

Version 1, 30 May 2025, Page 1 of 16

Document No.: 001.00.10.38

Product Installation Guidelines & Scope of Use

CliniMix[®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixers

PRODUCT CODE:

- 100.50.75.01
- 100.50.76.02
- 100.50.75.02
- 100.50.72.00

TABLE OF CONTENTS

1.0	INTRODUCTION	
2.0	RANGE	
3.0	TECHNICAL DATA	
4.0	SAFETY	
5.0	DIMENSIONS	
6.0	WATER SUPPLY CONDITIONS	
7.0	INSTALLATION 4	
8.0	OPERATION AND TESTING 6	
9.0	COMMISSIONING	
10.0	ISOLATE INLETS AND CLEAN FILTERS 8	
11.0	ADJUSTMENT OF THE MIX TEMPERATURE	
12.0	REMOVING AND INSPECTING MIXER CARTRIDGE	
13.0	MAINTENANCE 11	
14.0	DISINFECTION 11	
15.0	TROUBLESHOOTING 12	
16.0	WARRANTY 12	

1.0 INTRODUCTION

The CliniMix[®] Lead Safe[™] Inwall Thermostatic Progressive Shower Mixer range are high-performance thermostatic mixing valves suitable for a wide range of applications with the following features:

- Progressive shower mixers provide state of the art features to comply with healthcare requirements.
- The GalvinCare[®] paddle handle provides straight forward temperature control and minimises ligature risk (100.50.75.02, 100.50.75.01 & 100.50.76.02)
- Suitable for high and low pressure systems with a thermostatically controlled water temperature of 48°C maximum.
- Enables water to be mixed closer to the point of discharge, minimising stagnant warm water which provides ideal conditions for legionella bacteria to grow.
- Smooth internal components and body reduces scale build-up and bacteria growth.
- Maximum temperature limiter fitted for protection from accidental scalding.
- Clean smooth lines facilitate fast and easy cleaning.
- All servicing and commissioning can be done without removing the device. Easy access isolators, help minimise time spent on commissioning and maintenance.
- Designed to provide stable mixed temperature with rapid shut down in the event of cold or hot water supply failure.
- Approved to: AS 4032.4.

*Our Lead Safe™ product range is compliant with the Lead-Free Requirements of the NCC 2022 Vol. Three, Clause A5G4(2) and NSF/ANSI 372

WARNING: Special attention to be paid to notes, photos, images, or drawings of assembly steps marked with the warning symbol.

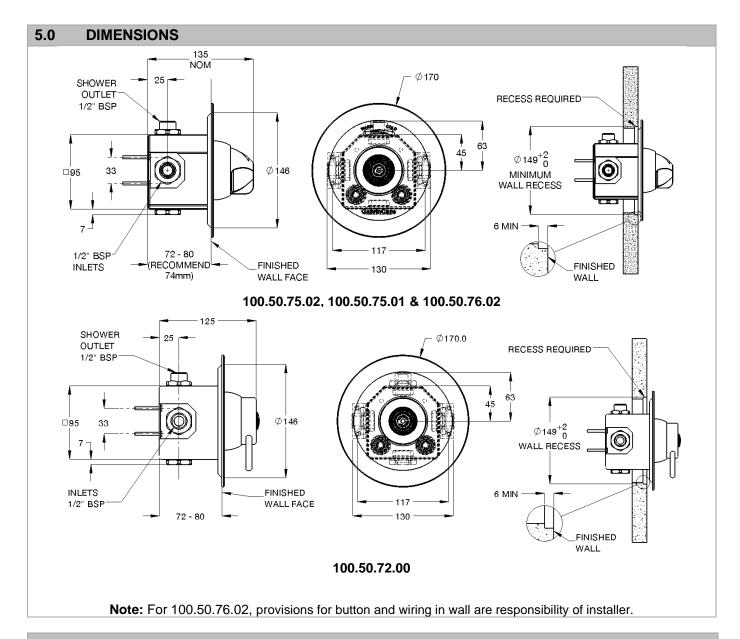


2.0 RAN	GE	
Product Code	Product Description	Product Image
100.50.75.01	CliniMix [®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer w/ GalvinCare [®] Handle W&C	Gabricare
100.50.75.02	CliniMix [®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer with GalvinCare [®] Handle H&C	Calendary
100.50.76.02	CliniMix [®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer with Galvincare [®] Handle H&C - Electronic	andre
100.50.72.00	CliniMix [®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer - Lever	C

