Aquablend® Health Point of Use TMV with Four Way Mixer

Installation & Maintenance Instructions

ATMHE608-LEV80SQ

I00310_Oct 19

NOTE: THIS DOCUMENT IS TO BE LEFT ONSITE WITH FACILITY MANAGER AFTER INSTALLATION

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contents

AQUABLEND® HEALTH POINT OF USE TMV WITH FOUR WAY MIXER

The Aquablend® Health TMV (Aquablend HE) has been developed to deliver an all new approach to hygiene, safety and convenience for Health Care and Aged Care Ensuites.

The Aquablend® HE is a point of use (POU) thermostatic mixing valve coupled with a unique 4 way mixer allowing the user to easily and safely mix water for showering at the desired temperature from Cold through to Full Warm. Simultaneously, pre-mixed warm and/or cold water can be delivered to an adjacent fixture for hand washing or WC cistern fill*.

The benefit of this design is by increasing the flow through the Thermostatic Mixer, the risk of legionella or other bacteria developing in the pipework is reduced. As showers generally run for 3-5 minutes every time they are used and at higher flow rates than a basin, this additional and sustained flow ensures the TMV comes up to full operating temperature and pipework is flushed, keeping the risk of legionella and bacteria to a minimum.

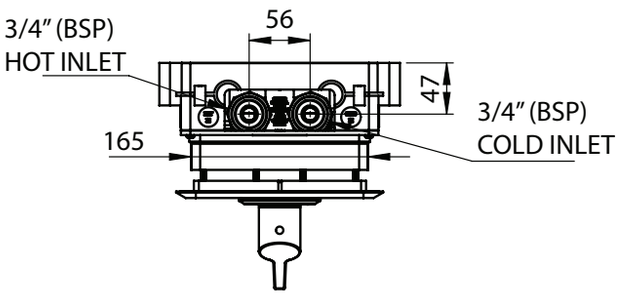
The Aquablend® HE is also equipped with Aquablend® Thermal Flush, allowing safe, controlled hot water sanitising of the Shower and Basin at the same time, without requiring re-commissioning.

Other Key features of the Aquablend® Health TMV and Mixer:

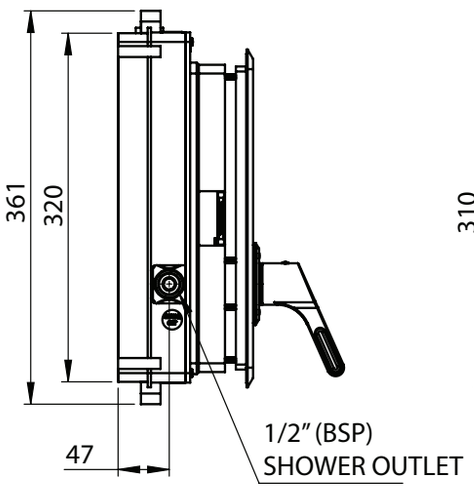
- Full Smartflow compatibility ensures informed risk management and performance analysis of the water delivery system.
- Sequential Ceramic Disc Mixing Cartridge ensures ultimate control with cold start up and stop, ensuring warm water is introduced into pipework only when needed.
- Compact wall box allows easy access for servicing, always at a convenient height, with all serviceable items front facing and easily accessible.

*Additional Warm and Cold take-off can be used to supply a basin mixer, or surgeon mixer at a flow controlled rate. WC Cistern may also be supplied from the cold take-off. 20mm inlet pipework is required to the TMV and warm/ cold bypass pipework must be sized to suitably supply connected fixtures.

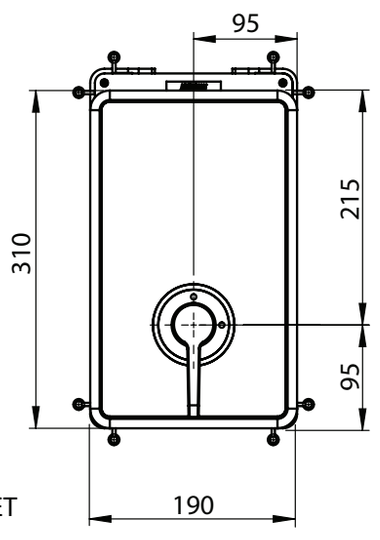
dimensions



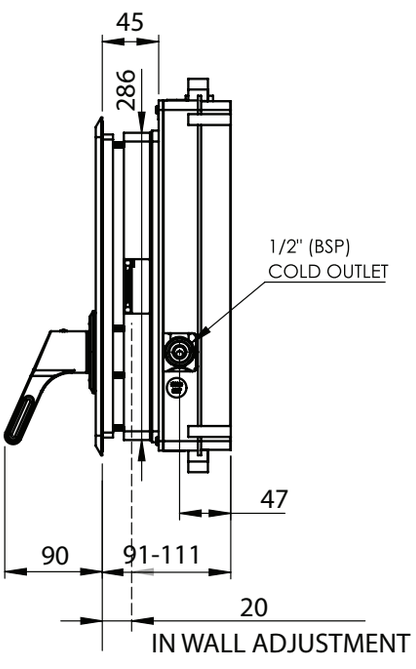
TOP VIEW



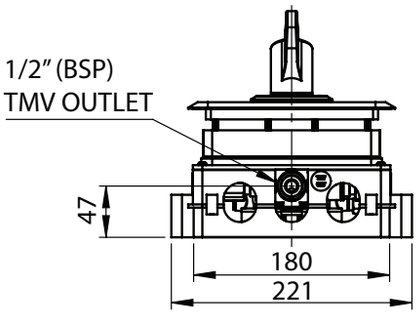
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW



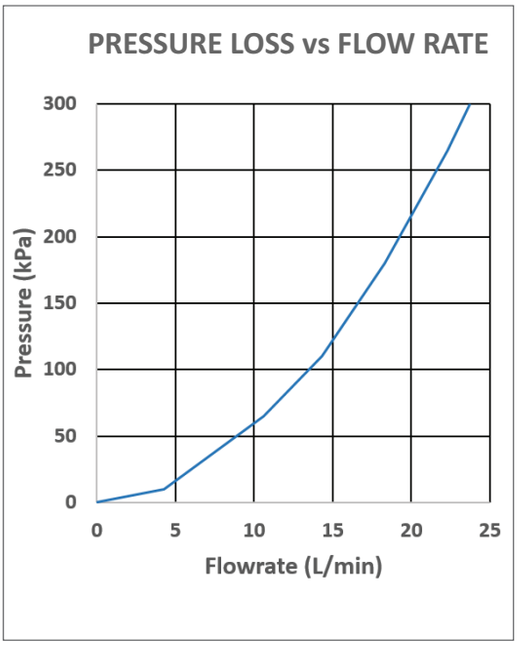
BOTTOM VIEW

installation conditions

Dynamic Inlet Pressures* (10% maximum dynamic pressure differential between hot and cold supplies)	Min. 20kPa Max. 500kPa
Static Inlet Pressures For testing purposes / system commissioning	Max. 1000kPa
Hot Temperature Supply Range	Min. 55°C Max. 90°C
Cold Temperature Supply Range	Min. 5°C Max. 30°C
Minimum Temperature Differential Between hot supply and the outlet temperature, required to ensure correct function of valve	10°C
Thermostatic Temperature Range* Set during installation/ commissioning	35 - 48˚C (+/-2)
Minimum Flow Rate	4L/min
Maximum Flow Rate - Thermostatic Mixing Valve	23 L/min @ 300 kPa pressure loss as per Flow Sizing Graph

*AS3500.4 clause 1.9.4.2 - The dynamic pressure differential between hot and cold supplies when mixed at a thermostatic mixing valve shall not exceed 10%.

TMV Flow Sizing Graph



compliance

Enware products are to be installed in accordance with the Plumbing Code of Australia and AS/NZS3500. Installations not complying with PCA and AS/NZS3500 may void the product and performance warranty provisions.

