AQUABLEND 1500 THERMOSTATIC MIXING VALVE WITH THERMAL FLUSH

Installation Instructions



15MM THERMOSTATIC MIXING VALVE

≋ENWARE

NEW AQUABLEND 1500

FAQ and technical info available at www.enware.com.au/1500info

100105 VC463





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The ENWARE AQUABLEND 1500 THERMOSTATIC MIXING VALVE is a high performance Thermostatic Mixing Valve suitable for a wide range of applications. The valve is designed to comply with AS4032 - Thermostatic Mixing Valves.

PRODUCT FEATURES

- Complies with the requirements of AS4032
 Thermostatic Mixing Valves
- Provides high stability of mixed water temperature even under changing inlet conditions
- Ensures rapid shut down of mixed outlet flow in the event of hot or cold water supply failure
- Designed for quick and simple in-situ servicing
- Suitable for installation into AS3500 compliant systems with hot water temperature as low as 55°C
- Fitted with a Tamper Resistant temperature adjustment mechanism
- Built-in Thermal Flush feature allows controlled thermal flush to the TMV and warm water plumbing system

Enware reserves the right to change any product specification or information contained in this publication, at any time and without notice. Every care has been taken to ensure accuracy in the preparation of this publication which has been issued for guidance only. No liability can be accepted for any consequences which may arise as a result of its application.

Enware is a trade mark of Enware Australia Pty Limited - A.C.N. 003 988 314 Aquablend TMV's are exclusively manufactured for Enware Australia Pty Limited by Reliance Worldwide 27-28 Chapman Place, Eagle Farm, Qld, 4009 Australia.



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AQUABLEND 1500 THERMOSTATIC MIXING VALVE

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SAFETY

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve is a high performance valve designed to give stable and dependable operation, provided it is installed, commissioned, operated and maintained as per the recommendations outlined in this manual. It should be noted however that this valve should not be considered as an alternative to adequate supervision and duty of care during its use and operation. Note: When installed, the mixing valve, inlet controls, pipework and the surrounding area may become hot, which may cause burn injuries. Precautions should be taken to ensure that these surfaces cannot cause such injuries.

PRODUCT DESCRIPTION

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve is available complete with inlet service fittings. The inlet to the fittings is $\frac{1}{2}$ " BSP male, and the outlet from the valve is $\frac{1}{2}$ " BSP male adapter with an optional $\frac{3}{4}$ " BSP male adaptor. The service fittings consist of isolating ball valves, strainers, pressure test points and non-return valves. The strainers can be serviced and cleaned without disturbing the installation (refer to Maintenance and Servicing section). The inlet service fittings also incorporate union type fittings enabling the thermostatic mixing valve to be removed from its installation without disturbing its pipework.

AQUABLEND 1500	
Enware Product Code	ATM700
Outlet Size	1" with 1/2" and 3/4" BSP adaptors
Inlet	1/2" BSP male with compression nuts
Dry Weight	2 kg
Finish	Nickel Plated



PRODUCT DESCRIPTION

Method of operation is illustrated in IMAGE 2 below: Hot and cold water is supplied to each side of the valve respectively. The hot water enters through a port below the Piston, the cold water enters above the Piston. Upon entry the water begins to blend and enters the Mixing Tube. At this point the mixed water contacts the thermostatic wax Element. The Element will extend or contract to match the water temperature it is exposed to causing the Piston to move, thereby regulating the amounts of hot and cold water entering the valve. This thermostatic mechanism maintains the mixed water temperature at a constant temperature.



PRODUCT DESCRIPTION

If, for example the inlet hot pressure dropped, the flow of hot water into the valve would be reduced and the valve would react as per the following sequence of events:

- Element is exposed to mixed water at a reduced temperature
- Thermostatic Element contracting
- Piston is pushed upwards by the return spring restricting cold flow, consequently opening more of hot port.
- Valve attempts to restore itself to original temperature setting.

Similarly if the hot inlet temperature dropped, the element would again see blended water at a lower temperature and therefore the Element would again contract reducing the cold port piston gap and hence supply more hot water and less cold. Once again the valve attempts to restore itself to its original setting. This will occur for all changing conditions including changes to flow rate, inlet temperatures and inlet pressures.