3.0 TECHNICAL DATA				
Inlet		1⁄2" BSP – Male		
Outlet		½" BSP – Male		
Headwork		Thermostatic mixing valve		
Marking Pressure Pange (I/Pa)		20		
Working Pressure Range (kPa)		500		
Marting Teamserature Dense (%C)		5		
Working Temperature Range (°C)		85		
Finish		Chrome		
Wall Recess required (mm)		Ø149 x 6		
NOTE: Galvin Engineering continually strive to improve their products. Specifications may change without notice.				

4.0 SAFETY

The CliniMix[®] Lead Safe[™] Inwall Thermostatic Progressive Shower Mixer range are high-performance valves designed to give stable and dependable operation, provided they are installed, commissioned, operated and maintained as per the recommendations outlined in this manual. It should be noted however that these valves should not be considered as an alternative to adequate supervision and duty of care during its use and operation.



6.0 WATER SUPPLY CONDITIONS

INTRODUCTION

This Clini**Mix[®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer - Lever** is manufactured to the highest standards. When installed the supply conditions detailed below must be observed.

SUPPLY REQUIREMENTS

This mixer is designed to be installed on all types of plumbing systems.

Hot and cold water supply pressures should be reasonably balanced; however, the mixer will function within specification on unequal pressures up to 10:1.

The mixer has integral isolating valves which permit servicing of the strainer, check valve/flow regulator and thermostatic cartridge. They are also used for thermal disinfection.

The minimum pressure for the correct thermal operation is 20kPa. However, to achieve an acceptable flow performance at very low pressures it may be necessary to remove the combined check valve and flow regulators and replace them with simple check valves.

Hot Temperature Supply Range (°C)		5
		85
Minimum Temperature Differential (between the supply and the outlet temperature) (°C)		10
Adjustable Temperature Range	Min	35
	Max	48

Maximum Static Pressure (kPa)		1000
Min		20
Working Pressure Range (kPa)	Max	500*
Maximum Outlet Pressure (kPa)	· · ·	500
Permitted Supply Pressure Variation		10:1
Factory Set Thermostatic Temp. (°C)		41
Maximum Thermostatic Temperature (°C)		48
Minimum Flow Rate for Stable Outlet Temperature (LPM)		6
Maximum Flow Rate (LPM@300kPa)		18

*Tapware must be installed in accordance with the provisions of AS/NZS 3500. Installations not complying with AS/NZS 3500 may void the product and performance warranty provisions.

7.0 INSTALLATION

The CliniMix[®] Thermostatic Progressive Mixing Valves must be installed using the appropriate Standard, Code of Practice and legislation applicable to point of install.

The CliniMix[®] Thermostatic Progressive Mixing Valves must be installed by a licensed plumber.

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 CliniMix[®] Thermostatic Progressive Mixing Valve. If the hot water supply temperature is greater than 85° Celsius, the valve may be damaged. If the temperature of the hot water will rise above 85° Celsius a suitable temperature limiting valve must be fitted to the hot water supply, prior to the inlet fittings. This temperature limiting valve must be installed as per the manufacturer's instructions. It is important that both 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.

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

To ensure that the mixing valve operates correctly, it is necessary that the pipe-work is thoroughly flushed with clean water before the valve is installed. This will remove any physical contaminants from the pipe-work, ensuring trouble-free operation. During the flushing procedure, care should be taken to prevent water damage occurring to the surrounding area.

The valve should be installed so it can be easily accessed for maintenance or servicing.

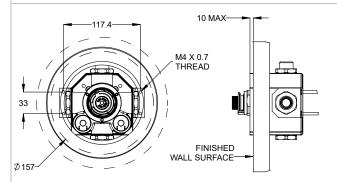
During installation or servicing, heat must not be applied near the mixing valve or inlet fittings, as this will damage the valve and inlet fittings internals. Failure to comply with this requirement will damage the valve and fittings. It will put the user at risk and it will void the warranty of the valve.