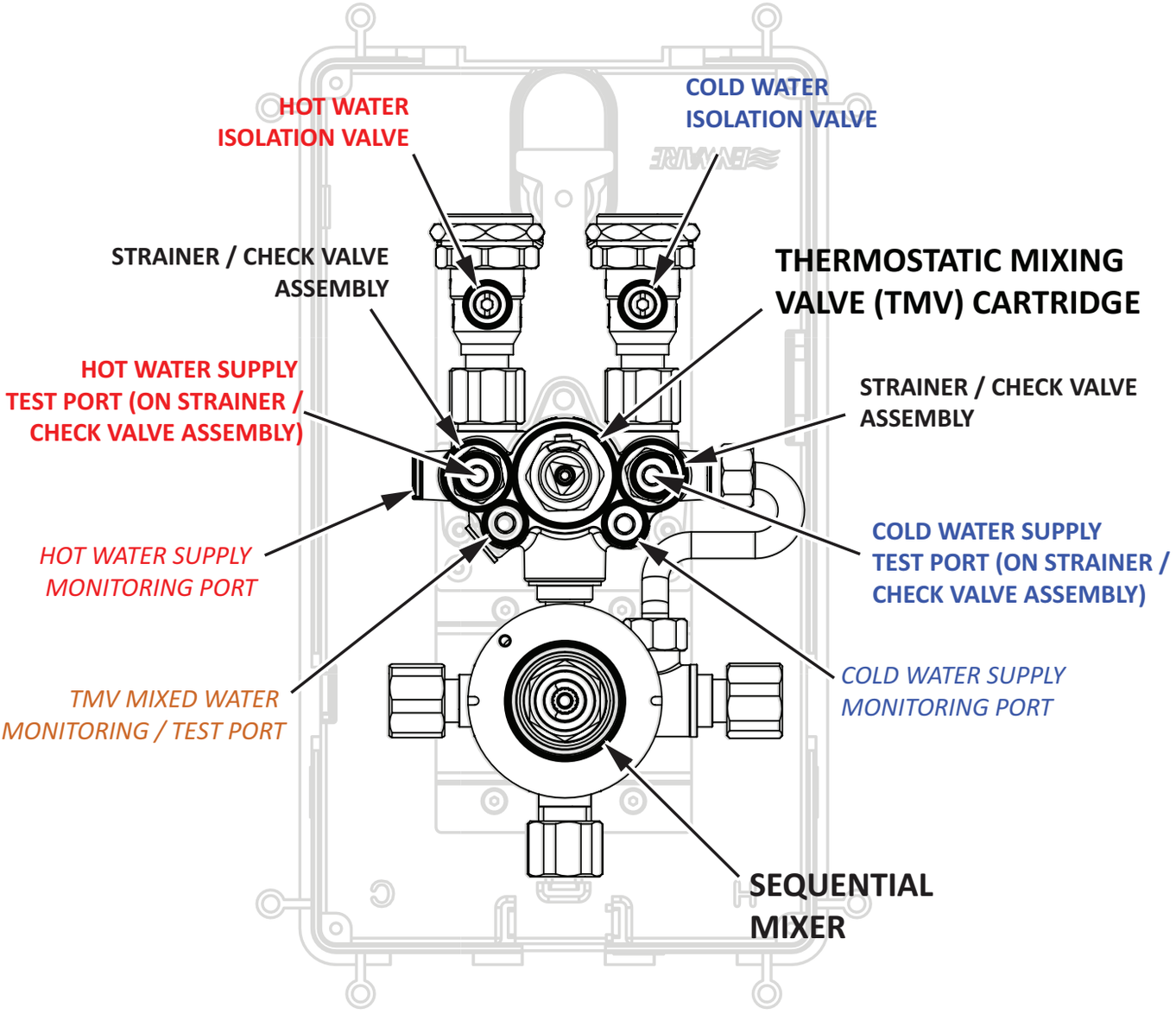
Reference should also be made to the Australasian Health Facility Guidelines (AHFG), ABCB and Local Government regulations when considering the choice of, and the installation of these products.

Pressure Reduction Valves may be required to comply with maximum pressure requirements.

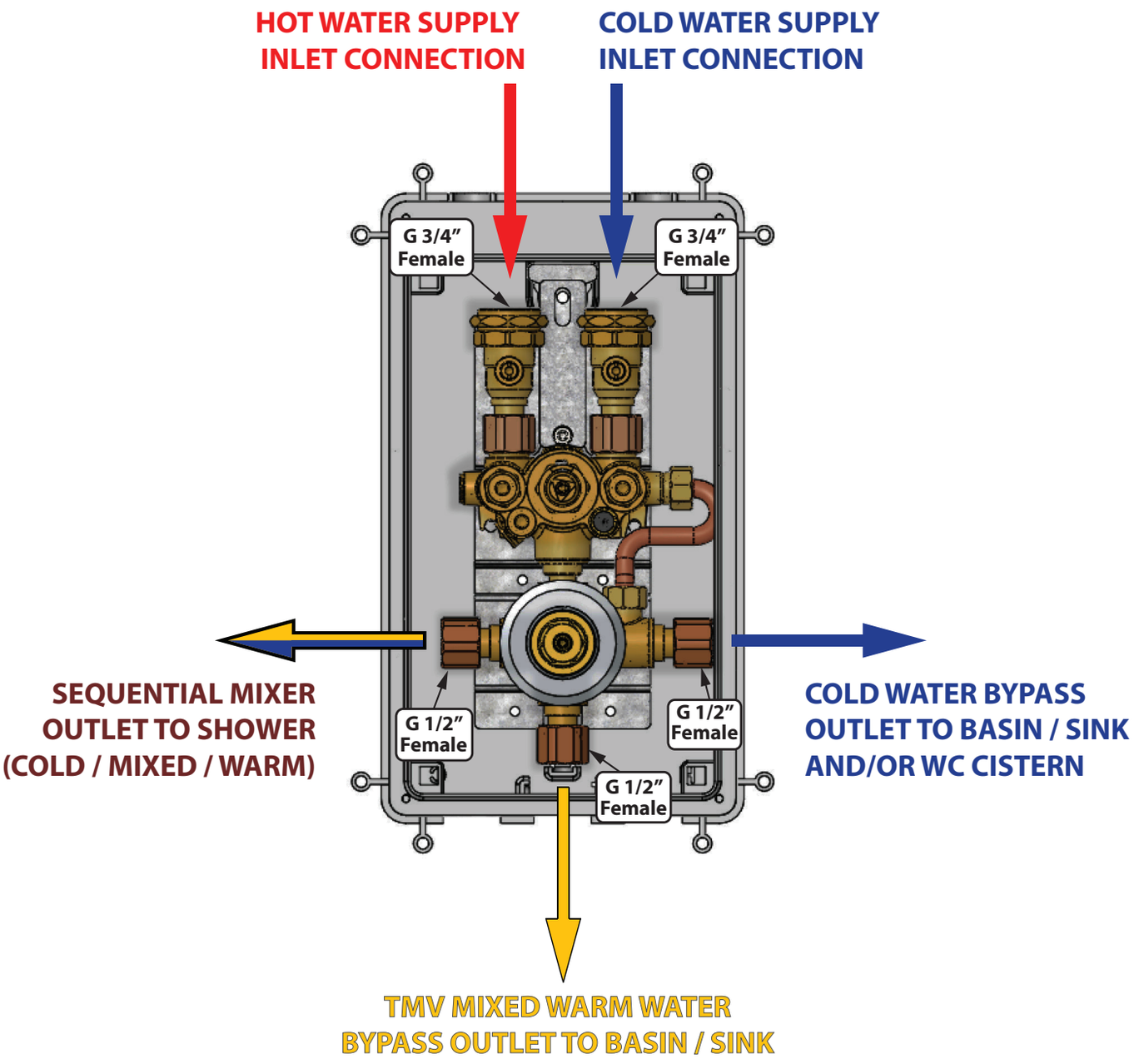
For use with potable water only.

Enware Australia advises:
1. Due to ongoing Research and Development, specifications may change without notice;
2. Component specifications may change on some export models.

component descriptions



flow directions



before installation

Aquablend® HE should be installed using the appropriate Standard, Code of Practice and legislation applicable to each state and following the details outlined in this section. Thermostatic mixing valves must be installed by a qualified plumber.

NOTE: To effectively control microbial hazards during system design, installation, commissioning and maintenance, the requirements outlined in AS/NZS3666 and local legislation shall be adhered to.

Incorrect installation may cause the valve to operate outside specified performance values and may also void warranty.

Prior to the installation of the valve, the system must be checked to ensure that the system operating conditions fall within the recommended operating range specified in “Installation Conditions” on page 5.

To ensure that Aquablend® HE operates correctly, it is necessary that the pipework is thoroughly flushed with clean water before it is installed as per AS/NZS3500.1. This will remove any physical contaminants from the pipework, ensuring trouble-free operation. During the flushing procedure care should be taken to prevent water damage occurring to the surrounding area.

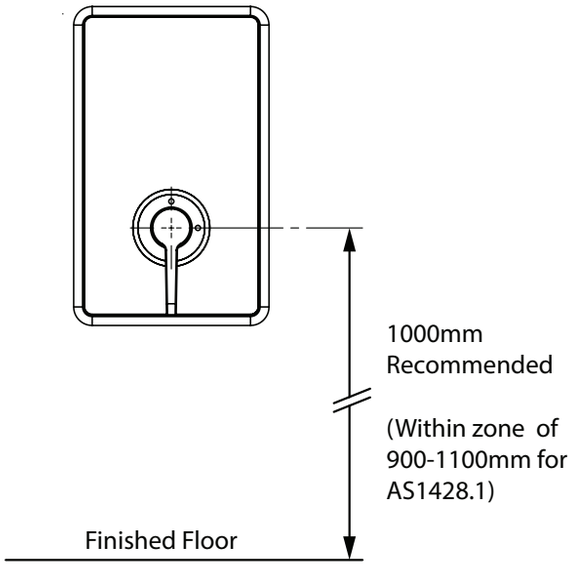
installation procedure

IN-WALL COMPONENTS

STEP 1

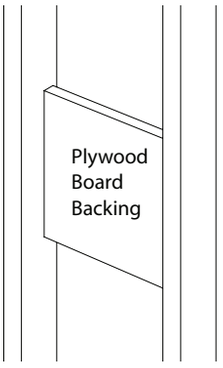
Determine the desired location for the in-wall assembly (box) with relation to the mixer handle height off the floor.

Recommended height 1000 – 1100mm off the floor. (Within zone of 900 – 1100mm for AS1428.1.)

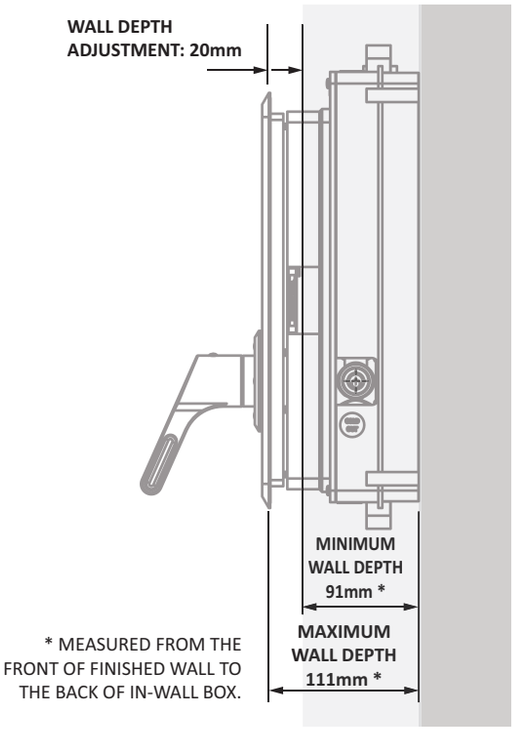


STEP 2

If installing within a frame wall, fit mounting timber in the desired location for box support. Enware recommends 13mm ply wood sheet fixed between two in-wall studs.

