

# USER MANUAL

## FLOMIX Lead Free Thermostatic Mixing Valve

- **MVLF5015** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Strainers and Non Return Valves
- **MVLF6015** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Strainers, Isolation and Non Return Valves
- **MVLF60153** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Stainless Steel Recessed Enclosure with Lockable Lid and Copper Tails
- **MVLF60153H** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Stainless Steel Recessed Enclosure with Hinged Lockable Lid and Copper Tails
- **MVLF60154** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Stainless Steel Recessed Enclosure with Recessed Lockable Lid and Copper Tails
- **MVLF60154H** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Stainless Steel Recessed Enclosure with Hinged Lockable Lid and Copper Tails
- **MVLF60153BAC** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Copper Tails, Stainless Steel Enclosure and Temperature Probe Adapter
- **MVLF60154BAC** - NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Copper Tails, Stainless Steel Enclosure and Temperature Probe Adapter



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## Scope of Use

Installation of all products should adhere to the manufacturer's guidelines, as well as comply with PCA, AS/NZS3500, AS4032 standards, and any other relevant regulatory provisions.

This product range complies with the Lead Free requirements of the National Construction Code Volume Three.

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- **Installation:** Refer to the installation instructions included within this manual
- **Water quality:** In line strainer (supplied) must be installed to ensure water quality.
- **Suitable for indoor use.**
- **Temperature recommendation:**
- Cold Inlet Temperature: Min 5°C - Max 30°C
- Hot Inlet Temperature Min 55°C - Max 80°C
- Mixed Outlet Temperature: 35°C - 50°C
- **Mounting:** In-wall installation.

## Technical Information

Description	MVLF6015 Series
Mixed Temperature	Min. temperature: 35 °C Max. temperature: 50°C
Flow Rates	Minimum flow 6 L/min
Inlet Temperature (Hot)	Hot Max. 80°C Min. 55°C
Inlet Temperatures	Cold Max. 30°C Cold Min. 5°C
Inlet Ratio	6:1
Accuracy	±2 °C
Water Pressure	Static, Max 1400kPa
Working Pressure	Dynamic, 50kPa-500kPa

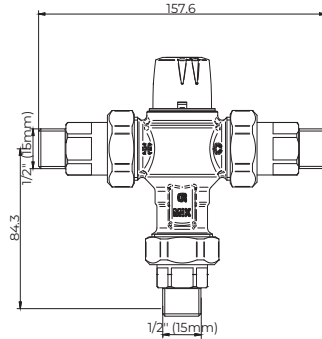
## Product Information

Body Material	NSW Healthcare Approved Valves (HOSPLAN)
MVLF6015	Bare valve complete with isolating valves, strainer and non-return valves
MVLF60153	3 hole boxes complete
MVLF60154	4 hole boxes complete

Body Material	Single Point Installation
MVLF5015	Bare valve 15mm (must be installed with an additional isolation valve on Hot & Cold)

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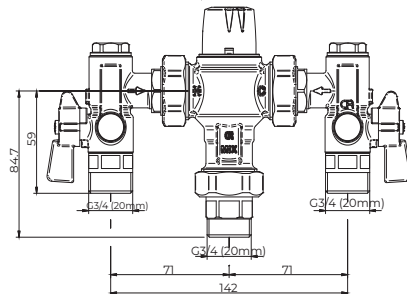
## Product Images & Technical Drawings



### MVLF5015

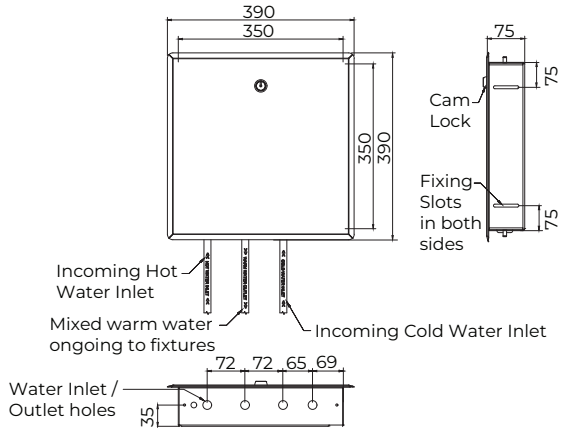
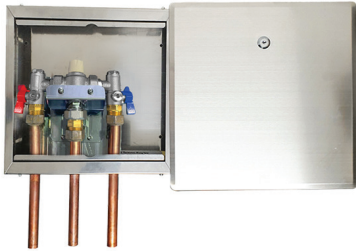
NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Strainers and Non Return Valves