Note: To effectively control microbial hazards during system design, installation, commissioning and maintenance, the requirements of local legislation shall be adhered to.

Note: In some installations, certain types of tapware 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 with 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 the installation of an inline pressure reducing valve directly before the valve inlets.

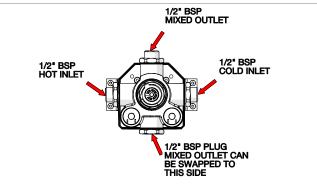
7.1 INSTALLATION

IMPORTANT: Galvin Engineering products must be installed in accordance with these installation instructions and in accordance with AS/NZS 3500, the PCA and your local regulatory requirements. Water and/or electrical supply conditions must also comply to the applicable national and/or state standards. Failing to comply with these provisions shall void the product warranty and may affect the performance of the product.



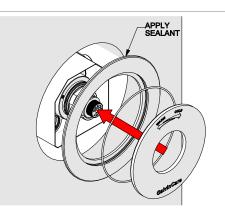
1. Mounting

 Ensure the rough in details have been followed to allow correct fitment of the Progressive Shower unit. The unit must be mounted so that the inlets are horizontal, and the outer plastic box on the Progressive shower is proud of the finished wall (to a maximum of 10mm).



2. Connect Water Supply

 Fit hot and cold water supplies to the correct side of the shower unit and the outlet to the shower head. To make this easier the outlet can be changed from one end to the other by swapping it with the opposite plug. Do not use heat on any of these connections as it will damage the shower.

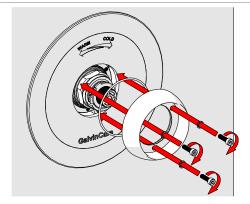


3. Seal outer faceplate and fit inner faceplate

- Seal the outer faceplate to the wall using a suitable sealant.
- Insert the inner faceplate followed by the shower flange, ensuring the provided o-rings are in place.

Note: Cartridge spline must be parallel with the faceplate within 1°.

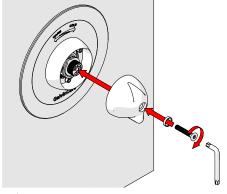


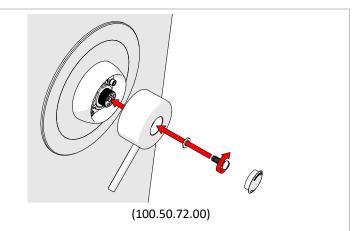


4. Secure flange

- Secure the flange with the three supplied screws.
- Use supplied M4x20mm long screws, if not suitable change to M4x16mm long screws.
- Wipe off excess sealant on the outer faceplate when secured to the wall.

Note: Before tightening the flange make sure the handle fits correctly. Put screws into flange and tighten finger tight, the flange should still be able to move. Slide the handle onto spline and move the flange until central to the handle. Remove handle and tighten the screws (it is best to tighten the screws in sequence a little at a time to avoid the flange moving). Refit handle.





(100.50.75.02, 100.50.75.01 & 100.50.76.02)

5. Fit handle

- Secure the handle with supplied tamper proof screw.
- Ensure the handle is oriented correctly.

8.0 OPERATION AND TESTING

After installation, check for leaks and correct operation.

As the handle is rotated anti-clockwise the delivered water progresses from cold through hot or warm to the pre-set maximum temperature of approximately 41°C.

9.0 COMMISSIONING

Initial Test for Correct Operation

The following must be checked to ensure the correct performance of the progressive thermostatic mixer:

- the supply pressures and temperatures are within the range of operating pressures and temperatures for the thermostatic valve.
- the supply temperatures are within the range permitted for the unit.

Please record the testing done during the commissioning and record the temperature of the hot and cold-water supplies and the temperature of the mixed water at the full hot setting.

A calibrated digital thermometer having rapid response time with maximum temperature hold will be required to check and set the outlet mixed temperature of the mixer.