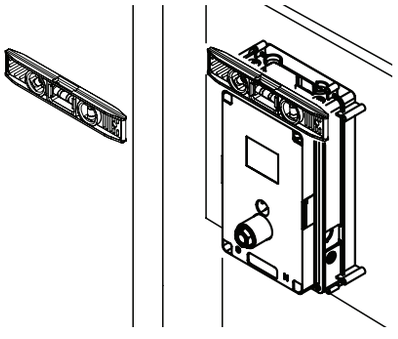


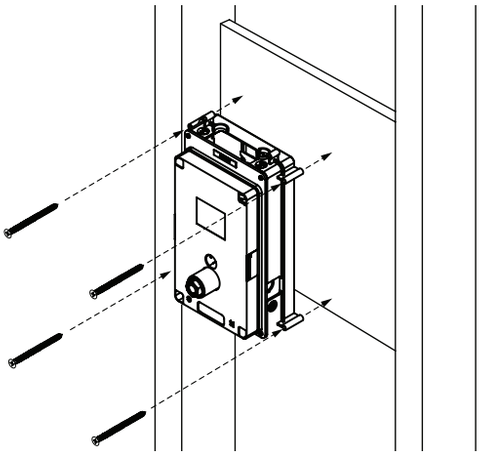
IMPORTANT: The depth of box from finished wall to the back of the box must be **between 91-111mm.**



STEP 3

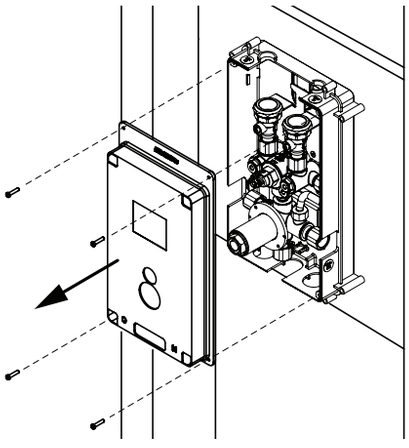
Mark out the fixing point locations while ensuring the box is level, and secure the box to the wall support using the external fixing lugs and suitable fixing screws.





STEP 4

Remove front dust cover. Keep the dust cover and 4 screws at hand.



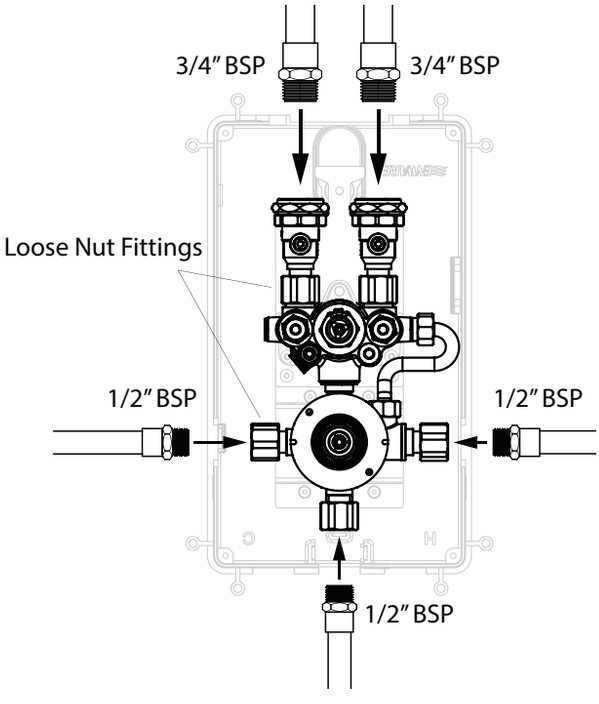
STEP 5

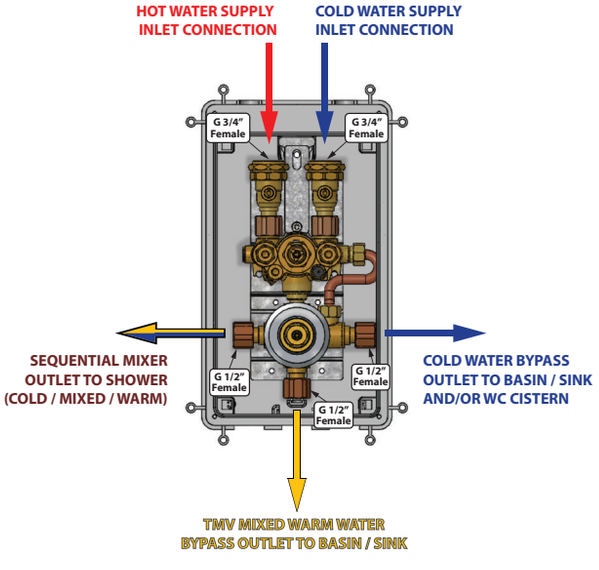
Purge hot and cold supply lines to make sure all debris has been cleared. Connect water supplies to inlet fittings using 3/4” BSP connectors.

Connect pipework to sequential mixer outlet (to shower), hot water bypass, and cold water bypass, using 1/2” BSP loose nut connectors.

(Refer to FLOW DIRECTIONS on page 7.)

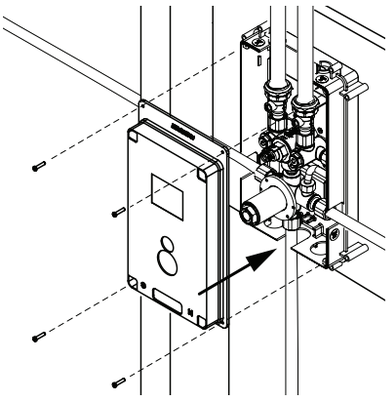
Turn water on, and check for any leaks on connections.





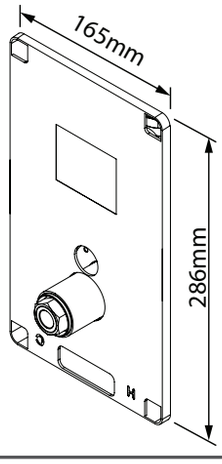
STEP 6

Re-fit the front dust cover and secure with the 4 screws.

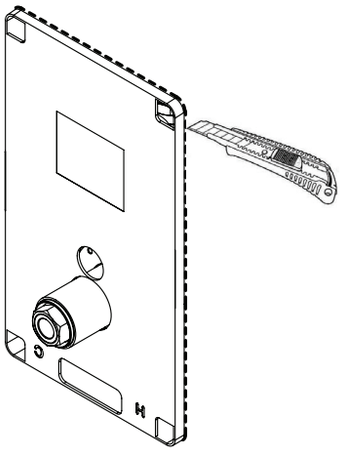


The wall is ready to be sheeted. Make sure the sheeting is finished hard up against the protruding section of the box.

The wall cut-out size is 286mm high x 165mm wide.



FRONT OF WALL COMPONENTS



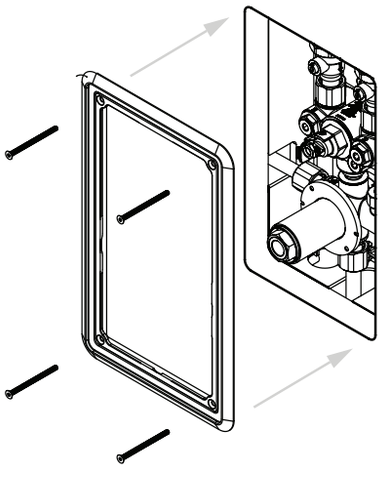
STEP 1

Once the wall is finished, the protruding section of the box needs to be trimmed so it finishes flush with finished wall face. Discard cover.

Check that no part of the box protrudes past the finished wall, and deburr trimmed edges.

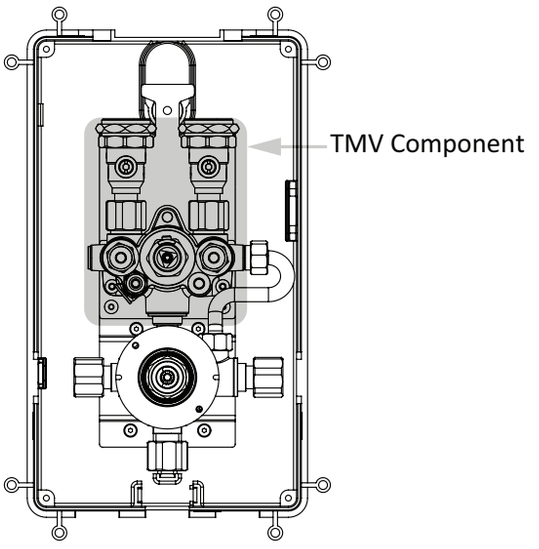
STEP 2

Fit the chrome back support bracket, taking care not to pinch the seal that is around the support bracket. Secure the bracket with four screws supplied.