(Must be installed with isolation valves- not supplied by GENTEC)

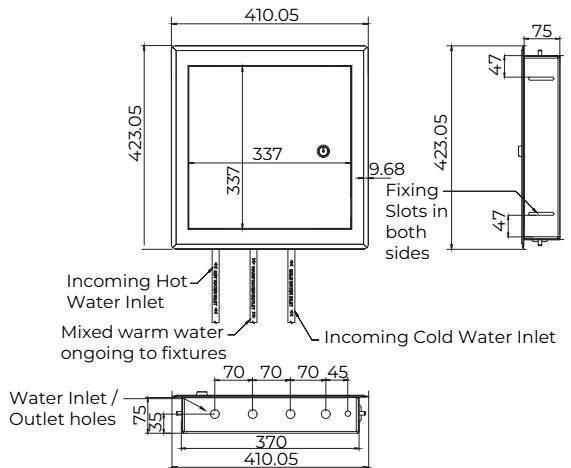
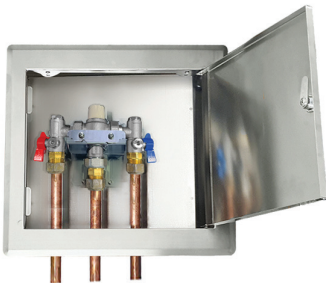


### MVLF6015

NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Strainers, Isolation and Non Return Valves

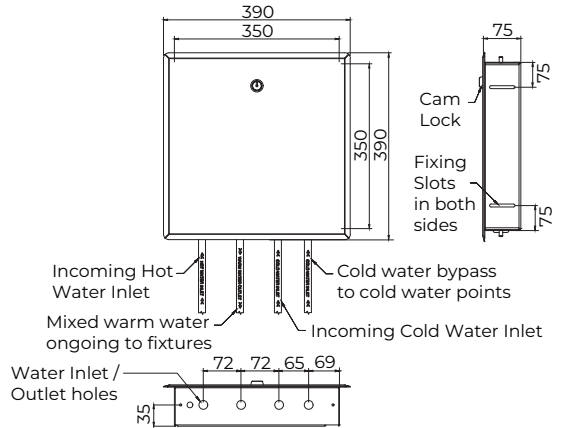

**MVLF60153**

NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Stainless Steel Recessed Enclosure with Lockable Lid and Copper Tails


**MVLF60153H**

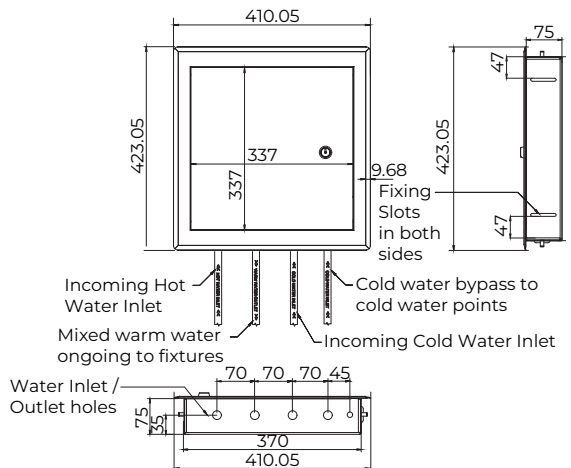
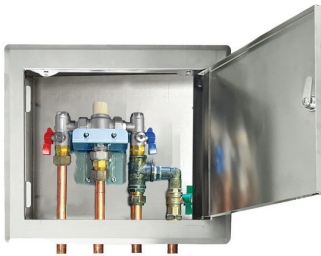
NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Stainless Steel Recessed Enclosure with Hinged Lockable Lid and Copper Tails