To Commission

To test the temperature, open the valve and allow the mixed heated water to flow for at least 30 to 60 seconds so the temperature can stabilise before taking a temperature reading at the outlet with a digital thermometer. The flow rate should be at least 4L/min.

The temperature should be taken close to the mixer's outlet and if the outlet temperature requires adjustment then follow the temperature adjustment in the installation instructions.

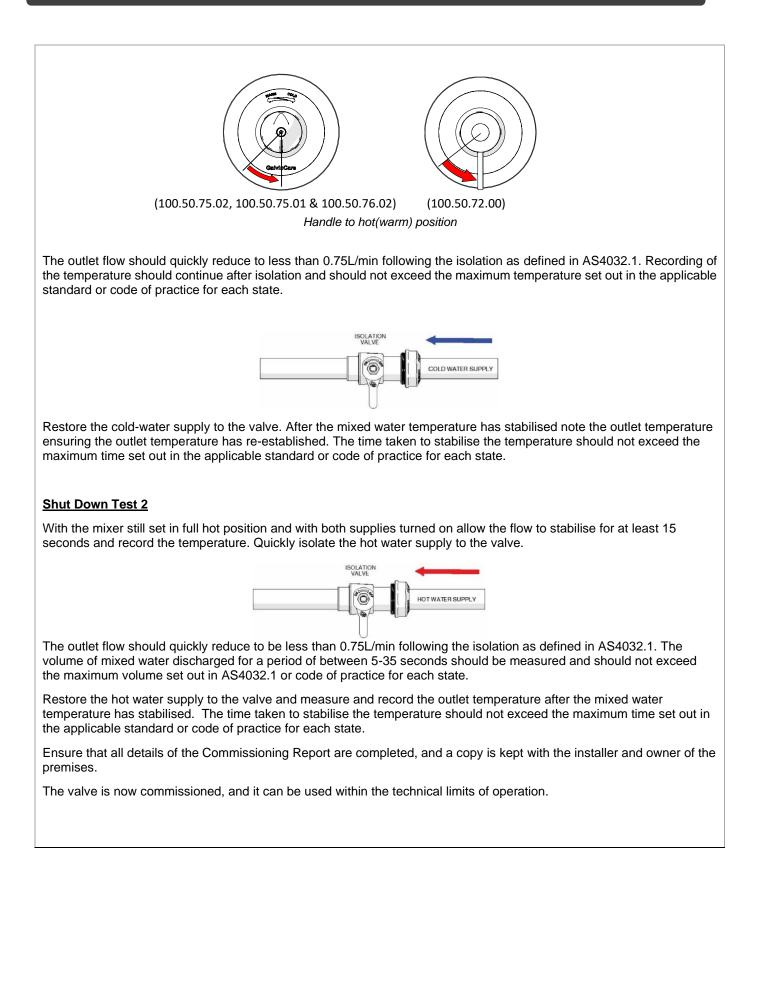
Shut Down Test

Once the correct outlet temperature has been achieved, the valves internal mechanism should be exercised at least 3 times by alternately shutting off the hot and cold supplies while the mixer is set in the full hot position.