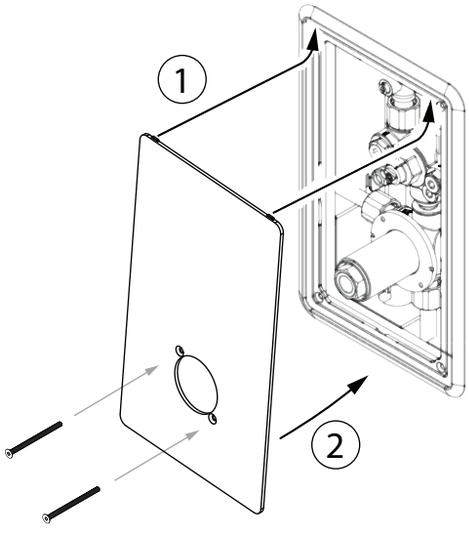
STEP 3

Commission the Thermostatic Mixing Valve (TMV) following the Commissioning Procedure on page 15.



STEP 4

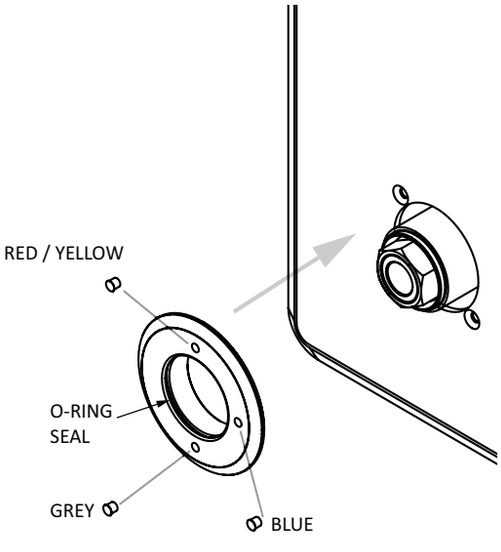
Fit the chrome faceplate by first placing its 2x tabs on the top edge into the 2x voids on the top side of the faceplate bracket. Secure the faceplate in place using the 2x screws and tighten with a 2.5mm Allen Key.



STEP 5

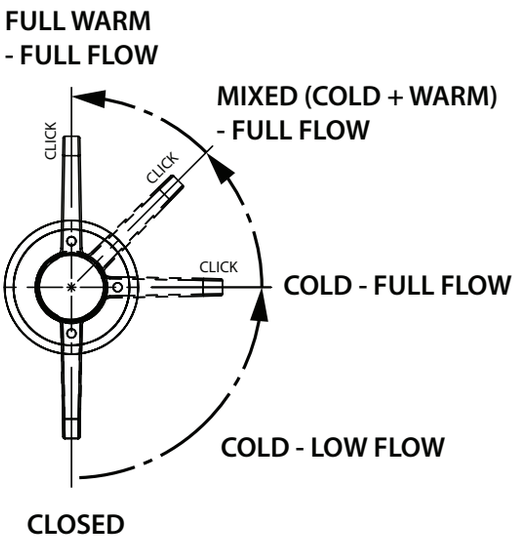
Place the chrome dress flange over the spout connector. Align the flange and fit 3 colour indicators into the 3 holes on the flange, with red or yellow on top, blue on the right, and grey on the bottom.

Check that the O-ring seal on the flange is in place.



STEP 6

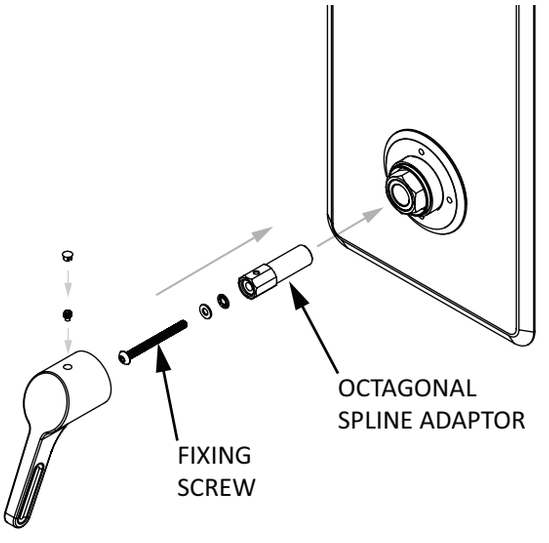
Fit octagonal spline adaptor onto the spline, with the grub screw hole facing up. Put handle on the spline adaptor, and check that the handle is facing straight down when in OFF position. If not, take the handle off, re-fit the octagonal spline adaptor in a different position on the spindle, and try fitting the handle again.



STEP 7

Once correct position is achieved, fix the octagonal spline adaptor in place using the fixing screw.

Fit handle on and secure in place by tightening the grub screw (2.5mm Allen Key). Put on cap for the grub screw hole.



mixer operating instructions

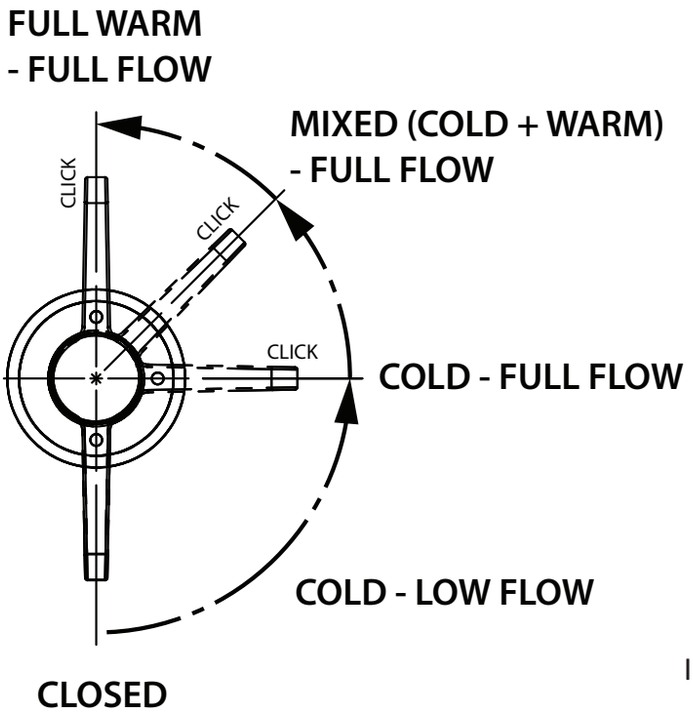


IMAGE 1

The sequential lever turns progressively from “OFF” to “COLD” to “MIXED HOT”.

Starting from “CLOSED” position (handle lever pointing straight down),

To operate the tap, turn the lever anti-clockwise. The flow volume gradually increases.

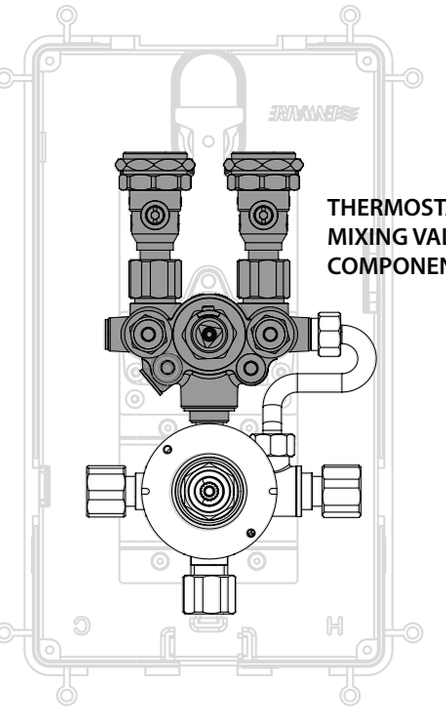
At “COLD - FULL FLOW” position (handle pointing to the right), cold water is at its full flow.

Turning the lever further past ”COLD - FULL FLOW”, the flow rate stays at maximum but now the water is mixed with warm water.

At “FULL WARM” position (handle pointing straight up), it is at full temperature and full flow supplied by the TMV, and is no longer mixed with cold water.

thermostatic mixing valve

In accordance with the requirements of AS 4032.3, the Thermostatic Mixing Valve component needs to be commissioned, and serviced annually. A major service is required at intervals of no more than 5 years, where the Thermostatic Element and O-rings are replaced in addition to the annual service.



THERMOSTATIC MIXING VALVE COMPONENT

commissioning of TMV

Upon completion of the installation, the valve should be tested and commissioned as per the procedure outlined below including Temperature Adjustment and Shut Down Test, or as specified by the local authority. The entire procedure should be read thoroughly prior to the commissioning of the valve. A calibrated digital thermometer having rapid response time with maximum temperature hold, 3mm and 4mm Allen keys, and the temperature adjusting key (supplied with product) will be required to check and set the outlet mixed temperature of the valve.

Ensure all outlets that will be serviced by the valve have adequate warning signs posted to ensure that no outlet is used during commissioning.

Open the cold supply line to the valve, then open the hot supply line, ensuring there are no leaks. Open the outlet on basin, or if using the shower outlet, turn the mixer handle to Full Warm - Full Flow position.

Allow the mixed outlet to flow for at least 60 seconds to allow the temperature to stabilise before taking a temperature reading at the outlet with a digital thermometer. The flow rate should be at least 4L/min. The flow rate can be checked with the aid of a known size container and a stopwatch. The temperature should be taken at the closest outlet served by the thermostatic mixing valve. If the outlet temperature requires adjustment, follow steps below.

commissioning of TMV

1. TEMPERATURE ADJUSTMENT

1. Turn on the integral isolation valves using a 4mm Allen key or slotted screw driver (if not already turned on). SEE IMAGE 4
2. Turn on the the basin warm water to full flow, or alternatively, turn sequential shower mixer to “full warm – full flow” position.
3. Check the temperature of the warm water with a hand held digital thermometer.
4. Loosen the temperature adjustment locking grub screw located on the Hex of the top cap using a 3mm Allen key. SEE IMAGE 2
5. Fit supplied key over the adjusting spindle. SEE IMAGE 3 With the thermometer held within the water flow stream, rotate the temperature adjuster key until the desired temperature is achieved.

