

Product Installation Guidelines & Scope of Use

Version 3, 30 May 2025, Page 1 of 16 Document No: 100.51.76.02

CliniMix[®] Lead Safe[™] Duct Mounted Thermostatic Progressive Shower Mixer with Anti-Ligature Handle - Electronic

PRODUCT CODES:

- 100.51.76.02

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1.0 INTRODUCTION

The CliniMix[®] Lead Safe™ Inwall Thermostatic Progressive Shower Mixer with GalvinCare® Handle - Electronic is a high-performance thermostatic mixing valve suitable for a wide range of applications. The mixing valve has the following features:

- This progressive shower mixer provides state of the art features to comply with healthcare requirements.
- The handle design provides straight forward temperature control and minimises ligature risk.
- 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.

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



2.0 TECHNICAL DATA			
Inlet		RP ½" BSP – Female	
Outlet		RP ½" BSP – Female	
Headwork		Thermostatic mixing valve	
Working Pressure Ponge (kPa)	Min	20	
Working Pressure Range (kPa)	Max	500	
Marking Townserture Dange (90)	Min	5	
Working Temperature Range (°C)	Max	85	
Finish		Chrome	
Minimum Wall Cavity Diameter (mm)		Ø160	
NOTE: Galvin Engineering continually strive to improve their pro	ducts. Specifications n	nay change without notice.	

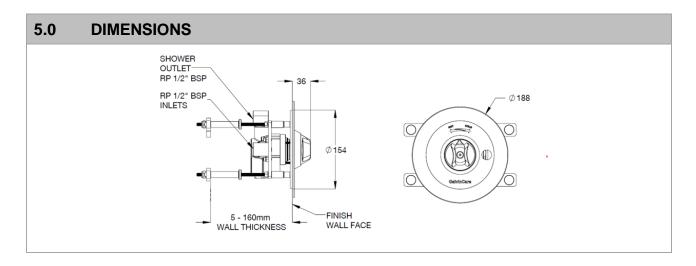
3.0 SAFETY

The CliniMix[®] Lead Safe™ Duct Mounted Thermostatic Progressive Shower Mixer with Anti-Ligature Handle - Electronic 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.

4.0 DESCRIPTION

This manual covers the CliniMix[®] Lead Safe™ Duct Mounted Thermostatic Progressive Shower Mixer with Anti-Ligature Handle - Electronic. This product is designed to provide water from ambient cold up to a safe maximum temperature for showering. This mixing valve is supplied with integral isolating valves, strainers, check valves, flow regulators located in-body and a facility for thermal disinfection of the cold inlet side and mixed water outlet.

Note: this shower unit does not contain an activation button or electronic system required to operate this shower. These can be obtained through Galvin engineering if required; contact sales for details. Provisions for button and wiring in wall are responsibility of installer.



6.0 WATER SUPPLY CONDITIONS

INTRODUCTION

This CliniMix[®] Lead Safe™ Duct Mounted Thermostatic Progressive Shower Mixer with Anti-Ligature Handle - Electronic is manufactured to the highest standards. When installed the supply conditions detailed below must be observed.

SUPPLY WATER 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 Denge	Min	35
Adjustable Temperature Range		48
Maximum Static Pressure (kPa)		
Mir Mir Dungaya Banga (LDs)		20
Working Pressure Range (kPa)	Max	500*
Maximum Outlet Pressure (kPa)		
Permitted Supply Pressure Variation		
Factory Set Thermostatic Temp. (°C)		
Maximum Thermostatic Temperature (°C)		
Minimum Flow Rate for Stable Outlet Temperature (LPM)		
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 pipework, 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.

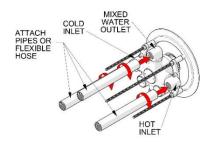


Note: To effectively control microbial hazards during system design, installation, commissioning and maintenance, the requirements of local legislation shall be adhered to.

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.

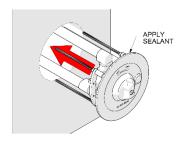


1. Attach pipes/hoses

 Fit hot, cold and outlet water pipes or flexible hoses to the elbows before placing the shower unit into the wall.

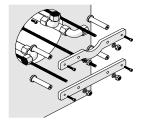


Note: Do not use heat on these connections as it will damage the Progressive shower unit.



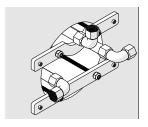
2. Fit Faceplate

- Apply silicon sealant to the lip on the faceplate to seal outer faceplate to the wall.
- Fit the progressive shower unit complete with pipes/flexible hoses into the wall.



3. Secure to wall

- Secure the unit using the supplied back brackets and Nyloc nuts.
- Note: Use the spacers if necessary for thinner walls, remove for thicker walls.
- Wipe excess sealant from between faceplate and wall.



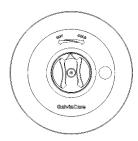
4. Fit Outlets & Inlets

 Fit shower outlet and hot & cold water supplies to the elbows

8.0 OPERATION AND TESTING

After installation, check for leaks and correct operation.