In the event of a sudden loss of the cold water supply the Piston will shut off the hot port thus stopping any flow through the valve. The valve will also shut down the cold supply if there is a hot water failure.

RECOMMENDED PRESSURES & TEMPERATURES

MIXED OUTLET TEMPERATURE					
Temperature Ac	35 - 48°C				
Set during install	ation/commissioning		(+/- 2 °C)		
INLET TEMPERAT	URES				
Cold Supply		Minimum	5°C		
		Maximum 30°C^			
Hot Supply		Minimum	55°C		
		Maximum	90°C		
Hot to Mix Tem Stable Operatio	perature Differential for n	Minimum	10°C		
Cold to Mix Ten Stable Operatio	nperature Differential for n	Minimum 5°C			
FLOW RATES - TO ENSURE STABLE CONDITIONS SEE IMAGE 3					
Minimum	4 litres/minute as per flow	sizing graph			
Maximum 39 litres/min @ 300kPA Pressure loss as per f			s per flow		
DYNAMIC INLET PRESSURES					
Hot & Cold Inlet	Pressures **	Minimum	20kPa		
		Maximum	500kPa		
STATIC INLET PRESSURES					
Hot & Cold Inlet I For testing purpose	Pressures s/ system commissioning	Maximum	1600kPa		

** 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%.

^ Where cold inlet temperature may exceed recommended range due to seasonal variation, a 5°C

temperature differential between the inlet cold supply and outlet mixed temperature setting must be maintained.

NOTE: Notwithstanding the above, compliance with AS3500 must be maintained.

FLOW SIZING GRAPH

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve is suitable for many applications.

The Headloss Characteristic for Mixed Outlet Flowrate versus Balanced Inlet Pressure is shown below in IMAGE 3. It is important that the valve is not oversized for its intended application.



HEADLOSS CHARACTERISTICS OF AQUABLEND 1500

NOTE: To ensure optimum performance the minimum outlet flow of the mixing valve during operation should be at least 4 litres/minute.

It is important that the valve is sized such that the flow rates from the outlets are not less than those listed in AS3500.1.Section 3. The pipework between the valve and the system must be sized in accordance with AS3500.1 Section 3 and Appendix C to ensure the water velocity in the pipework is within the allowed limit.

If the valve is to be installed and operated under unequal inlet pressures the lower inlet pressure determines the outlet flow rate. However, for optimum performance and stability it is recommended that the valve be installed with balanced dynamic inlet pressures (+/- 10%).

IMAGE 3 - Headloss Characteristics

INSTALLATION

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve should be installed using the appropriate Standard, Code of Practice and legislation applicable to each state and following the details outlined in this section.

The ENWARE AQUABLEND 1500 must be installed by a licensed plumber, or where applicable, a licensed plumber who has undertaken TAFE training in Thermostatic Mixing Valves.

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.

Inlets and outlet connections of the valve are clearly marked. The letters H and C cast into the valve body indicates the Hot and Cold Inlet respectively. An arrow cast into the body of the valve identifies the valve outlet direction.

If the valve is not installed correctly then it will not function correctly and may put the user in danger. It may also void the warranty of the valve.

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 of the AQUABLEND 1500 Thermostatic Mixing Valve as detailed on page 10 - recommended temps & pressures.

If the hot water supply temperature is greater than 90°C the valve may be damaged. A suitable temperature limiting valve must be fitted to the hot water supply, prior to the inlet fittings, if the temperature of the hot water will rise above 90°C. This temperature limiting valve must be installed as per the manufacturer's instructions.

It is also important that both of the inlet dynamic supply pressures are 500kPa or less. If either supply pressure exceeds 500kPa then a suitable pressure reducing valve must be fitted prior to the inlet control valve to reduce the pressure to an acceptable limit.

INSTALLATION

These pressure reducing valves must be installed as per the manufacturer's instructions. For optimum performance from the valve it is recommended that the inlet pressures are balanced to within 10% of each other.

The water quality conditions should be checked to ensure they do not exceed the limits as listed in AS3500.4, Section1.6. If they do exceed the limits it will be necessary to install a water softener or water treatment device.