   • To <u>increase</u> the mixed outlet temperature, rotate the spindle anti-clockwise.

   • To <u>decrease</u> the mixed outlet temperature, rotate the spindle clockwise

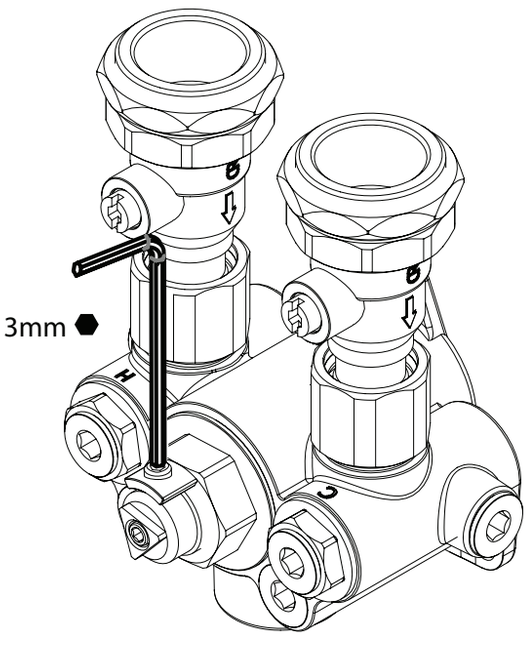


IMAGE 2

6. Allow the mixed outlet temperature to stabilize for 60 secondss and once again take a temperature reading. Repeat the procedure until the desired temperature has been reached.
7. Tighten the temperature adjustment locking grub screw. SEE IMAGE 2
8. Check the outlet temperature is stable over the full range of flow rates and that flow rate is adequate for the application.
9. Close the outlet.
10. The TMV temperature is now set and locked.

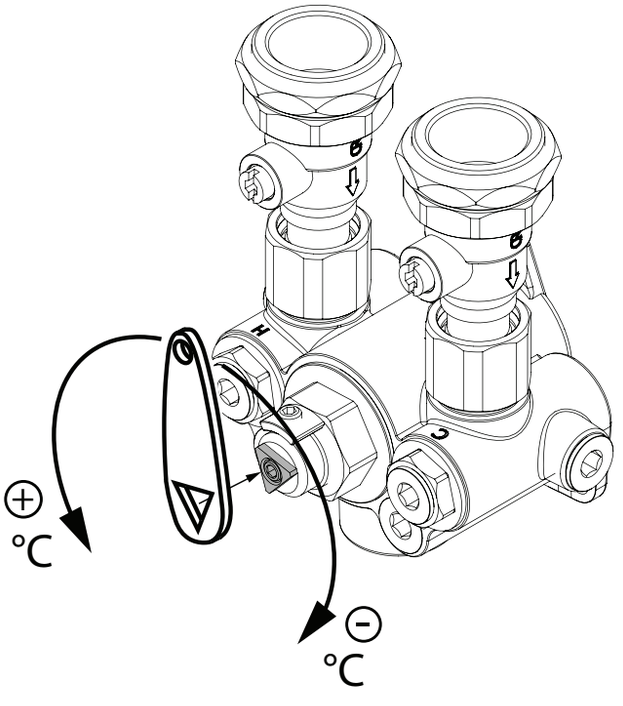


IMAGE 3

2. SHUT DOWN TEST

Now that the mixing valve has been set and locked it is necessary to perform a shut down check.

Allow the mixed water temperature to stabilise and note the outlet temperature.

While holding a digital thermometer in the outlet flow, quickly isolate the cold water supply to the valve. The outlet flow should quickly cease flowing. The flow should be less than 0.1L/min following the isolation. Monitor the maximum outlet flow temperature, and record this on the Commissioning Report. The temperature should not exceed that allowed by the applicable standard or code of practice for each state.

Restore the cold water supply to the valve. After the mixed water temperature has stabilised note the outlet temperature ensuring the outlet temperature has re-established.

Repeat the above test, except this time quickly isolate the hot water supply to the valve. The outlet flow should quickly slow to a trickle. The trickle should typically be less than 0.4L/min@500kPa down to less than 0.1L/min@100kPa following the isolation.

Restore the hot water supply to the valve. After the mixed water temperature has stabilised, measure and record the outlet temperature, ensuring the outlet temperature has re-established.

Ensure that all details of the Commissioning Report are completed and signed by the relevant signatories, and a copy is kept with the installer and owner of the premises.

The valve is now commissioned and it can be used within the technical limits of operation.

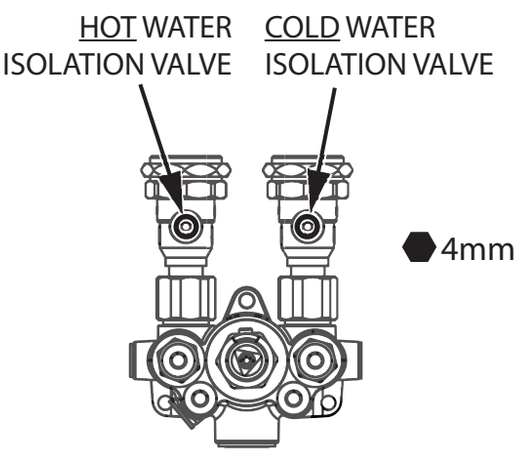


IMAGE 4

thermal flush option

The Aquablend® HE includes a built-in Thermal Flush feature allowing the facility's maintenance team or licensed service contractors to perform a controlled thermal flush to the TMV and warm water plumbing system for disinfection.

NOTE: The thermal flush procedure is optional and does not form part of commissioning and service requirements set out in AS4032.3.

Before commencing the thermal flush, a site-specific procedure must be implemented to control the risk of scalding. Hot water will run directly to the outlets fed by the Thermostatic Mixing Valve, and precautions shall be taken to prevent the chance of injury.

THERMAL FLUSH PROCEDURE

1. Turn OFF both hot and cold inlet isolation valves on the TMV. SEE IMAGE 7

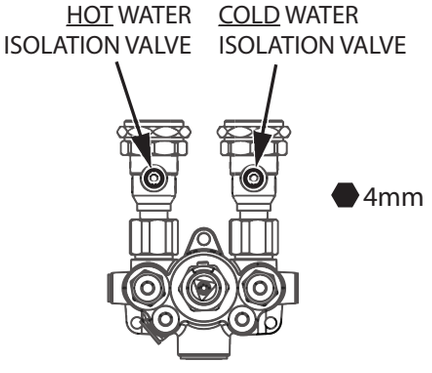


IMAGE 7

2. Check that the temperature adjustment locking grub screw (located on the hex of the top cap) is tight. SEE IMAGE 8

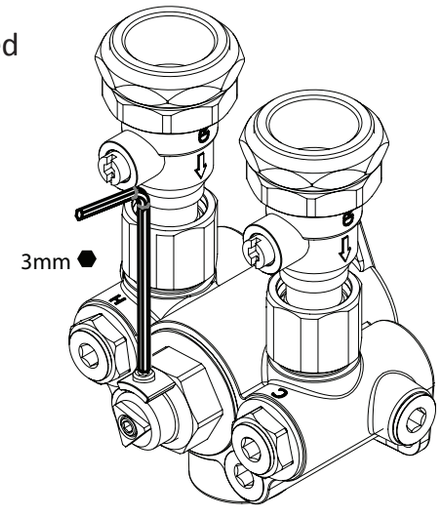


IMAGE 8

3. Insert a 3mm Allen key into the Thermal flush activation point located in the centre of the temperature adjustment screw on the valve's Top Cap. SEE IMAGE 9

4. Wind Thermal Activation Screw anti-clockwise until it stops. A red indicator will be visible.

5. Turn the hot water inlet isolation valve to the ON position.

6. Turn the basin tap warm water to ON position, and / or shower to FULL WARM - FULL FLOW position.

WARNING: Full temperature hot water will flow from the tapware or shower outlet. Care must be taken to prevent scalding.

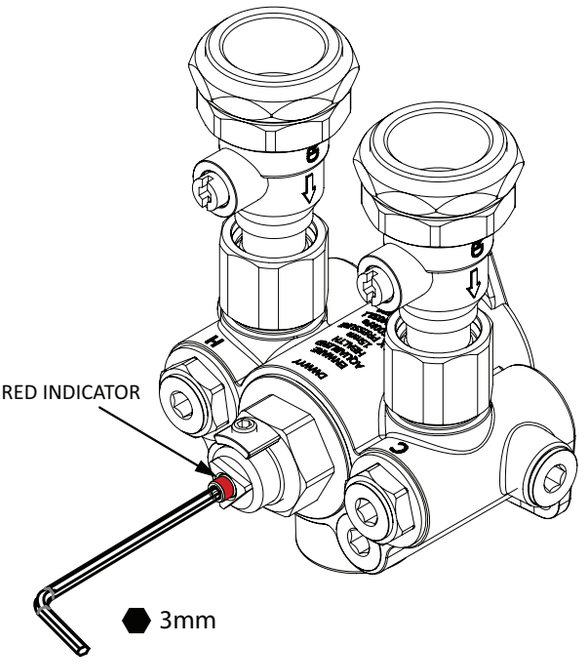


IMAGE 9

7. Once the required time set in the facility's Thermal Flush procedure has passed, turn the hot water inlet isolation valve to the OFF position. SEE IMAGE 7

8. Leaving the basin tap / shower outlet in the ON position, turn the cold water inlet isolation valve to the ON position. SEE IMAGE 7

9. Wind the Thermal Flush activation screw clockwise until it is all the way back in and sitting flush with the temperature adjustment screw. (Note: Spurts of cold water will discharge from the tapware outlet during this process.)