Note: If handle is hard to turn or rubs, follow step 1 of Section 10 to remove the handle and loosen the flange (there is no need to remove the flange or inner faceplate). Re-tighten the flange and handle according to steps 9 and 10 of Section 10 to ensure ease of use.



The piezo button is pushed to start water flow.

As the handle is rotated anti-clockwise the delivered water progresses from cold through 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



Handle to hot position

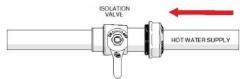
The outlet flow should quickly reduce to less than 0.75L/min following the isolation as defined in AS4032.1. Recording of the temperature should continue after isolation and should not exceed the maximum temperature set out in the applicable standard or code of practice for each state.



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. The time taken to stabilise the temperature should not exceed the maximum time set out in the applicable standard or code of practice for each state.

Shut Down Test 2

With the mixer still set in full hot position and with both supplies turned on allow the flow to stabilise for at least 15 seconds and record the temperature. Quickly isolate the hot water supply to the valve.



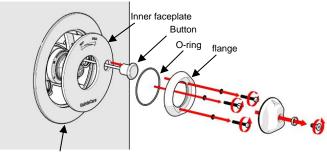
The outlet flow should quickly reduce to be less than 0.75L/min following the isolation as defined in AS4032.1. The volume of mixed water discharged for a period of between 5-35 seconds should be measured and should not exceed the maximum volume set out in AS4032.1 or code of practice for each state.

Restore the hot water supply to the valve and measure and record the outlet temperature after the mixed water temperature has stabilised. The time taken to stabilise the temperature should not exceed the maximum time set out in the applicable standard or code of practice for each state.

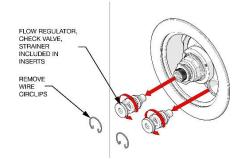
Ensure that all details of the Commissioning Report are completed, and a copy is kept with the installer and owner of the premises.

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

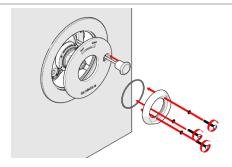
10.0 ISOLATE INLETS AND CLEAN FILTERS



- Outer faceplate
- 1. To isolate the shower, remove the handle and flange by unscrewing and carefully remove the inner faceplate and o-ring. (As shown)
- Disconnect the button from the lead ensure the lead does not fall into the wall cavity where it may be lost

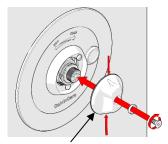


- It is recommended the shower is isolated at supply
- Remove the two wire clips and unscrew the two assemblies. As they are removed the water supply to the valve will be isolated.
- The strainers and check valves can now be examined and cleaned or replaced as necessary.
- 6. Re-assemble the strainer, check valves and re-fit the wire clips.
- 7. Turn on water supply.



- 8. Connect the button back onto the wall lead.
- 9. Fit the inner faceplate into the outer faceplate. Ensure the marking on the top of the plate is positioned correctly.

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.





Plastic washer

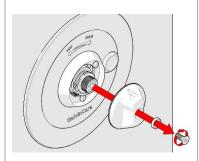
10. Ensure a plastic washer is located in a handle outer groove. Adjust the handle so the arrow shape on top of the handle matches the marking on the faceplate. Squeeze the plastic washer, push the handle into the flange, and fasten the screw.

Note: To make it easier to remove the handle use a M10 screw and fit it into the handle.

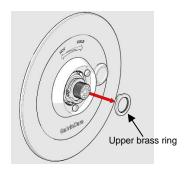
11.0 ADJUSTMENT OF THE MIX TEMPERATURE



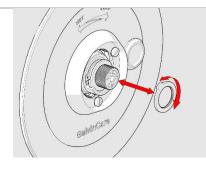
1. Set the handle to cold position.



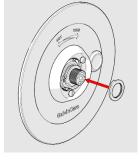
 Unscrew the tamper proof screw from handle. Pull out handle assembly from the body



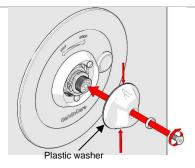
Remove the upper brass ring.Make sure the control rod doesn't rotate during the next steps.



 Remove the lower brass ring (temperature setting ring) and rotate the brass ring clockwise to increase temperature or anticlockwise to decrease. Refit to spline in new position.

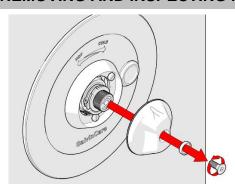


5. Reposition the upper ring in the same position against step.



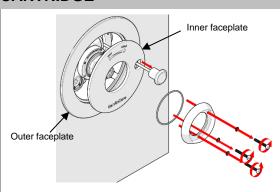
- 6. Once set, fit the plastic washer in the outer groove of the handle and then reverse step 2. Squeeze the plastic washer to reassemble.
- 7. Re-test temperature to ensure correct operation.

12.0 REMOVING AND INSPECTING MIXER CARTRIDGE



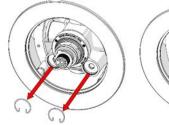
1. Remove handle assembly

 Unscrew the tamper proof screw from handle. Pull out handle assembly from the body



2. Remove flange and faceplate

 Unscrew the three screws and pull out the flange and inner faceplate from unit. Do not remove the outer faceplate.