NOTE: In some installations where certain types of faucet devices such as flick mixers and solenoid valves are used, the water pressure may be seen to spike outside that recommended for the valve during rapid shut off conditions created by these types of devices. Even if the spike only lasts a split second it is still considered to be outside the operating conditions, and may cause the valve to operate incorrectly. In the event that this does occur, measures must be taken to control the spike, such as an inline pressure reducing valves directly before the valve inlets.

To ensure that the mixing valve operates correctly it is necessary that the pipework is thoroughly flushed with clean water before the valve is installed. 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.

It is required by AS3500.4 Section 3.3 that "Each thermostatic mixing valve shall have an isolating stop tap/valve, line strainer and non-return valve fitted to the hot and cold water supply lines". The inlet fittings supplied with each TMV will ensure this requirement is met.

If the ENWARE AQUABLEND 1500 Thermostatic Mixing Valve is to be installed without supplied inlet control valves then it will be necessary to install a separate isolating valve, non-return valve and strainer to both inlets to the valve.

SEE IMAGE 4 on following page.

INSTALLATION

Strainers must be fitted to prevent any particulate contamination from entering the valve. These strainers should be 60 Mesh stainless steel. Isolating valves are required so that the water supply to the valve can be isolated in the event that servicing is required. Non-return devices must also be fitted to both the hot and cold inlets to prevent crossconnection. SEE IMAGE 4

Ensure that test plugs in the top of the inlet fittings are tight. The valve should be installed so it can be accessed easily for maintenance or servicing. The valve can be installed in a wall cavity, under a basin or on a wall, however it is essential that the mixing valve and inlet fittings are easily accessible for servicing.

During installation or servicing heat must not be applied near the mixing valve or inlet fittings, as this will damage the valve and inlet fitting

internals. Failure to comply with this requirement will damage the valve and fittings. It will put the user at risk, and it will void the warranty of the valve.



COMMISSIONING OF THE VALVE

Upon completion of the installation, the valve should be tested and commissioned as per the procedure outlined below or as specified by the local authority. The entire procedure should be read through thoroughly prior to the commissioning of the valve. A calibrated digital thermometer having rapid response time with maximum temperature hold, a small flat bladed screwdriver and the adjusting key (supplied with the AQUABLEND 1500) 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 that is serviced by the shortest length of pipe work between the mixing valve and outlet fixture.

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 please follow steps below.

TEMPERATURE ADJUSTMENT

- Using a small flat bladed screw driver, lever the Red Lock Shield (protective cover) off the valve. SEE IMAGE 5 (over page)
- 2. Loosen the temperature adjustment locking grub screw located on the Hex of the top cap using 3mm Allen Key. SEE IMAGE 6

If the grub screw is not easily accessible, relocate the grub screw to the most accessible screw hole (3 screw holes are provided on the top cap for convenience). Leave the grub screw loose.

COMMISSIONING OF THE VALVE

- 3. Fit supplied key over the adjusting spindle. SEE IMAGE 5
 - To increase the mixed outlet temperature, rotate the spindle anti-clockwise.
 - To decrease the mixed outlet temperature, rotate the spindle clockwise
- Allow the mixed outlet temperature to stabilize for 60 secs and once again take a temperature reading. Repeat the procedure until the desired temperature has been reached.
- 5. Tighten the temperature adjustment locking grub screw. SEE IMAGE 6
- Push the top cover firmly back on to the top of the valve until it 'snaps' back into place.
- Check the outlet temperature is stable over the full range of flow rates and that flow rate is adequate for the application.
- 8. Close the outlet.
- 9. The mixing valve is now set and locked.





COMMISSIONING OF THE VALVE

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. As a rule of thumb 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. As a rule of thumb 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.

MAINTENANCE AND SERVICING

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve will only require minimal preventative maintenance work to ensure it operates at its optimum level of performance. The valve should be commissioned and serviced annually, unless the installed conditions dictate more frequent servicing is necessary.

ANNUAL MAINTENANCE PROCEDURE

Every 12 months the ENWARE AQUABLEND 1500 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.