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## MVLF60154

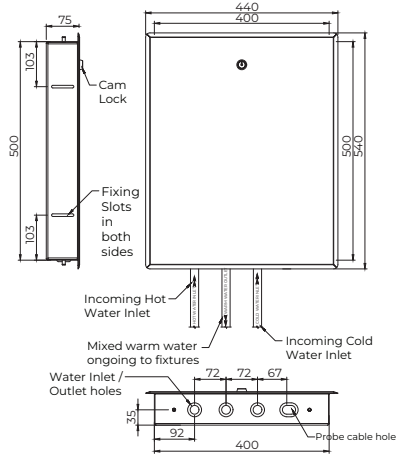
NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Stainless Steel Recessed Enclosure with Recessed Lockable Lid and Copper Tails



## MVLF60154H

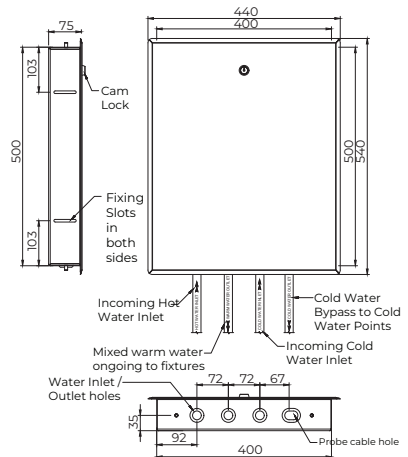
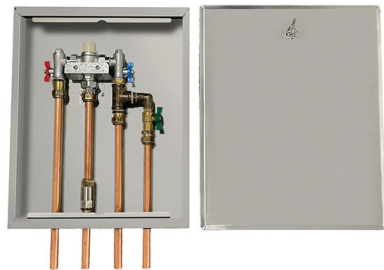
NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Stainless Steel Recessed Enclosure with Hinged Lockable Lid and Copper Tails

Note: Dimensions are provided as a guide and are subject to manufacturing tolerances.



### MVLF60153BAC

NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Copper Tails, Stainless Steel Enclosure and Temperature Probe Adapter

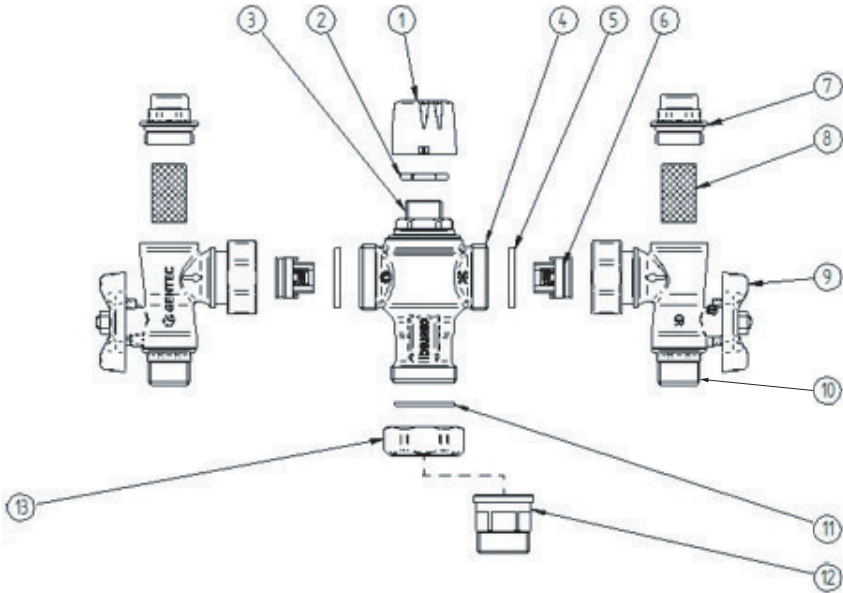


### MVLF60154BAC

NSW Health Approved Thermostatic Mixing Valve Lead Free DZR Brass Chrome Plated w/ Cold Water Bypass, Copper Tails, Stainless Steel Enclosure and Temperature Probe Adapter