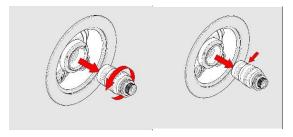




3. Isolate the shower

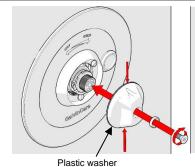
- It is recommended the shower is isolated at supply.
- To isolate the shower, remove clips, and loosen the isolators in an anti-clockwise direction until they're flush with the face of the body. This closes the shut off valves.

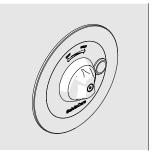
Do not fully remove isolators.



4. Remove cartridge nut and check cartridge

- Unscrew cartridge and remove from body.
 Check the cartridge for wear and damage.
 Replace if required (replacement cartridge available through your supplier).
- Check and clean the body of all debris.





5. Re-assemble

- 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.
- Ensure a plastic washer is located in a handle outer groove.
- Re-assemble, by reversing steps 4 to 1. For the handle assembly (step 1), squeeze the plastic washer during pushing it on the spline.

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.

15.0 TROUBLESHOOTING					
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 the Cartridge ensuring that all debris is removed, and components are not damaged. Replace if necessary Clean strainers ensuring debris is removed Check non-return device is not jammed. Clean it if necessary Check for airlocks in the water supply 			
When the water is set at cold, the blended temperature is too hot	Hot & Cold water supply connections are installed in reverse.	Refit the valve with Hot/Cold supplies 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 not jammed. Clean if necessary 			
Mix temperature unstable	 Flow rate below 6L/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. Replace if necessary Clean strainers ensuring debris is removed Check non-return device is not jammed. Clean if necessary 			
Mix temperature changing over time	Inlet conditions (pressure or temperatures) are fluctuatingStrainers contain debris	 Install suitable pressure control valves. Clean strainers ensuring debris is removed 			
Either full hot or cold flowing from outlet fixture	 The upper temperature ring is incorrectly set Hot/Cold water has migrated to another inlet No flow from Hot and Cold supplies – damaged check valves Refer also to fault/symptom 1 & 2 	 Re-set temperature to between 35-48°C as required Replace faulty check valves 			
Water is not flowing from outlet	 Hot or cold water failure Thermostatic cartridge contains debris or damage Strainers contain debris 	 Remove aerator and clean then reinstall Restore inlet supplies and check mix temperature Clean the cartridge ensuring that all debris is removed, and components are not damaged. Replace if necessary 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.

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ABN: 78 008 719 382





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

N	Oto:	
1 1	OLC.	

- 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:	We	ork Order #:	
Contact Person:		Make & Model of Hot Wate	er System:		
Temperature of Hot Water to t	he Valve: _	Temperature of 0	Cold Water to the	e 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: Bat	hs () Basins () Showers ()		
Other Outlets - Details					
Valves Installed to the require	ments of:				
The Valves manufacturers requ	irements		Yes	No	
The specifications and drawings for the project			Yes	No	
The Local Water Supply or Auth	Yes	No			
If No, give details and actions	taken:			,	

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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 we requirements of the Codes of Practice indicated p	ork has been carried out by the undersigned in accordance varior.	with the
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:		

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Galvin Engineering Thermostatic Mixing Valve Commissioning Report

Warm		Flow rate of Design Water (LPS)		Temp of Warm Water (C)	
Water Outlet Fixture No.	*Name/Type/Size and location of Outlet Fixture (Bath, Shower, Basin, Other)	One Outlet in Use	**All Req'd Outlets in Use	One Outlet in Use	**All Req' Outlets in Use
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
mmensura	orand and model designation. te with the design flow rate for the mixing te digital thermometer is necessary for the		neasurements	,	,
cribed temp	erature range for warm water	C to	C		

_____ Date: _____ Telephone Number: ____

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Licensee's Signature:

ABN: 78 008 719 382





Galvin Engineering Thermostatic Mixing Valve Commissioning/Maintenance Report

The following information is to be	provided by the site	manager/owner/occupier.		
Valve size and installation recom	mended by :			
Valves supplied by:				
Date of Installation:	[Drawing No.		
Service Manual on Site:	Yes □	No □		
Commissioning Tests for new ins	stallation or valve rep	lacement. Yes		
This set of testing procedures an	d report received and	d witnessed by (Print Name):		
Temperature setting at completic	on of commissioning	C		
Position: Date:	-	nature:		
Maintananca Taste Vas □				
Maintenance Tests. Yes ☐ Date of Previous Service:				
Previous Service carried out by:				
Reason for Maintenance Tests:				
This Test and report Witnessed b	oy:			
The valve has been operating/pe	erforming satisfactorily	y for the previous 12 months:	Yes □	No □
Comment on monthly Temperatu	re Tests carried out	by the owner:		
Temperature setting at time of co	ompletion:	 _c		
Current Report received and witr	nessed by:			
Name:		_		
Position:		_		
Signature:		Date:		

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