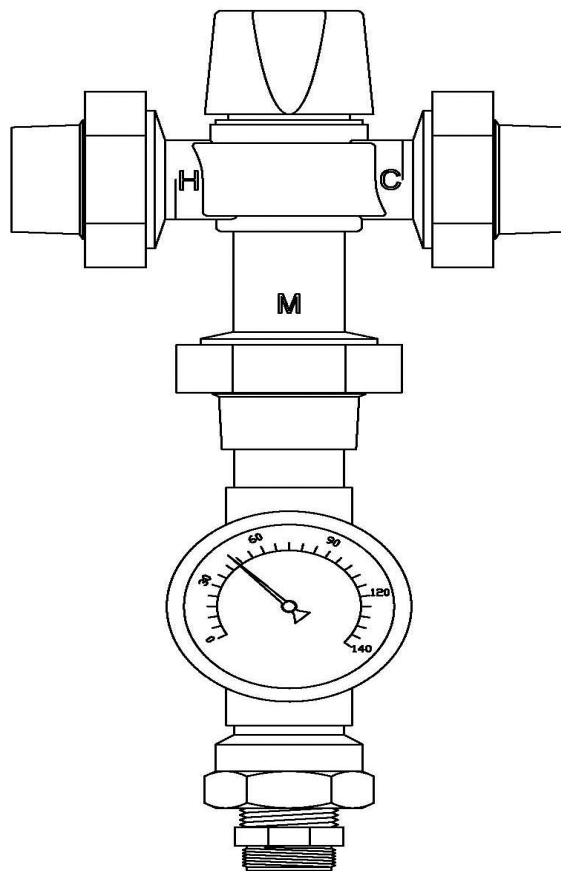




Health Care Blend Valve

Installation/Operation Manual



**Manufactured With Pride
In The USA**

www.ameriwater.com • 800-535-5585

AmeriWater • 3345 Stop 8 Rd. • Dayton, OH 45414

P/N 98-0135
REV A

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1.0 INTRODUCTION

The Blend Valve assembly blends incoming cold tap water and heated water thermostatically to the desired temperature. It compensates quickly for flow and incoming temperature fluctuations.

Please read the Operations Manual before using the system. Contact AmeriWater Customer Service with any questions at 1-800-535-5585 Monday through Friday 8:00 a.m. to 5:00 p.m. eastern standard time. For after hours emergencies call 1-800-535-5585 and follow the instructions on the recorded message. Our on-call technician will return your call as soon as possible.

2.0 THEORY OF OPERATION

The temperature-blending valve is designed to blend together hot and cold water to produce adjustable water temperature. The reverse osmosis membrane has been designed to operate the best at 77 degrees Fahrenheit. Colder water will tighten the membrane, and cause a lower product flow. Warmer water will cause the membrane to expand, and will allow poor quality water through to the product side of the membrane.

Please note; temperatures above 110F will damage the membrane.

3.0 INSTALLATION

CAUTION: Local plumbing and electrical codes must be observed.

1. Locate the blend valve prior to the MRO as close to the water source as possible. Plumb the cold water piping into the cold water bypass valve after the blend valve and plumb the hot water piping into the valve plumbed in before the blend valve as shown on system installation drawing.
2. Plumb in a three valve bypass on the cold water side of the blend valve assembly as shown in system installation drawing. The three valve bypass is to be supplied by customer.
3. To prevent damage from excessive heat to valve body, filter screens and the fiber washer during soldering, loosen the unions and remove the valve body, filter screens and fiber washer prior to soldering.
4. After soldering, clean out any residue from soldering in piping and install valve body, filter screens and fiber washer. Open both the hot water and cold water valves and flush all piping thoroughly and check for leaks.
5. If you have a large amount of sediment in your water, AmeriWater recommends that you install a prefilter on the hot side of the blend valve and a prefilter on the cold side of the blend valve.

6. Let water flow for at least two minutes to allow supply temperature to stabilize.
7. Adjust the temperature adjustment screw until a value between 75 - 80 degrees Fahrenheit is achieved during water flow. This will need to be done utilizing a hex key (not provided).
8. To adjust the setting of the valve, loosen locking cap screw with hex key. Cap must be lifted 1/4" to adjust temperature. To increase the temperature, turn counterclockwise. To decrease temperature turn clockwise.
9. Calibrate the mixed water outlet temperature by placing a thermometer in the mixed water stream.
10. Lower handle and tighten screw.
11. Check outlet temperature.