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## Exploded Drawings



Item#	Description	Spare Parts
1	Plastic Cap	<input checked="" type="checkbox"/>
2	Lock Nut	<input type="checkbox"/>
3	Temperature Adjustment Spindle	<input checked="" type="checkbox"/>
4	Valve Body	<input type="checkbox"/>
5	Rubber Gasket	<input checked="" type="checkbox"/>
6	Check Valve	<input checked="" type="checkbox"/>
7	Ball Valve Cap Nut	<input type="checkbox"/>
8	Strainer	<input checked="" type="checkbox"/>
9	Ball Valve	<input type="checkbox"/>

Item#	Description	Spare Parts
10	Inlet 20	<input type="checkbox"/>
11	Fibre Washer	<input type="checkbox"/>
12	Outlet Union 20	<input type="checkbox"/>
13	Union Nut	<input type="checkbox"/>
14	Outlet Union 15	<input type="checkbox"/>
15	Copper Olive 20	<input type="checkbox"/>
16	Flared Nut 20	<input type="checkbox"/>



## Installation Steps

### BEFORE SETUP, MAKE SURE:

- Product must be installed in accordance with manufacturer's recommendations and to AS/NZS3500.
  - Product must be installed by a licensed plumber and commissioned by a certified and licensed plumber.
  - Commissioning and maintenance, must be comply with local legislation and standards code AS/NZS 3666
  - **Ensure plumbing lines are flushed and cleaned to remove all debris prior to product installation. NB: any failure or damage to the valve caused by debris not covered by warranty.**
  - Before Installation, Please refer to the exploded drawings given on page 6.
- 
1. Valve must be installed in an accessible position.
  2. Installation must be in accordance with plumbing code and manufacturers recommendations.
  3. Ensure correct heated water is delivered to the valve.
  4. The valve must have hot and cold water delivered to the valve.
  5. To prevent any damage to the valve, please use screwed fitting.
  6. Water pressure to the valve must be in accordance with plumbing code and manufacturers recommendations.
  7. Balanced systems is recommended on any installation.
  8. Dead leg must be in accordance with health codes, refer to state requirements.
  9. Ensure plumbing line are flushed prior to product installation.
  10. Strainer must be cleaned prior to commissioning.

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## Cleaning & Maintenance

To minimise downtime and maximise the functional life of the product, GENTEC recommends servicing your product at least every 12 months, under heavy use may need to be checked and serviced more often.

- The product must be handled carefully to avoid causing any physical damage.
- Use the product at least once every week to ensure all parts are kept lubricated and functioning properly.
- Service the product at least once a year to avoid any product failures - The service timeline provided is based on normal use. More frequent servicing may be required for heavy usage.
- A working pressure of 350kPa is highly recommended to ensure the maximum up-time of the product.
- Regularly clean the product with a soft cloth with warm soapy water, wash off with warm water and dry off with a soft dry cloth, paying attention to removing the dust and contamination in the bends and joints is highly recommended.
- Abrasives, hard clothes, strong acids, and bleaches must be avoided when cleaning all GENTEC products.

Parts	Product Name
MV9040S	FLOMIX inlet strainer 300 micron
MVLF9050SC	FLOMIX Lead Free right angle isolation, strainer and non return valve - cold
MVLF9055SH	FLOMIX Lead Free right angle isolation, strainer and non return valve - hot
MV9030S	FLOMIX non return valve
MVLF9011S	FLOMIX Lead Free brass top cap to suit MVLF6015 thermostatic element
MV9000S	FLOMIX O-Ring service kit (Annual)
MVLF9010S	FLOMIX Lead Free thermostatic element

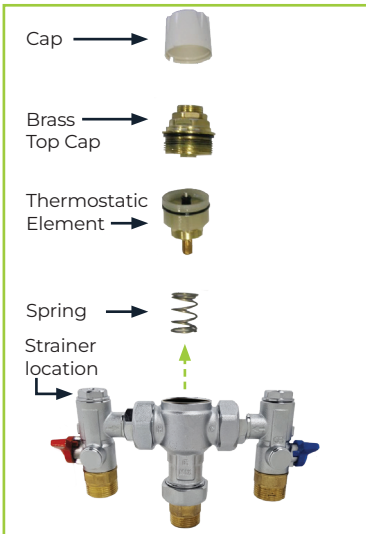
## INSTRUCTIONS FOR FLUSHING AFTER INSTALLATION PRIOR TO COMMISSIONING

### Important Steps

Step 1. Close the inlet ball valves on the valve.