10. Turn the hot water TMV inlet valve to the ON position.

11. Check the outlet flow, making sure it is within the required temperature range.

12. Turn the basin tap/ shower outlet OFF.

13. Re-instate front facia plate and handle. NOTE: If the front fascia plate does not securely fit back to the top cap this indicates the thermal flush has not been disengaged properly. (See Step 9)

maintenance and servicing - TMV

Aquablend® Health TMV will only require minimal preventative maintenance work to ensure it operates at its optimum level of performance.

The valve shall be serviced annually, unless the installed conditions dictate more frequent servicing is necessary.

Remove Handle and Facia Plate

1. Remove grub screw cap on handle, loosen the grub screw, and remove handle.
2. Remove dress flange, by pulling straight out.
3. Remove faceplate, by unscrewing two fixing bolts, then pulling the bottom side out first.

(See pages 12 - 13)

ANNUAL MAINTENANCE PROCEDURE

Every 12 months the Aquablend® Health TMV should be inspected and tested. The valve's external surfaces should be given a light wipedown. The valve and surrounding area should be inspected for leaks or water damage and action taken if required. Ensure a clean dry work area is available.

1. Cleaning the Strainers

1. Firstly isolate the hot and cold supplies to the mixing valve by closing the inlet isolation valves. SEE IMAGE 4 page 17
2. With a suitable spanner, remove strainer-check valve assembly. SEE IMAGE 5
3. Clean strainers with a suitable descaling solvent (such as CLR) diluted with water. Check for physical damage and thoroughly rinse with clean water. Strainer-check valve assembly can then be reinstalled into the valve and tightened to a maximum torque of 15Nm into the valve body.

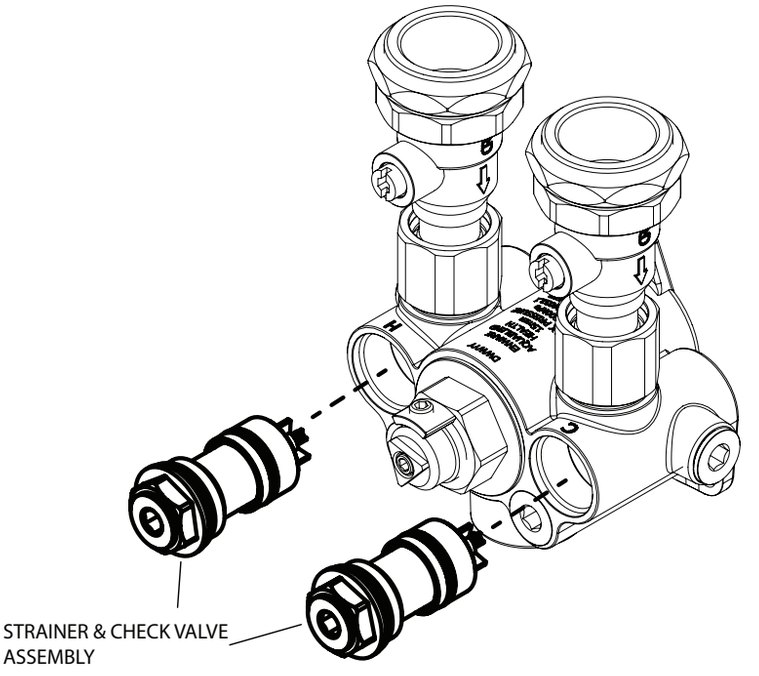


IMAGE 5

2. Non-Return Valve Operation

To check Non-Return Valve on the HOT inlet side, carry out the following steps:

1. Turn OFF the isolation valve on the HOT inlet only (COLD inlet must be open).
2. Unscrew and remove Hot Water Supply Test Port Cap. (SEE IMAGE 6)
   After releasing water pressure initially, observe any water leaking through in the Hot Water Supply Test Port.
3. If water continues leaking through this may indicate a fouled or faulty Non-Return Valve. If this is the case, inspect the non-return valve for damage or any debris, and replace the Strainer & Check Valve Assembly if required.
   If water does not leak through, this indicates the check valve is working correctly.
4. Replace Hot Water Supply Test Port Cap.
5. Turn back ON the isolation tap on the HOT inlet.

To check Non-Return Valve on the COLD inlet side, repeat the above steps using the COLD inlet side.

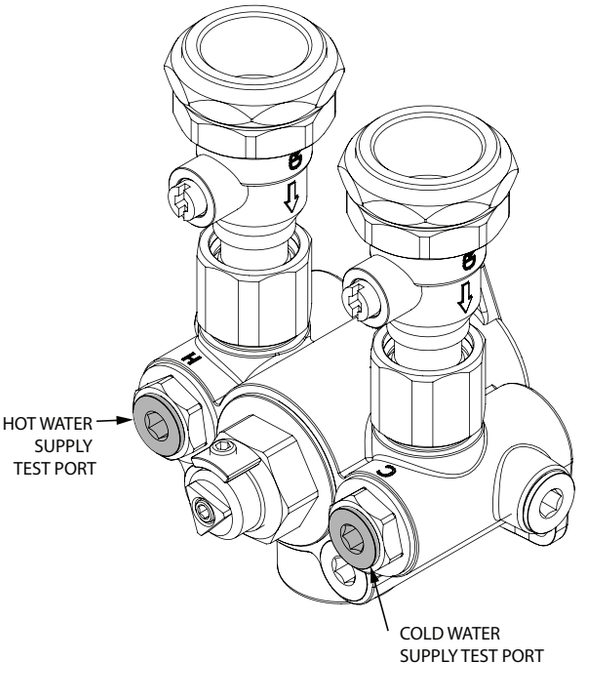


IMAGE 6

3. Recommissioning

The valve must then be recommissioned as per the Commissioning instructions on page 15, including temperature adjustment and the shut down test.

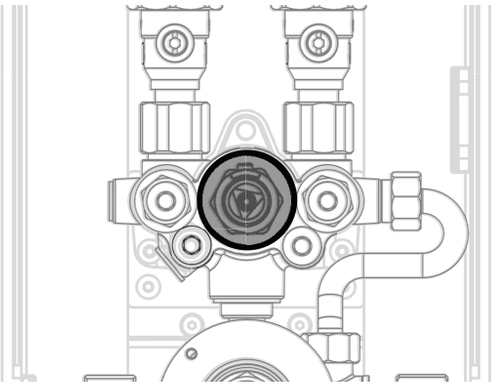
If the valve fails to shut down or fails to maintain its set temperature, refer to Troubleshooting.

5-YEAR SERVICE

In addition to the Annual Maintenance, the Cartridge O-rings and Thermostatic Element must be replaced at intervals not exceeding 5 years from commissioning.

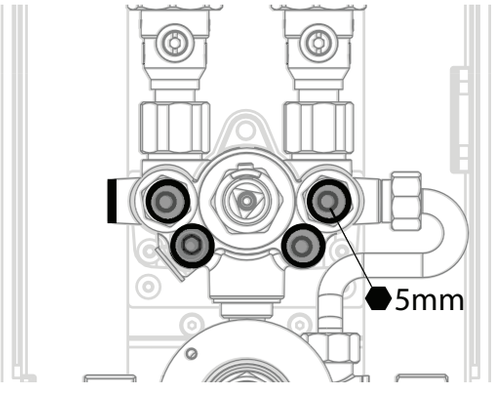
ACCESS TO TMV CARTRIDGE

Use a spanner on the cartridge Top Cap to unscrew cartridge from TMV body. To dismantle cartridge, use a spanner on the hex of the Top Cap, and a 28mm socket wrench on the hex at the bottom of the Cartridge Shell - and unscrew. SEE “Spare Parts - TMV” on page 26. Clean or replace components as required, then re-assemble cartridge. Install cartridge back into body using a spanner. Do not overtighten. (Recommended - 20Nm)



ACCESS TO INSPECTION / MONITORING PORTS

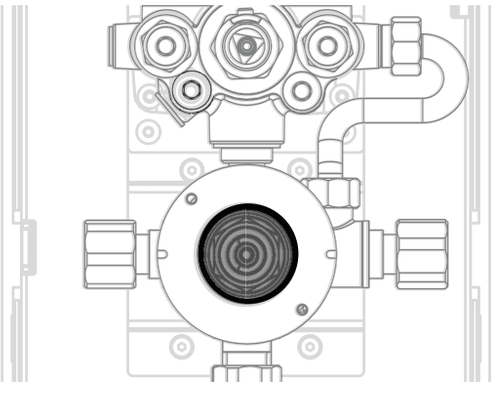
To access the inspection ports, remove handle, dress flange and the faceplate, then shut off water supply to the TMV using the isolation valves.
Using a 5mm Allen key, unwind the access cover and keep at hand.
Apply thread tape to a Pete’s Plug and screw into the 1/4” thread port. Insert measurement probe into Pete’s Plug and open isolation valves. Check for leaks. Operate the TMV/ mixer and conduct tests as required.



SERVICING THE SEQUENTIAL MIXER CARTRIDGE

To replace mixer cartridge, remove handle and dress flange, then unscrew mixer cartridge lock nut. SEE Spare Parts - Mixer on page 27. Pull mixer cartridge out. Replace cartridge, ensuring the locator on the cartridge is aligned with the slot in the body.