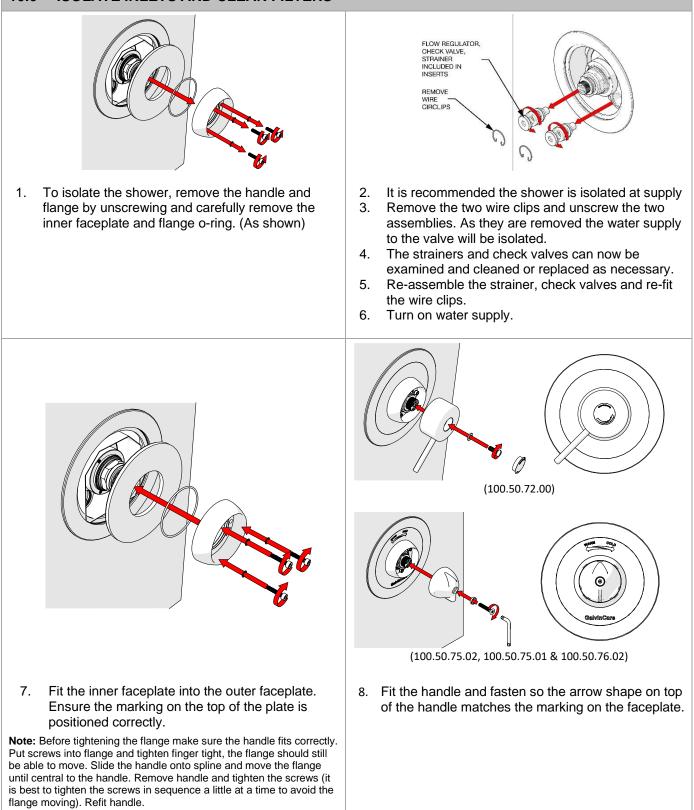
Shut Down Test 1

With the mixer still set in the full hot position (handle fully turned anti-clockwise) and with both supplies turned on, allow the mixed water temperature to stabilise for at least 15 seconds and note the outlet temperature. While holding a digital thermometer in the outlet flow, quickly isolate the cold water supply to the valve

Product Installation Guidelines & Scope of Use

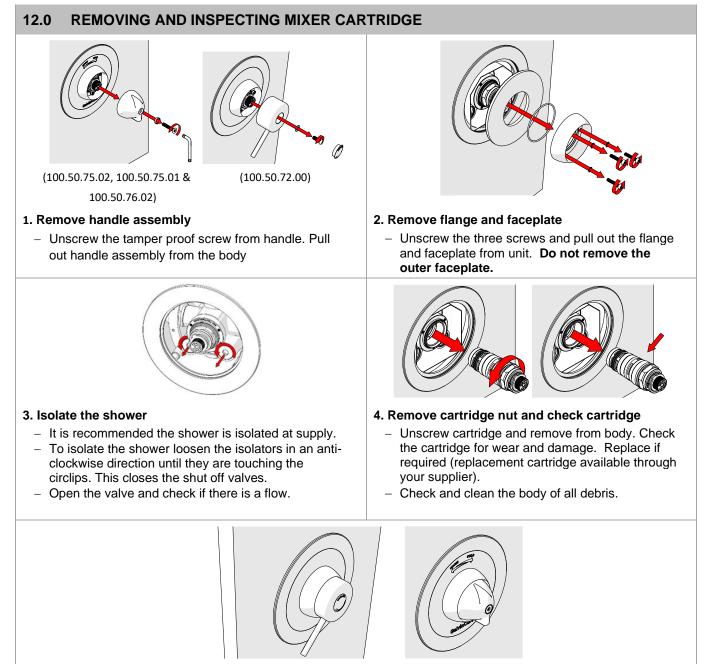


10.0 ISOLATE INLETS AND CLEAN FILTERS



11.0 **ADJUSTMENT OF THE MIX TEMPERATURE** Ø 1. Set the handle to cold position. 2. Unscrew the tamper proof screw from handle. Pull out handle assembly from the body 4. Reposition the 3. Remove the upper brass ring. Make sure 5. Remove the lower brass ring (temperature setting ring) and rotate the the control rod doesn't rotate during the upper ring in the same brass ring clockwise to increase next steps. position against step temperature or anti-clockwise to decrease. Refit to spline in new position (100.50.75.02, 100.50.75.01 & 100.50.76.02) (100.50.72.00)6. Once set, reverse step 2 to reassemble.

7. Re-test temperature to ensure correct operation.



5. Re-assemble

- Re-assemble, by reversing steps 4 to 1.
- To re-open the shut off valves tighten the flow regulator/check valve/filter units until tightened (do not over tighten) and refit the two clips.
- Check for leaks and correct operation.

Note: Before tightening the flange make sure the handle fits correctly. Fit screws into flange and finger tighten. The flange should still be able to move. Slide the handle onto spline and move the flange until central to the handle. Remove handle and tighten the screws (it is best to tighten the screws in sequence a little at a time to avoid the flange moving). Refit handle.