Step 2. Remove the cap first, unscrew the brass top cap and take out the thermostatic element and spring.



Step 3. Remove strainer cap and take out strainer, then flush your line for at least 5 minutes, then clean the strainer and reinstate in position.

Step 4. Reassemble the brass top cap on the valve, open the hot and cold inlet ball valves and let the water flow through the body for at least 5 minutes in order to remove all the impurities.



Step 5. Close the inlet ball valves on the valve.

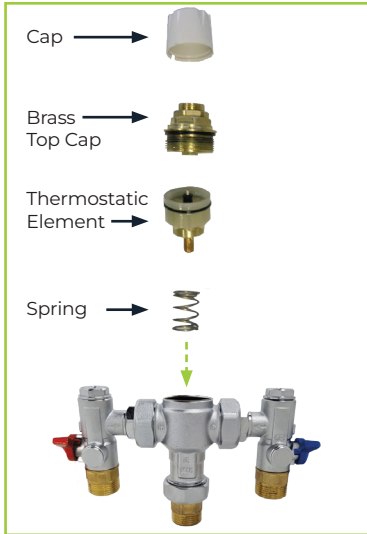


Step 6. Unscrew the brass top cap.



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Step 7. Unscrew the brass top cap. Install the thermostatic element and spring inside the body of the valve, screw on the top cap back in place.



Step 8. Open the intel ball valves of the valve.



Now you are ready to commission the valve.

Step 1. Clean out strainers and make sure they are free of debris.

Step 2. Adjust the temperature to suit the application.

Step 3. Do a fail safe test in accordance to the requirements.

Step 4. If the valve is leaking during fail safe, it means debris has an effect either the brass top cap and the thermostatic element.

## SHUT DOWN TEST

Now that the mixing valve had been set and locked, it is necessary to preform a shut down check. To set inlet pressures at 300kPa and the mixed water temperature at  $38 \pm 2^{\circ}\text{C}$  and note the outlet temperature while holding a digital thermometer in the outlet flow, quickly isolate the cold water supply to the valve.

As a rule, perform the two shut down tests by quickly isolating the cold water supply and then the hot water, checking that the outlet flow slows down quickly, remaining less than 0.75L at 300kPa in the period 5 to 35 sec. following inlets isolation (that is about 1.5L/min).

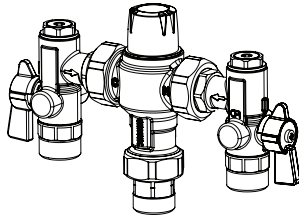
Restore the hot water supply to the valve, measure and record the outlet temperature after the mixed water temperature has stabilized ensuring the outlet temperature has re-established.

**Ensure to complete and sign off your commissioning reports, a copy must be kept with the installer and the other with the owner of the premises.**

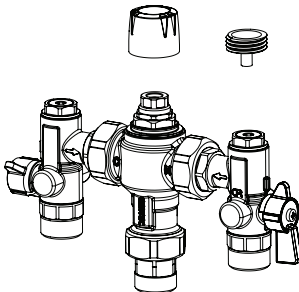
**MVLF5015, MVLF6015 THERMAL DISINFECTION PROCEDURE**

During the process the valve don't lose its preset temperature.

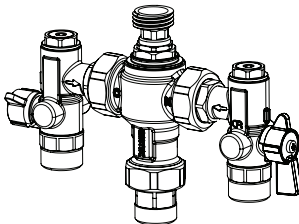
Step 1. Turn the cold water knob inlet to the closed position.



Step 2. Remove the cap.