Fit octagonal spline adaptor. Fit mixer cartridge and lock nut back into body, and tighten with a spanner. Do not overtighten. (Recommended - 20Nm)



CLEANING

Enware products should be cleaned with a soft damp cloth using only mild liquid detergent or soap and water. Do not use cleaning agents containing a corrosive acid, scouring agent or solvent chemicals. Do not use cream cleaners, as they are abrasive. Use of unsuitable cleaning agents may damage the surface. Any damage caused in this way will not be covered by warranty. If re-greasing spindles or seals, always use a silicon based potable water approved lubricant such as Hydroseal Food Pro, Molykote 111 or Clare FU5.

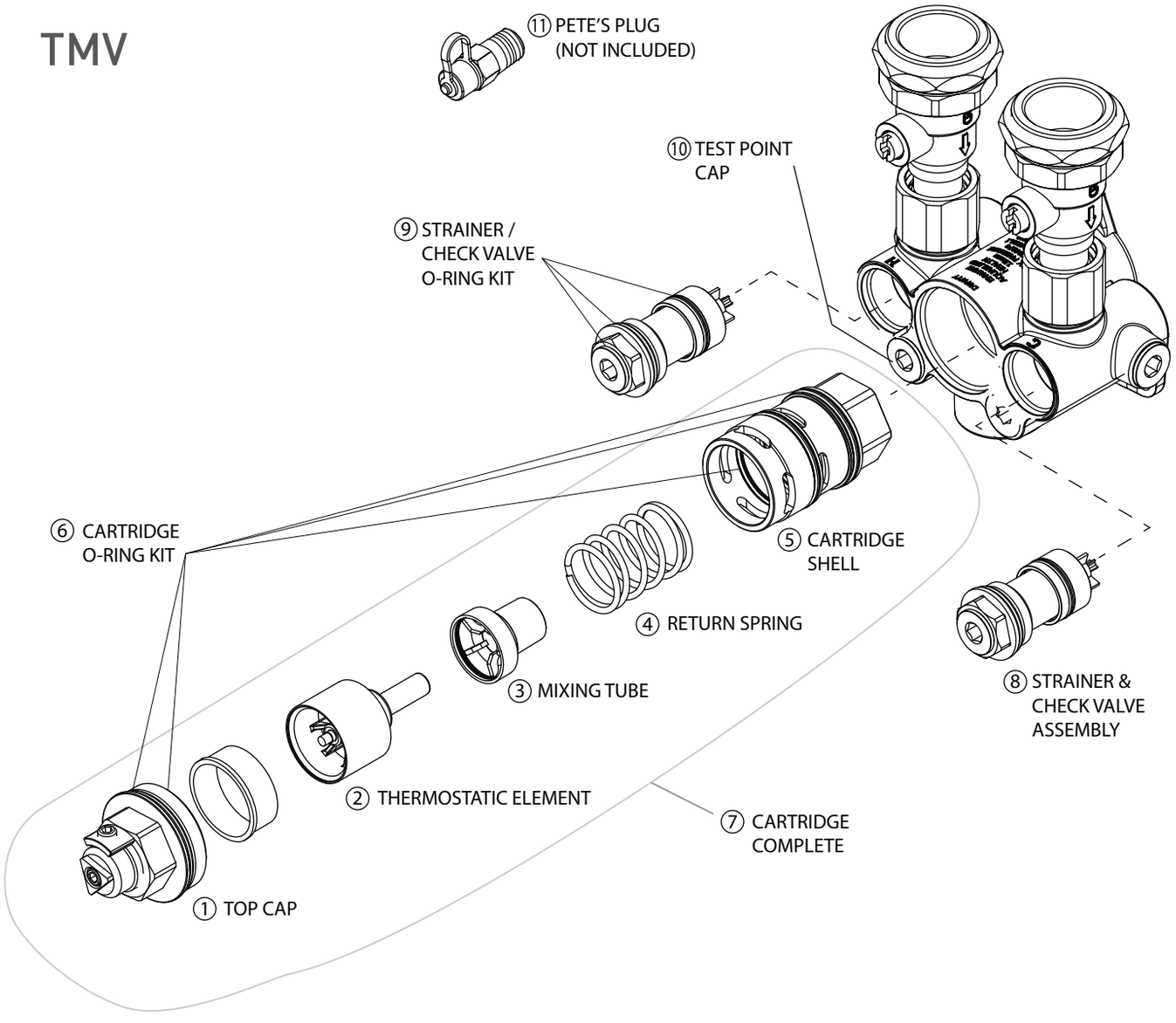
troubleshooting

FAULT / SYMPTOM	CAUSE	RECTIFICATION
1. The desired mixed water temperature cannot be obtained or valve is difficult to set.	• Hot and cold supplies are fitted to the wrong connections. • Valve contains debris. • Strainers contain debris. • Non-return devices are damaged • Top Cap and/ or Cartridge O-rings are damaged	• Refit the valve with Hot/ Cold supplies to the correct connections. • Clean the valve ensuring that all debris is removed and components are not damaged. • Clean strainers ensuring debris is removed. • Check non-return device is not jammed. Clean or replace it if necessary. • Check Top Cap and cartridge O-rings for damage. Replace if necessary.
2. The valve will not shut down	• The hot to mix temperature differential is not 10°C or greater. • Cartridge O-ring is damaged. • Cartridge seat is damaged or fouled by debris. • Thermostatic Element has failed.	• Raise hot water supply temperature. • Replace cartridge O-rings. • Clean seat using mild descaling solution. • Replace Thermostatic Element.
3. Mix temperature unstable	• Debris is fouling valve. • Flow rate below 4L/min. • Strainers are fouled.	• Clean the valve ensuring that all debris is removed and components are not damaged. • Rectify any pressure deterioration. • Clean strainers.
4. Mix temperature changing over time	• Inlet conditions (pressures or temperatures) are fluctuating. • Strainers contain debris	• Install suitable pressure control valves to ensure inlet conditions are within those stated in Installation Conditions on page 5. • Clean strainers ensuring debris is removed
5. Either full hot or cold flowing from outlet fixture	• Valve is incorrectly set. • Hot/Cold water has migrated to other inlet. • Refer also to fault/sympton 1 & 2	• Adjust mix temperature between 35 - 48°C as required. • Replace faulty non-return valves.
6. No flow from the valve outlet	• Hot or cold water failure. TMV has shut down. • Strainers are fouled	• Valve functioning correctly. Restore inlet supplies and check mix temperature. • Clean strainers.
7. Flow rate reduced or fluctuating	• Valve or inlet fittings fouled by debris. • Dynamic inlet pressures are not within recommended limits.	• Check valve and inlet fittings for blockages. • Ensure operating conditions are within specified limits and the dynamic inlet pressures are balanced to within +/- 10%.
8. Mixed water temperature too hot or cold	• Valve has been tampered with. • Valve incorrectly set. • Inlet temperatures are not within specified limits.	• Readjust valve to required set temperature. • Readjust valve to required set temperature. • Ensure inlet temperatures are within the specified limits as per Installation Conditions on page 5.
9. Mixed water temperature doesn't change when the temperature adjuster is altered	• Return spring is missing • Thermostatic element has failed	• Install return spring. • Replace thermostatic element.

FAULT / SYMPTOM	CAUSE	RECTIFICATION
10. Mixed water temperature adjuster difficult to move	• Adjuster at maximum position. • Valve piston into overstroke	• Mixed water is at maximum temperature. No higher mix temperature adjustment is available. • Wind adjuster out until set temperature required is achieved.
11. Hot water flows into the cold water system or vice versa.	Non-return valves.	Replace non-return valves.
12. Valve is noisy.	Water velocity above velocity requirements of AS3500.1.2	Reduce water velocity.
13. Water leaking from shower outlet. Water dripping and does not shut off	Debris is caught inside cartridge Cartridge is worn or damaged Pressure too high	Remove and flush Cartridge, inspect and remove any debris. Replace Cartridge if damaged. Install pressure reduction valve, ensure it is under 500 kPa
14. Water is leaking from spindle	Seal in Cartridge is worn or damaged Pressure too high	Replace Cartridge Install pressure reduction valve, ensure it is under 500 kPa
15. Water is not flowing from mixer. Poor water flow from outlet	Water turned off Aerator or Flow control is blocked by debris.	Turn water on Remove outlet and wash debris from aerator/ flow control. Install an inline strainer.
16. Handle cannot be installed	In-wall assembly (box) is installed too far into the wall	Check that the depth of box from finished wall to the back of the box is between 91-111mm