Cleaning the Strainers

Firstly isolate the hot and cold supplies to the mixing valve by closing the inlet ball valves. With a suitable spanner remove inlet fitting top cover then remove mesh strainer SEE IMAGE 7 Clean strainers with a suitable descaling solvent (such as CLR) diluted with water. Check for physical damage and thoroughly rinse with clean water. Strainers can then be re-installed into the valve and top cover replaced and tightened to a maximum torque of 15Nm into the inlet valve bodies.



Non-Return Valve Operation

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

- 1. Turn OFF the isolation tap on the HOT inlet only (COLD inlet must be open)
- 2. Open Test Port Cap on the HOT inlet side
- 3. Observe water level in the HOT inlet side test port.
- If there is a rising water level this may indicate a fouled or faulty Non-Return Valve. If this is the case, inspect the nonreturn valve for damage or any debris, and replace Non-Return Valve if required.
- Replace the test port cap on HOT inlet side ensuring it is tightly secured.
- 7. Turn back ON the isolation tap on the HOT inlet.
- To check Non-Return Valve on the COLD inlet side, repeat steps above using the COLD inlet side.

Check that the test plug in the top of the inlet fittings are tight, and that there is no evidence of water leakage.

The valve must then be recommissioned as per 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 the troubleshooting solutions outlined on page 22.

5-YEAR SERVICE

In addition to the Annual Maintenance, the valve piston O-ring and Thermostatic Element/ Piston Assembly must be replaced at intervals not exceeding 5 years from commissioning.

For re-greasing of O-rings, use the grease supplied with Aquablend Service Kit or use food grade silicone based grease (e.g. Molykote 111, Clare FU5, Hydroseal).

THERMAL FLUSH OPTION

The ENWARE AQUABLEND 1500 includes a built-in Thermal Flush feature allowing the facilities maintenance team or licensed service contactors to perform a controlled thermal flush to the TMV and warm water plumbing system.

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.

- 1. Isolate both hot and cold inlet valves to the TMV.
- 2. Remove the TMV's Red Lock Shield (protective cover).
- Check that the temperature adjustment locking grub screw (located on the hex of the top cap) is tight (see IMAGE 6).
- 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.
- Wind Thermal Flush activation screw anticlockwise until it stops. A red indicator will be visible.
- Turn the hot water TMV inlet valve to the on position.



- Turn the tapware outlet to the on position.
 Note: full temperature hot water will flow from the tapware. Care must be taken to prevent scalding.
- Once the required time set in the facility's Thermal Flush procedure has passed, turn the hot water TMV inlet valve to the off position.

THERMAL FLUSH OPTION

- 9. Leaving the tapware outlet in the on position, turn the cold water TMV inlet valve to the on position.
- 10. Wind the Thermal Flush activation screw clockwise until it is all the way back in and sitting level with the temperature adjustment screw. (Note: Spurts of cold water will discharge from the tapware outlet during this process.)
- 11. Turn the hot water TMV inlet valve to the on position.
- 12. Check the outlet flow, making sure it is within the required temperature range.
- 13. Turn the tapware outlet off.
- 13. Re-fit the red lock shield to the TMV

NOTE: If the Red Lock Shield does not securely fit back to the top cap this indicates the thermal flush has not been disengaged. Repeat Steps 9-13

TROUBLESHOOTING

FAULT/ SYMPTOM	CAUSE	RECTIFICATION
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 Piston O-rings are damaged 	 Refit the valve with Hot/ Cold supplies fitted 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 it if necessary Check Top Cap & Piston O-rings for damage. Replace if necessary
The valve will not shut down	 The hot to mix temperature differential is not 10°C or greater. The piston O-ring is damaged. Valve body seat (Hot Seat) is damaged or fouled by debris Cold seat (bottom surface of Top Cap) is damaged Thermostatic element has failed Plastic shuttle of Thermostatic of Thermostatic element has been damaged by debris 	 Raise hot water temperature. Replace piston O-ring Clean seat using mild descaling solution Replace top cap Replace element
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.
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 on PAGE 10. Clean strainers ensuring debris is removed