13.0 MAINTENANCE

Thermostatic Mixing Valves are precision products and as such any maintenance needs to be undertaken in a clean environment and in accordance with the manufacturer's instructions.

The purpose of servicing regularly is to monitor any changes in performance due to changes in either the system or the product. This may highlight the need to adjust either the supply system or the product. These products should be checked at 6 to 8 weeks and again at 12 to 15 weeks after commissioning. The results are to be compared against original commissioning settings.

If there are no significant changes at the mixed temperature outlet then a 6 monthly servicing cycle may be adopted. Otherwise, servicing checks should be carried out more frequently (e.g. every 4 months).

Follow the recommended maintenance procedures detailed in this section.

During servicing, note the following:

- 1. Repeat the procedure of recording and checking supply temperatures. (The same type of measuring equipment should be used)
- 2. If the temperature has changed significantly from the previously recorded values, the following should be checked:
 - a. All integral valve filters are clear of obstruction.
 - b. All integral check valves are clean and working properly to prevent backflow.
 - c. Any isolating valves are fully open.
 - d. The thermostat is free of debris.

When satisfied with the mixed outlet temperatures re-record the temperatures.

14.0 DISINFECTION

A disinfection kit is available. For more information please visit www.galvinengineering.com.au.

TROUBLESHOOTING

15 0

15.0 TROUBLESH	OOTING				
PROBLEM	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. Thermostatic cartridge contains debris or is damaged. Strainers contain debris. Non-return devices are damaged. 	 Refit the valve with hot/cold supplies fitted to the correct connections. Clean cartridge ensuring all debris is removed and components are not damaged. Replace if necessary. Clean strainers of debris. Check non-return device is not jammed. Check for airlocks in the water supply. 			
Handle rubs against the flange	 The faceplate is not perpendicular to cartridge spline within 1°. 	 Remove and re-mount properly ensuring faceplate is within 1° perpendicular to cartridge spline. 			
The water temperature selected is cold yet hot water comes out.	 Hot and cold-water supply connections are installed in reverse. 	 Refit the valve ensuring the hot/cold supplies are fitted to the correct connections. 			
The thermostatic mixing valve will not shut down.	 The hot to mix temperature differential is not 10°C or greater. Thermostatic cartridge contains debris or is damaged. Non-return devices are damaged. 	 Raise hot water temperature. Clean the cartridge ensuring that all debris is removed. 			
Mix temperature unstable.	 Flow rate below 2L/min. Thermostatic cartridge contains debris or is damaged. Strainers contain debris. Non return devices are damaged. 	 Rectify any pressure deterioration. Clean the cartridge ensuring that all debris is removed and components are not damaged. Replatif needed. Clean strainers ensuring debris is removed. Check non-return device is not jammed. 			
Mix temperature changing over time	 Inlet conditions (pressure or temperatures) are fluctuating. Strainers contain debris 	 Install suitable pressure control valves to stabilise inlet conditions. Clean strainers ensuring debris is removed. 			
Either full hot or cold flowing from outlet fixture	 Upper temperature ring is not correctly set. No flow from hot and cold supplies. Damaged check valves. 	 Re-set temperature to between 35-46°C as required. Check water is switched on. Replace faulty check valves. 			
Water is not flowing from outlet.	 Hot or cold water failure. Thermostatic cartridge. contains debris or damage Strainers contain debris. 	 Restore inlet supplies and check mix temperature. Clean the cartridge ensuring that all debris is removed and components are not damaged. Replace if needed. Clean strainers. 			

16.0 WARRANTY

Galvin Engineering products are covered under our Manufacturer's Warranty. Galvin Engineering products must be installed in accordance with the installation instructions and in accordance with AS 3500 and NCC Volume Three, relevant Australian Standards and local authorities applicable to product being installed. Water and electrical supply conditions must also comply to the applicable national and/or state standards, failing to comply with these provisions may void the product warranty and affect performance of the product.

Please visit <u>www.galvinengineering.com.au</u> to view the full warranty, our Installation Compliance and Maintenance & Cleaning information as well as any other additional information.

