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Installation Instructions

CliniMix® 2000 Lead Safe™ TMV Replacement Cartridge (Pre-2009 Models Only)

Product Code: 201.79.00.09

**This replacement cartridge is suitable for existing 2000 TMV valves in the market marked with WMKA1593 (pre-2009). The replacement cartridge is covered under AS 4032.1 WMKA1593, ensuring its compliance. As an integral component of the thermostatic mixing valve the replacement cartridge is not separately listed on the WaterMark product database but rather included under the valve's respective item code.*

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Galvin Clear® LEAD SAFE™

The CliniMix® 2000 Lead Safe™ TMV Replacement Cartridge (pre-2009 models only) provides the opportunity to upgrade to the current version CliniMix® 2000 element shuttle assembly, including thermal flush while still keeping the old TMV body in place.

Installation

The CliniMix® 2000 Lead Safe™ TMV Replacement Cartridge (pre-2009 models only) is designed to comply with AS4032.1 Thermostatic Mixing Valves and NSW Health Department requirements. In addition to these instructions, the item must be installed subject to the requirements of the relevant regulatory authorities.

1. Using an adjustable wrench or suitable spanner, remove the protective cover off the valve (See Figure 1).
2. Using spanner/wrench remove the cartridge assembly. Proceed to take out old cartridge. (See Figure 2)
3. Check for any debris or grease build up inside the valve body and ensure the internal surface of the body is clean and free from debris.
4. Proceed to install the new cartridge to the TMV body.
5. Note the location of the temperature adjustment locking grub screw located on the hex of the Top Cap. If the grub screw is not in an easily accessible position, relocate it to the most accessible one of the 3 screw holes provided. Leave the grub screw loose. If the grub screw is tight, loosen the grub screw.
6. Proceed to temperature Adjustment and Shut-Down Test, as per the original maintenance / commissioning procedure.
7. Once the valve has passed the test and the outlet temperature is set, tighten the temperature adjustment locking grub screw.
8. Fit new supplied top cover. Push the top cover firmly on the top of the valve until it 'snaps' into place.

Note: The pipework must not be used to support the valve. A support bracket shall be used to bare the weight of the TMV.

Figure 1 - Removing old top cover

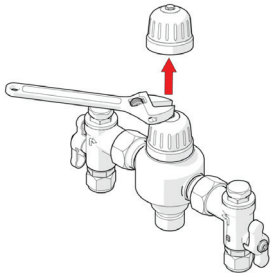
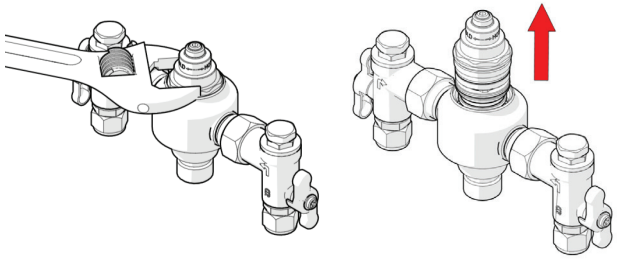


Figure 2 - Removing Cartridge



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

Recommended Pressures & Temperatures

MIXED OUTLET TEMPERATURE		
Temperature Adjustment Range		38° - 50°C
INLET TEMPERATURES		
Cold Supply	Min-Max	5° - 25°C
Hot Supply	Min-Max	55° - 90°C
Hot to Mix Temp Differential	Minimum	10°C
Cold to Mix Temp Differential	Minimum	5°C
FLOW RATES - TO ENSURE STABLE CONDITIONS		
Minimum - 4 litres/minute minimum to ensure stable operation		
Maximum - 38 litres/min @ 300kPa Pressure loss		
DYNAMIC INLET PRESSURES		
Hot & Cold Inlet Pressures	Min-Max	20kPa - 550kPa
STATIC INLET PRESSURES		
Hot & Cold Inlet Pressures	Maximum	1600kPa

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Fault Finding

Fault / Symptom	Cause	Rectification
• The desired mixed water temperature cannot be obtained, or the valve is difficult to set.	• Hot and cold supplies are fitted to the wrong connections. • The 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 valve ensuring that all debris is removed, and components are not damaged. • Clean strainers ensuring debris is removed. • Check the non-return device is not jammed. Clean it if necessary. • Check the Top Cap and 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. • The rubber sealing seat is damaged or fouled by debris. • The thermostatic element has failed.	• Raise the hot water temperature. • Replace piston O-ring. • Clean the seat using a mild descaling solution. • Replace element (ATMS306).
• Mix temperature unstable.	• Debris is a fouling valve. • Flow rate below 6L/min. • Strainers are fouled.	• Clean 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) fluctuate. • Strainers contain debris.	• Install suitable pressure control valves to ensure inlet conditions are within those stated in Section 5. • Clean strainers ensuring debris is remove.
• Either full hot or cold flowing from the outlet fixture.	• The valve is incorrectly set. • Hot/Cold water has migrated to another inlet. • Refer also to fault/symptoms 1 & 2.	• Adjust the mix temperature between 35 - 50°C as required. • Replace faulty non-return valves.
• No flow from the valve outlet.	• Hot or cold water failure. • Strainers are fouled.	• The 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 the recommended limits.	• Check valve and inlet fittings for blockages. • Ensure operating conditions are within specified limits & dynamic inlet pressures are nominally balanced to within +/- 10%.
• Mixed water temperature too hot or cold.	• Valve has been tampered with. • The valve was incorrectly set. • Inlet temperatures are not within specified limits.	• Readjust the valve to the required set temperature. • Readjust the valve to the required set temperature. • Ensure inlet temperatures are within the specified limits as listed in Section 5.
• Warm water temperature doesn't change when temp. adjuster is altered.	• The return spring is missing. • The thermostatic element has failed.	• Install the return spring. • Replace thermostatic element.
• Warm water temperature adjuster difficult to move.	• Adjuster at maximum mix temperature stop. • Valve piston into over stroke.	• 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 valves.	• Replace non-return valves.
• Valve is noisy.	• Water velocity above velocity requirements of AS3500.1, 3.4.	• Reduce water velocity.
• Temperature adjuster difficult to move	• Adjustment at maximum mix temperature stops. • Valve piston over set.	• Mixed water is at maximum temperature no higher mix. • Wind adjuster out until set temperature required is achieved.