions are more severe this check should be carried out more frequently.

## 6 Performance Checks

Performance checks that should be carried out at routine maintenance times are:

- Check the set temperature using a hand-held digital thermometer.
- Carry out the cold and hot water supply isolation tests.
- 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.

This installation guide is provided to give instruction on the best installation practices that should be observed to ensure the correct functioning of the AusiMix TMV2/3 valve.

Before installing the AusiMix TMV2/3 valve ensure that the designation of the valve matches the application. Flow rates, dynamic pressures, and temperature must be within the limits stated, as valves operating outside of these conditions of use, cannot be guaranteed to operate correctly, as either a type 2 or 3 valve.

**The valve must be installed in accordance with the Water Supply (Water fittings) Regulations 1999 and any relevant building regulations, specific to the application.**

The valve must also be installed in an easily accessible position for commissioning and future maintenance.

# 1 Working parameters & specifications

	TMV3	TMV2
Factory temperature setting:	38°C	38°C
Temperature setting range:	38°C - 46°C	38°C - 46°C
Temperature, hot supply:	52-65°C (Max 85°C)	55-65°C (Max. 85°C)
Temperature, cold supply:	5-20°C	Equal to or less than 25°C
Minimum hot to mix differential temperature:	10°C	10°C
Temperature stability:	+/- 2°C	+/- 2°C
Working pressure, static:	16 bar max	10 bar max.
Working pressure (high), dynamic:	1.0-5.0 bar	0.5-5.0 bar
Working pressure (low), dynamic:	0.2-1.0 bar	
Maximum pressure loss ratio:	10:1	10:1
Flow rate, minimum:	4 lpm	4 lpm

Please note: If water supply is fed by gravity then supply pressures should be verified to ensure the conditions of use are appropriate for the valve.

# 2 Approved specification and standards

Code	Operating Pressure	Application	Recommended Temperature		Maximum Temperature	
			TMV2	TMV3	TMV2	TMV3
Scheme			TMV2	TMV3	TMV2	TMV3
HP-S	High pressure	Shower	41°C	41°C	43°C	43°C
HP-W	High pressure	Washbasin	41°C	41°C	43°C	43°C
HP-T44	High pressure	Bath	44°C	44°C	43°C	46°C
HP-T46	High pressure	Assisted Bath	46°C	46°C	48°C	48°C
LP-SE	Low pressure economy	Shower	N/A	41°C	N/A	43°C
LP-BE	Low pressure economy	Bidet	N/A	38°C	N/A	40°C
LP-WE	Low pressure economy	Washbasin	N/A	41°C	N/A	43°C

Standards covered by this valve range include:  
 NHS Model Engineering Specification D08  
 BS7942  
 BSEN 1111

It is essential that, before installing an AusiMix TMV (15mm & 22mm models), the supply conditions under which the TMV is intended to be fitted are checked to confirm compliance with the parameters above.

Please note:

- For hand washbasins, it is assumed washing will be under running water
- A thermostatic mixing valve having multiple designations (ie it is capable of satisfying the requirement of this specification for more than one application) should be re-set on site to suit the needs of that environment.
- The mixed water temperature must never exceed 46°C (or for TMV2: Building Regulations allow up to 48°C) at a terminal fitting, this is the maximum water temperature from the bath, it takes into account the allowable temperature tolerances inherent in the thermostatic mixing valve and temperature losses in metal baths. It is not a safe bathing temperature for adults or children. The British Burns Association recommends 37°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.

# 3 Installation

**It is important that the installer reads these instructions and is fully aware of their responsibility and duty of care to ensure that all aspects of the installation comply with all current regulations and legislation.**

A. Consideration must be made for the possibility of multiple/simultaneous demands being made on the supply system whilst the AusiMix TMV (15mm & 22mm models) is in use, all practice precautions must be made to ensure that the valve is not affected. Failure to make provision within the pipe sizing, etc will affect the performance of the valve.

B. The supply system to which the AusiMix TMV (15mm & 22mm models) is to be installed into must be thoroughly flushed and cleaned to remove any debris, which may have accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer’s warranty of the product.

C. If using a 2in1 valve, independent isolation valves must be fitted in conjunction with the valve, adjacent to the hot and cold water inlet supplies to the TMV.

D. In areas subject to aggressive water, provision must be made to treat the supplies prior to the supplies entering any AusiMix product.

E. AusiMix TMV (15mm & 22mm models) have been designed to ensure that the valve can be installed in any position, whether vertical or horizontal, and can be surface mounted or within a supply duct. It is essential that access to the valve must not be obstructed for any future maintenance that may be required to the valve or associated fittings.

F. It is recommended that the AusiMix TMV (15mm & 22mm models) failsafe thermostatic mixing valve is installed as close as is practicably possible to the outlet which it is serving. Attention must be paid to the maximum distance of pipework from the mixed water outlet of the valve to any terminal fitting. Current guidelines recommend a maximum distance of 2m from the outlet of the mixing valve to the furthest terminal fitting/outlet which the mixing valve is to serve.

G. The hot and cold water supplies must be connected to the valve strictly in accordance with the indications on the body of the valve ie hot water supply to the hot port of the valve.

H. In a situation where one or both of the water supply pressures are excessive, it is possible to fit a pressure reducing valve to reduce the pressure(s) to within the limits as quoted above.

I. Any thermostatic mixing valve must be fitted with a backflow prevention device, such as check valves, to prevent the cross contamination of supplies. The AusiMix (15mm & 22mm models) is complete with integral insert check valves and strainers.

J. It is essential that the AusiMix (15mm & 22mm models) failsafe thermostatic mixing valve should not be installed in situations where

there is a possibility of the valve being deprived of water or where demands for water exceed the actual stored supplies.

K. To ensure that performance levels of the AusiMix (15mm & 22mm models) valve are maintained (in the event of cold water failure), the temperature of the hot water supply at the point of entry to the AusiMix valve must be a minimum of 10°C above the commissioned mixed water discharge temperature.

L. The AusiMix (15mm & 22mm models) failsafe thermostatic mixing valves must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

# 4 Commissioning

Please ensure that the commissioning of the valve is completed under normal operating conditions. The AusiMix TMV2/3 thermostatic mixing valve is supplied factory set at 38°C. To alter this setting, proceed as follows:

A. Remove the cover cap.

B. With both the hot and cold supplies turned on and the terminal fitting open, test and record the hot and cold inlet temperatures. Then adjust the temperature to the required setting, using the adjuster cap.

C. Turn the adjuster cap clockwise to decrease or anti-clockwise to increase the temperature.

D. A digital hand-held calibrated thermometer should be used to measure the outlet temperature correctly. The outlet supply for the TMV3 applications must be set to a specific temperature for each individual application:

Washbasin or shower	41°C
Bath (unassisted)	44°C
Bath (assisted)	46°C
Bidet	38°C

E. Once the correct outlet temperature has been achieved, the valve’s temperature stability should be checked: firstly at a high flow rate, and then at a low flow rate (ensure this is no less than the valve’s minimum flow rate of 4 lpm).

F. The valve’s internal mechanism should be exercised at least 3 times by alternately isolating the hot and cold supplies. This will cause the piston to travel its full stroke and will ensure that the valve is operating correctly. If the set temperature has drifted after this operation, then the commissioning operation should be repeated.

G. Once the valve has been commissioned a cold water supply shut off test should be performed:

- Isolate the cold supply. The flow should reduce to a trickle within a second or two.
- Restore the cold supply and check that the set temperature has not altered.
- Repeat the test for the hot supply.