Within Australia: **1300 514 074** Outside Australia: P: **+61 (0)8 9338 2340** F: +61 (0)8 9338 2340 sales@galvinengineering.com.au **www.galvinengineering.com.au** ABN: 78 008 719 382 PERTH I SYDNEY I MELBOURNE I BRISBANE I ADELAIDE





Galvin Engineering Thermostatic Mixing Valve Commissioning Report and/or Maintenance Report

Note:		
NUMP	NI.	-+
	IN	ле.

1. Please use a separate form for each valve.

2. The original copy of the report is to be given to the owner/occupier and retained on site for a minimum of 7 years.

Cross off appropriate box					
Thermostatic Mixing Valve					
Commissioning Report		Maintenance Report			
Name of Establishment:					
Address of Establishment:					
Phone Number:		Date:		Work Order #:	
Contact Person:		Make & Model of Hot Wa	ater System:		
Temperature of Hot Water to th	e Valve:	Temperature o	f Cold Water to	the Valve:	
Hot Water Pressure:	kPa Cold Water	Pressure:kPa			
Make of Mixing Valve:		Model No:		Size:	
Valve Location/Building:					
Valve Identification No:					
Total No of Valves on the Site/	Building:				
No of Outlets Serviced by this Valve: Baths () Basins () Showers ()					

Other Outlets - Details

Valves Installed to the requirements of:

The NSW Code of Practice Plumbing and Drainage	Yes	No
The HOSPLAN Code of Practice for Thermostatic Mixing Valves in Health Care Facilities	Yes	No
The Valves manufacturers requirements	Yes	No
AS4032.3	Yes	No
The specifications and drawings for the project	Yes	No
The Local Water Supply or Authority	Yes	No

If No, give details and actions taken:



Galvin Engineering Thermostatic Mixing Valve Commissioning Report and/or Maintenance Report

Test Results

Valve considered satisfactory for use: Yes No

If No, state the reason and action taken:

Commissioning Work

It is hereby certified that all the commissioning work has been carried out by the undersigned in accordance with the requirements of the Codes of Practice indicated prior.

Date of Valve Commissioned: _____

Name of Licensed Plumber:	License/Cert No:
License Plumbers Signature:	
Telephone No.	
Owner/occupiers signature:	Date:
Date of Initial Service Due:	



Galvin Engineering Thermostatic Mixing Valve Commissioning Report

Valve Location/Building : _____

Room or Area:

Work Order No.:

Warm Water	*Name/Type/Size and location of Outlet Fixture (Bath, Shower,	Flow rate of Design Water (LPS)		Temp of Warm Water (C)	
Outlet Fixture No.		One Outlet in Use	**All Req'd Outlets in Use	One Outlet in Use	**All Req'd Outlets in Use
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					

*Give details of brand and model designation.

** Commensurate with the design flow rate for the mixing valve.

Note: An accurate digital thermometer is necessary for the temperature measurements

Prescribed temperature range for warm water _____ C to _____C

Thermal shutdown at both minimum and maximum design flow rates

(Passed/Failed) Yes □ No □

Name of Plumber: _____

License/Cert No. _____

Licensee's Signature: _____ Date: _____

Telephone Number: _____



Galvin Engineering Thermostatic Mixing Valve Commissioning/Maintenance Report

The following information is to be pro	ovided by the site manager/o	wner/occupier.		
Valve size and installation recommen	nded by :			
Valves supplied by:				
Date of Installation:		Drawing No		
Service Manual on Site:	Yes 🗌	No 🗌		
Commissioning Tests for new installa	ation or valve replacement.	Yes 🗌		
This set of testing procedures and re	port received and witnessed	by (Print Name):		
Temperature setting at completion of	f commissioning	C		
Position: Date:	Signature:			
Maintenance Tests. Yes 🗌				
Date of Previous Service:				
Previous Service carried out by:				
Reason for Maintenance Tests:				
This Test and report Witnessed by: _				
The valve has been operating/perfor	ming satisfactorily for the pro	evious 12 months:	Yes 🗌	No 🗌
Comment on monthly Temperature Towner	-			
Temperature setting at time of comp	letion:C			
Current Report received and witness	sed by:			
Name:				
Position:				
Signature:	Date:			