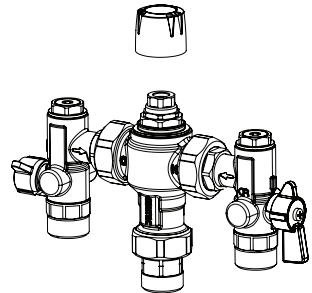


Step 3. Insert the special tool into the hole at the top of the valve. Rotate the tool clockwise. **DO NOT remove the tool until disinfection is complete.**



Step 4. After the disinfection completes, unscrew the tool anticlockwise.

Step 5. Replace the cap.



Step 6. Return the cold water knob to the open position.

**Please Note:**

The tool used for this Thermal Disinfection Procedure is available as a Separate item.

Sales Code: **MVLF9101** - GENTEC Thermal Disinfection Tool

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## Troubleshooting

Problem	Cause	How to Fix
Thermostatic valve is not working well	<ul style="list-style-type: none"> <li>Valve is pulsating</li> <li>Humming</li> <li>Not enough flow</li> </ul>	<ul style="list-style-type: none"> <li>Have you flushed the water line as per the instruction, this is <b>VERY IMPORTANT AND CRITICAL</b> during installation to do this correctly</li> <li>Please check the strainers for blockages, as well as the non-return valves and isolating valves</li> <li>If debris has gone through the cartridge this is more than likely to be the cause. If the cold water and hot water seats have been damaged, they must be replaced</li> <li>Have you checked to make sure the pressure is to manufacturer's recommendations and in line with the plumbing code</li> <li>Ensure you have adequate pressure on both hot and cold</li> <li>Temperature difference must be within tolerances</li> <li>Minimum flow and too many outlets can make the valve to pulsate</li> </ul>
How many taps or showers can I install per valve	<ul style="list-style-type: none"> <li>Not enough flow</li> </ul>	<ul style="list-style-type: none"> <li>Ensure to size the valve correctly, what is the valve output, and then make sure the outlets you are using do not exceed what the valve is able to achieve. For example, if the pressure is 400 on both hot and cold, and your valve output is 42 lpm, this means you must not use any more than 42 lpm for all the outlets you are proposing to use</li> </ul>
How often do I need to service the valve	<ul style="list-style-type: none"> <li>Preventing issues</li> </ul>	<ul style="list-style-type: none"> <li>The valve must be serviced annually and the O-Ring must be replaced using the manufacturer's parts only. However, in the event the valve is having any issues in between the 1 year period, then we recommend a full parts replacement</li> </ul>
What parts do I need to replace and when	<ul style="list-style-type: none"> <li>Preventing issues</li> </ul>	<ul style="list-style-type: none"> <li>The wax element must be replaced every 5 years. However, in the event the valve is having any issues in between the 1 year period, then we recommend a full parts replacement</li> </ul>

Problem	Cause	How to Fix
Thermostatic tap is not working well	<ul style="list-style-type: none"> <li>Flow issues</li> <li>Humming</li> <li>Not enough flow</li> </ul>	<ul style="list-style-type: none"> <li>Have you flushed the water line as per the instruction, this is <b>VERY IMPORTANT AND CRITICAL</b> during installation to do this correctly</li> <li>Please check the strainers for blockages, as well as the non-return valves and isolating valves</li> <li>If debris has gone through the cartridge this is more than likely to be the cause. If the cold water and hot water seats have been damaged, they must be replaced</li> <li>Have you checked to make sure the pressure is to manufacturer's recommendations and in line with the plumbing code</li> <li>Ensure you have adequate pressure on both hot and cold</li> <li>Temperature difference must be within tolerances</li> </ul>
What parts do I need to replace and when	<ul style="list-style-type: none"> <li>Preventing issues</li> </ul>	<ul style="list-style-type: none"> <li>The full cartridge must be replaced every 5 years, however in the event the cartridge is having any issues in between the 5 year period, we recommend that the cartridge be replaced</li> </ul>
Issue with water flow	<ul style="list-style-type: none"> <li>Not enough water</li> <li>Too much / little water</li> </ul>	<ul style="list-style-type: none"> <li>Check for blockages in the inlet where the strainer is fitted, or if the aerators are blocked with debris</li> <li>Is the isolating valve fully open on both hot and cold</li> <li>Have got these in a bank, if so, is the inlet pipes been sized correctly</li> <li>Has the laminar flow control been installed</li> <li>High pressure exceeding the plumbing code will have an effect on the product and must not exceed 500kPa</li> </ul>
Not enough water	<ul style="list-style-type: none"> <li>Taps installed in a bank or a trough</li> </ul>	<ul style="list-style-type: none"> <li>Ensure the main pipe size is sized correctly to ensure adequate water is able to service the taps installed in a bank or a trough</li> </ul>