TROUBLESHOOTING

FAULT/ SYMPTOM	CAUSE	RECTIFICATION
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/symptom 1 & 2 	 Adjust mix temperature between 38 - 50°C as required. Replace faulty non-return valves
No flow from the valve outlet	 Hot or cold water failure. Strainers are fouled 	 Valve functioning correctly. Restore inlet supplies and check mix temperature. Clean strainers.
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 nominally balanced to within +/- 10%.
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 listed on page 10.
Mixed water temperature not changing when the temperature adjuster is altered	Return spring is missing Thermostatic element has failed	Install return spring Replace thermostatic element
Mixed water temperature adjuster difficult to move	Adjuster at maximum mix temperature stop. 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
Hot water flows into the cold water system or vice versa.	Non-return valve has failed	Replace non-return valves
Valve is noisy	Water velocity above velocity requirements of AS3500.1 Sec 3.4	Reduce water velocity.

SPARE PARTS

PART	REPLACEMENT TIME	PART NUMBER
5 Year Service Kit (includes O-rings, element and piston assembly plus top cap with thermal flush)	5 years	ATMS242
O-Ring Kit	when required	ATMS123





ATMS1200 - Aquablend Test Kit



ATMS1221 - Pete's Plug ¼" Test Point Adaptor

COMMISSIONING REPORT

Enware Thermostatic Mixing Valve Commissioning Report For

Thermostatic Mixing Valves use a separate sheet for each valve

Establishment					
Address					
Phone No			Contact		
Date			Work Order No.		
Make & Model of	f Hot Water	⁻ Unit			
11-410/-4	Pressure	kPa	O a la la Martana	Pressure	kPa
Hot water	Temp	°C	Cold Water	Temp	°C
Cold Water Supply via			Pressure Reducing Valve Fitted		/ES/NO
Make of			Model No		
Mixing Valve			Size		
Valve Location / Building					
Valve ID No.			Total No. of Mixing Valves on Site/ Building		
Total No. of	Baths		Basins	Showers	
by this valve					
Other outlet details					
Valve installed to requirements of					
The drawing & specification	The valve manufact supplier	e ture /	The code of TMV's	The local supply at	water uthority
YES/NO	YES/NO		YES/NO	YES/NO	
If NO, give details and action taken					

COMMISSIONING REPORT

Test results (complete table on following page)						
Valve considered satisfactory f	or use	YES/NO				
If NO, state reason and action	taken					
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						
Date initial service due:		(Maximum 12 months use)				
Valve commissioned by:						
Signature Licensed Dlumber		Lic/Cert No				
Signature Licensed Flumber	Signature Licensed Plumber					
Business name of Plumbing Contractor						
Contractors Authority No		Date				

NOTE: A duplicate copy of this report is to be retained at the site for any inspection by authorised persons.

The following information is to be provided by site manager/owner:

Valve size and installation recommended by (name)				
Valve supplied by (name)				
Valve installed by (name)				
Date of installation:		Drawing No:		
Certificate of Compliance/Inspe	n No:	Dated:		
Service manual on site: YES/NO				
Report received by (name)				
Position				
Signature			Date:	
For and on behalf of the client/site manager/owner				

COMMISSIONING REPORT

Test results

Valve location/building	
Room or area designation	
Work Order No	

Warm Name/type/ water size & location		Flow rate of design warm water (L/sec)		Temp of warm water °C	
fixture No.	(bath, shower, basin or other)	1 outlet in use	** All req. outlets in use	1 outlet in use	** All req. outlets in use
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

Give details of brand and model designation. Commensurate with the design flow rate for the mixing valve.

NOTE: An accurate digital type thermometer is necessary for the temperature measurements.

Prescribed temperature range for warm water	°C to °C
Fail safe at both minimum and maximum design flow rates	PASSED/FAILED
Signature of licensed plumber	
Licence/Cert No	
Business name of plumbing contractor	
Contractor's authority No:	Date:

SERVICING REPORT

Enware Thermostatic Mixing Valve Servicing Report

use a separate sheet for each valve

Establishment						
Address						
Phone No		Contact				
Date		Work Order No.				
Make & Model of Hot Water Unit						
Mixing Valve Make:		Model No:				
		Size				
Valve Location / Building						
Valve ID No.		Total No. of Mixing Valves on Site/ Building				
Total No. of outlets served by this valve	Baths	Basins	Showers			
Other outlet deta	ils					
Valve installed to requirements of:						
The drawing & specification	The code of TMV's	The code of TMV's	The local water supply authority			
YES/NO	YES/NO	YES/NO	YES/NO			
If NO, give details and action taken						
Any current com operation reporte If YES, give deta	plaints concerning ed or stated in prev ils:	installation or ious report	YES/NO			
Particulars of ser carried our during	vice work g this visit					
List of items replaced (and part numbers) during this visit:						
Warm water tem	p. at outlet °C	Fail Safe Test PASSED / FAILED				
Valve considered	satisfactory for fu	rther use	YES/NO			
If NO, reason and action taken:						
Date next service due (12 months maximum):						

SERVICING REPORT

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

Signature Licensed Plumber	Lic/Cert No
Business name of Plumbing Contractor	
Contractors Authority No	Date

NOTE: A duplicate copy of this report is to be retained at the site for any inspection by authorised persons.

The following information is to be provided by site manager/owner:

Valve size and installation recommended by (name)					
Valve supplied by (name)					
Valve installed by (name)					
Date of installation:		Drawing No:			
Certificate of Compliance/Inspection		n No:	Dated:		
Service manual on site: YES/NO					
Report received by (name)					
Position					
Signature			Date:		

For and on behalf of the client/site manager/owner

PRODUCT WARRANTY

The ENWARE AQUABLEND 1500 Thermostatic Mixing Valve is guaranteed free from manufacturing defects for a period of 24 months* subject to the conditions outlined below:

Product Warranty

Subject to the warranty conditions and exclusions set out below ENWARE valves are warranted to be free from defects in material and/or workmanship for a period of 24 months service life and if found by ENWARE to be so defective will be replaced as set out below. If the valve is sold by a party other than ENWARE then it is sold by that seller as principal and the seller has no authority from ENWARE to give any additional warranty on behalf of ENWARE.

The benefits of this warranty are in addition to all other rights and remedies which the purchaser may have under the Trade Practices Act (Cwth) or similar laws of each State and Territory in Australia.

Warranty Conditions

The valve must have been installed by a licensed plumber in accordance with the ENWARE Installation Instructions and Application Guidelines supplied with the valve, and in accordance with the National Plumbing and Drainage Code AS3500 (the Code) current at the date of installation and all relevant statutory and local requirements in the State or Territory in which the valve is installed.

Where the valve is installed outside the boundaries of a metropolitan area as defined by ENWARE, the cost of transport insurance and travelling shall be the purchaser's responsibility. (Refer to the ENWARE scale of fees for replacement of valves).

Where the valve comprises part of a hot water system, installation of that system must be in accordance with its manufacturer's recommendations, the Code and all relevant statutory and local State or Territory requirements.

^{* 5} Years Conditional Warranty: 2 years parts and labour on the complete assembly; an additional 3 years parts supply only on the valve body excluding inlet fitting assemblies.

PRODUCT WARRANTY

The valve must be returned to ENWARE with a fully and correctly completed Online Product and Service Warranty Form: www.enware.com.au/product-service-enquiry . Where the valve is replaced under warranty the replacement valve carries a new warranty as detailed herein.

Warranty Exclusions

Replacement work will be carried out as set out in the ENWARE Warranty above, but the following exclusions may cause the warranty to become void, and may incur a service charge including cost of parts where:

Damage has been caused by accident, Acts of God, misuse, incorrect installation of the hot water system of which the valve forms a part or attempts to disassemble the valve.

It is found that there is nothing wrong with the valve.

The failure of the valve is due in part or in whole to faulty manufacture/installation of the hot water system of which the valve forms part.

The valve has failed directly or indirectly as a result of excessive water pressure or temperature outside the Application Guidelines, thermal input or corrosive environment.

The valve has failed due to foreign matter either from installation or the water supply.

The failure of the valve is due to scale formation in the waterways of the valve.

The failure of the valve is due in part, or in whole, to installation not in conformance with the requirements of the Code.

ENWARE reserves the right to change its specifications without prior notice and will not accept liability for any claim arising from such change.

Subject to any statutory provisions to the contrary, claims for damage to furniture, carpets, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the valve are also excluded from warranty cover.



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