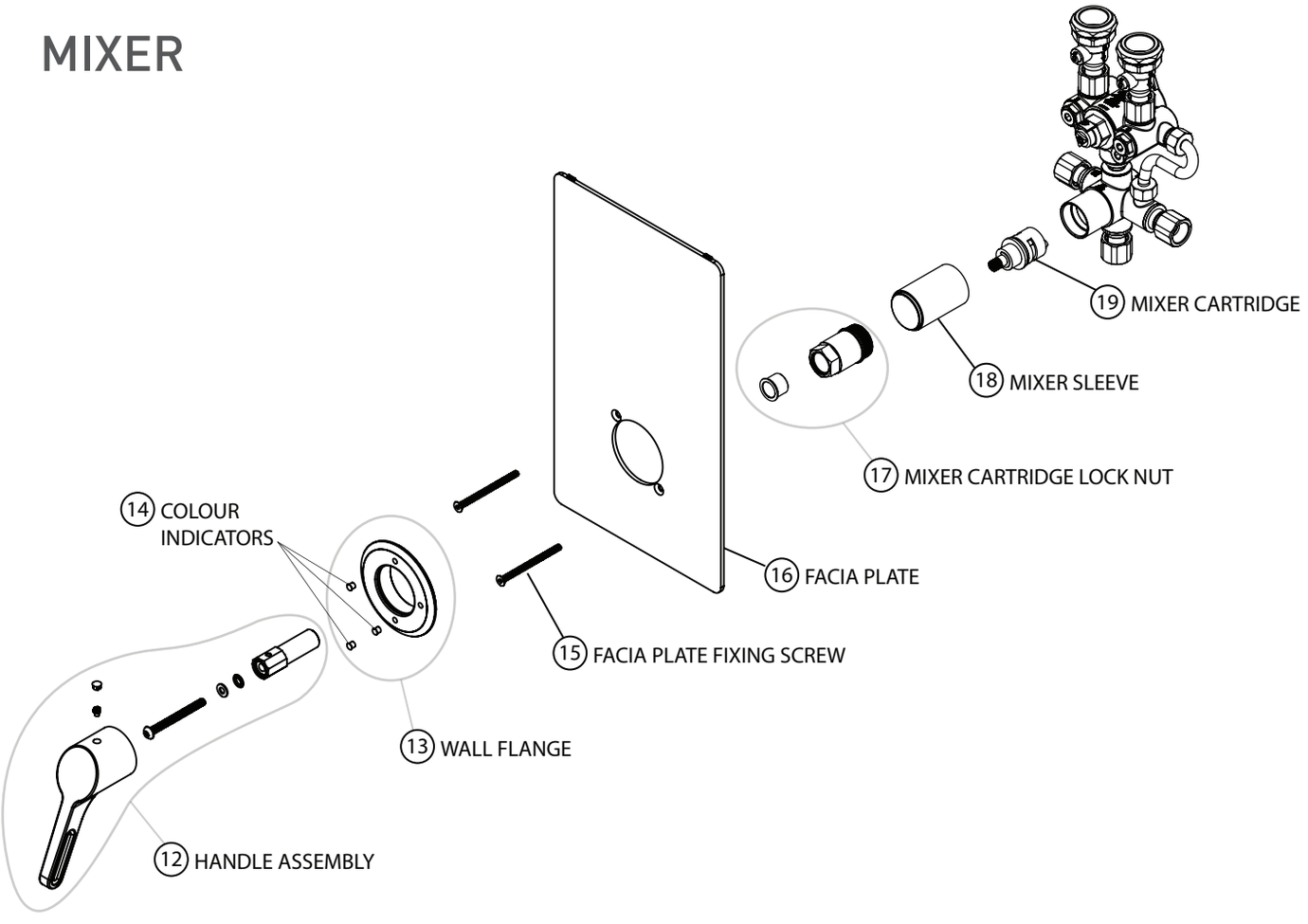
spare parts

TMV



ITEM	DESCRIPTION	ENWARE PRODUCT CODE
1	Top Cap	**(TBC)**
2	Thermostatic Element	**(TBC)**
3	Mixing Tube	**(TBC)**
4	Return Spring	**(TBC)**
5	Cartridge Shell	**(TBC)**
6	Cartridge O-ring Kit	**(TBC)**
7	Cartridge Complete	**(TBC)**
8	Strainer and Check Valve Assembly	**(TBC)**
9	Strainer / Check Valve O-ring Kit	**(TBC)**
10	Test Point Cap	**(TBC)**
11	Pete's Plug	**ATMS1221**

MIXER



ITEM	DESCRIPTION	ENWARE PRODUCT CODE
12	Handle Assembly 80mm	**(TBC)**
13	Wall Flange (with Colour Inidicators)	**LEVSQSHFLAN**
14	Colour Indicator Pack (1x Yellow, 1x Grey, 1x Blue, 1x Red	**LEVSQIND**
15	Facial Plate Fixing Screw (each)	**673833**
16	Facia Plate	**880898**
17	Mixer Cartridge Lock Nut	**897167, 670381**
18	Mixer Sleeve - Chrome	**880903**
19	Mixer Cartridge	**891373**

Commissioning / Service Report for Thermostatic Mixing Valve

Use a separate form for each valve.

The original report is to be retained on site for a minimum of 7 years.

Copies of the report shall be : provided to the owner/ occupier or the person responsible ; retained by the tester ; and where required, forwarded to the relevant authority.

The test method is in accordance with AS4032.3 Appendix B.

Name of Establishment	(Name)	Owner / Occupier	(Name)
Street Address			
Contact Name	(Name)	Phone	
Date of Test		Work Order No.	

Valve ID No.		Model No.	
Make of TMV		Size	

Valve location / Building	
Area Serviced by Valve	

Number of Outlets Served	Basin	Shower	Bath

Valve installed to requirements of		
1. The local water supply authority	2. The valve manufacturer / supplier requirements	3. The Australian Standards for Plumbing and Drainage
☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO
If NO, give details and action taken:		

Valve functioning in accordance with the application requirements:	☐ YES	☐ NO
If NO, give details and action taken:		

Inlet Temperature and Pressure Tests

Inlet Hot Water	Pressure	kPa	Inlet Cold Water	Pressure	kPa
	Temp	°C		Temp	°C
Cold Supply via: mains / tank / pump			Pressure Reduction Valve Fitted: ☐ YES ☐ NO		
Hot Water Unit:			PRV : ☐ YES ☐ NO		

Temperature of Mixed Warm Water at Outlet (measured at the nearest outlet to the valve)

Set Temperature:	°C	Temperature Range	☐ Neonatal and children 38 - 40°C ☐ Adult 40.5 - 43.5°C ☐ 45°C max. ☐ 50°C max.
With 1 Outlet in Use (Low Flow)	°C	Flow Rate With 1 Outlet in Use (Low Flow)	L/min
With All Required Outlets in Use (High Flow)	°C	Flow Rate With All Required Outlets in Use (High Flow)	L/min

Thermal Shut-Off Tests

Hot Water Isolation Test:	☐ PASS	☐ FAIL
Cold Water Isolation Test:	☐ PASS	☐ FAIL

Details of Test and Maintenance:

Type of work carried out:	☐ Commissioning	☐ Service	☐ 5-Year Service
Strainers	☐ Cleaned	☐ Replaced	
Non-Return Valves	☐ Checked	☐ Replaced	
O-rings and Seals	☐ Checked	☐ Replaced (max. 5-year intervals)	
Thermostatic Element	☐ Checked	☐ Replaced (max. 5-year intervals)	
Valve Replaced	☐ Yes	☐ No	
Other Items Replaced:			

Date of Installation	
Valve installed by	(Name)
Date of Previous Service	
Previous Service by	(Name)
Date of Previous Element/ O-Rings Replacement (5-Year Service)	
Date of This Service / Commissioning	
Date of Next Service Due	
Date Element / O-Rings Replacement (5-Year Service) Due	

It is hereby certified that all the commissioning work has been carried out by the undersigned in accordance with local plumbing requirements for Thermostatic Mixing Valves

Contractor Business Name	(Name)	
Contractor Name (print)	(Name)	Contractor Lic / Cert No.
Phone No		
Name of Authorised Tester (Licensed Plumber)	(Name)	
Signature of Authorised Tester (Licensed Plumber)	(Signature)	Date
Owner / Occupier Signature	(Signature)	Date

PRODUCT WARRANTY FOR AUSTRALIA

Effective 1 September 2014

Enware Australia Pty Limited (ACN 003 988 314) ("we" or "us") warrants that this product (also referred to as "our goods") will be free from all defects in materials and workmanship for 24 months* from the date of purchase. Our liability under this warranty is limited at our option to the repair or replacement of the defective product or part, the cost of repair of the defective product or part or the supply of an equivalent product or part, in each case if we are satisfied the loss or damage was due to a defect in the materials or workmanship of the product or part. All products must be installed in accordance with the manufacturer's instructions, the PCA, and AS/NZS3500 including any other applicable regulatory requirements.

making a claim

To make a claim under this warranty you must notify us in writing within 7 days of any alleged defect in the product coming to your attention and provide us with proof of your purchase of the product together with a completed Online Product Service and Warranty Form, available from our website **www.enware.com.au/warranty**.
All notifications and accompanying forms must be sent to us marked for the attention of the Enware Australia Pty Limited, 9 Endeavour Road, Caringbah NSW 2229. We can also be contacted by telephone (1300 369 273) or by email (info@enware.com.au). Your costs in making a claim under this warranty, including all freight, collection and delivery costs, are to be borne and paid by you. We also reserve the right at our cost to inspect any alleged defect in the product wherever it is located or installed or on our premises.

* 2 Year parts and labour on the complete assembly. After 2 years, a further 3 years parts only warranty is applicable to sequential valve cartridge.

exceptions

This warranty does not apply in respect of any damage or loss due to or arising from:

a) Failure by you or any other person to follow any instructions for use (including instructions and directions relating to the handling, storage, installation, fitting, connection, adjustment or repair of the product) published or provided by us;

b) Failure by you or any other person responsible for the fitting, installation or other work on the product to follow or conform to applicable laws, standards and codes (including the AS/NZ 3500 set of Standards, all applicable State and Territory Plumbing Codes, the Plumbing Code of Australia and directions and requirements of local and other statutory authorities); or

c) Any act or circumstance beyond our control including faulty installation or connection, accident, abnormal use, acts of God, damage to buildings, other structures or infrastructure and loss or damage during product transit or transportation.

other conditions

Except as provided or referred to in this document, we accept no other or further liability for any damages or loss (including indirect, consequential or economic loss) and whether arising in contract, tort or otherwise. Any benefits available to you under this warranty are in addition to any non-excludable rights or remedies you may have under applicable legislation, including as a "consumer" under the Australian Consumer Law. To that extent you need to be aware that: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

ADDRESS: 9 Endeavour Road, Caringbah NSW 2229 Australia

POSTAL ADDRESS: P.O. Box 2545, Taren Point NSW 2229 Australia

PHONE: 61 2 8536 4000 **FAX:** 61 2 8556 4066

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