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Problem	Cause	How to Fix
The tap or valve is leaking	<ul style="list-style-type: none"> <li>Debris</li> </ul>	<ul style="list-style-type: none"> <li>Have you flushed your water lines</li> <li>If rubbish has gone through the cartridge, there is a high chance you will need to replace the cartridge or the parts in the valve</li> </ul>
No water	<ul style="list-style-type: none"> <li>Isolating valve is off</li> </ul>	<ul style="list-style-type: none"> <li>Ensure the isolating valve is turned on</li> </ul>
How often do I need to service my tap	<ul style="list-style-type: none"> <li>Prevent product failure</li> </ul>	<ul style="list-style-type: none"> <li>Service and maintenance of the main operating parts is recommended as this will prolong the life of the product</li> </ul>
Thermal shut down	<ul style="list-style-type: none"> <li>Debris, not been flushed adequately</li> </ul>	<ul style="list-style-type: none"> <li>Refer to flushing procedures</li> <li>If the element/ top cap is damaged, it needs to be replaced</li> </ul>

## Water Quality

### Maximum chloride Cl- level Guidelines in plumbing systems

	Cold Water	Hot Water
Grade 304L	200	50
Grade 316L	1000	250

When materials may be used in either hot or cold water lines, the guidelines for hot water should be used.

Within these guidelines at ambient temperatures and provided the pH >~6, any negative effect to stainless steel will be unlikely.

Note: Chlorides in water - where the density of the solvent (water) is 1 (which it is to within 0.1% at ambient temperatures), then mg/L = ppm.

For brass products, please ensure the chlorine and chloramines levels are not more than 0.4 ppm.

Please ensure that the water quality supplied to the fixtures meets safe drinking standards to prevent potential staining of the product.

### Chlorine guidelines (not to be confused with chloride)

- 304L suitable for chlorine levels up to 2ppm.
- 316L suitable for chlorine levels up to 5ppm.
- Short term dosing, for example 25-50ppm, for sterilisation purposes of 24-48 hours acceptable if effectively flushed through afterwards.
- Sterilisation is essential during commissioning of potable water systems.

Reference: <https://www.assda.asn.au/component/content/article?id=271:chlorine-and-chloride--same-element,-very-different-effect>



## Responsibly Sourced



### **Reduce Carbon Footprint**

GENTEC is rejuvenating the product- no power, less maintenance and longer life.

### **Rejuvenation Program**

To learn more about the rejuvenation program, please contact our customer service at [info@gentecaustralia.com.au](mailto:info@gentecaustralia.com.au) for more information.

### **Ethically and Environmentally Sourced**

Please refer to GENTEC Business Ethics & Ethical Sourcing Policy at <https://gentecaustralia.com.au/terms-and-conditions/>



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Gentec products come with a Manufacturer's Warranty. To ensure the validity of this warranty, Gentec products must be installed following the provided installation instructions and adhering to AS 3500, NCC Volume Three, relevant Australian Standards, and any local authority requirements applicable to the product. Additionally, water and electrical supply conditions must meet the appropriate national and/or state standards. Non-compliance with these provisions may void the warranty and impact product performance.

Note: The information provided is only a guide, actual product may differ. The information here should not be relied on without clarification with Gentec. Gentec reserves the right to make design changes at any time without notification.

\*Subject to terms and conditions. For detailed warranty information, installation compliance, maintenance and cleaning guidelines, and other relevant details, please visit <https://gentecaustralia.com.au>

[gentecaustralia.com.au](https://gentecaustralia.com.au)