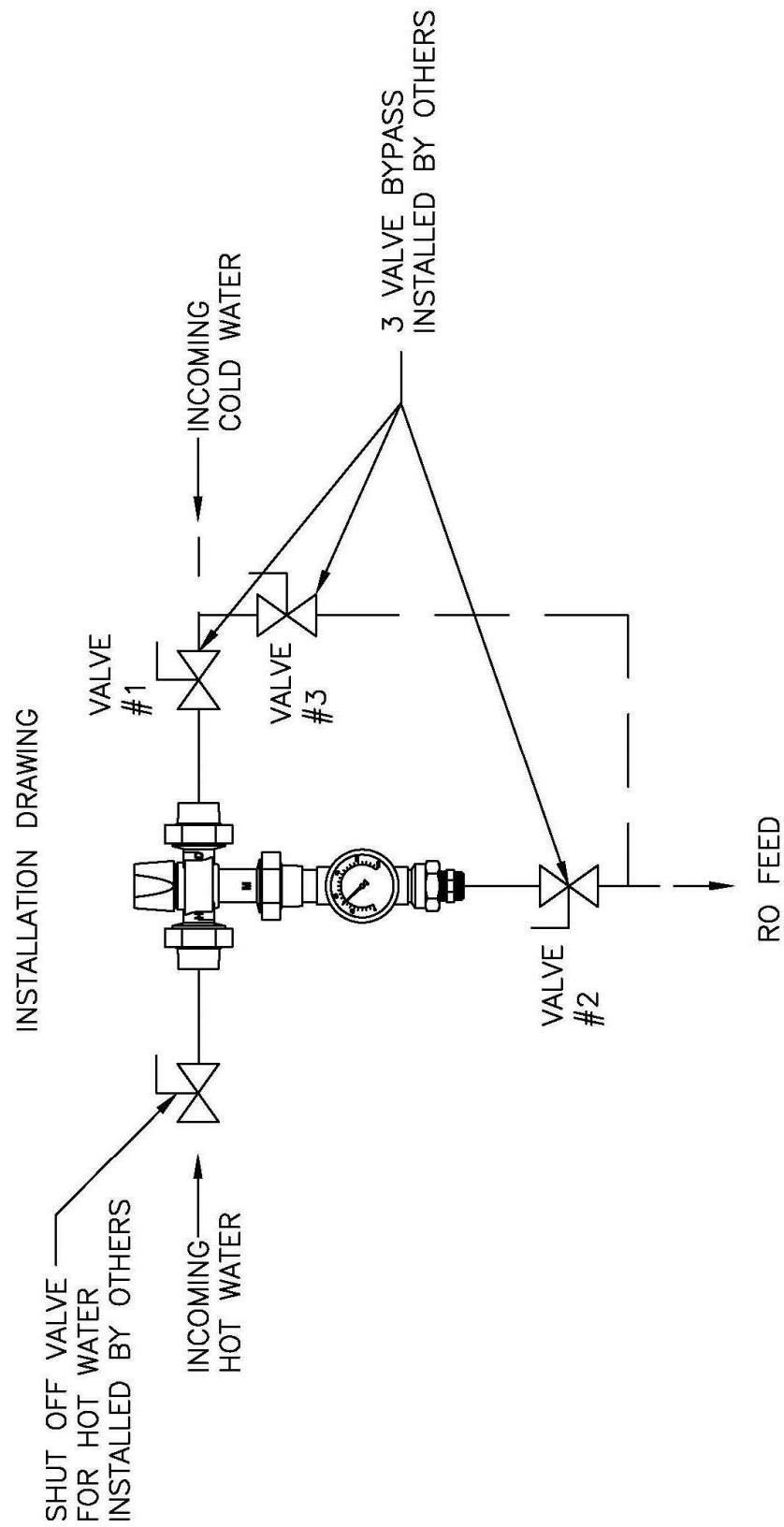
4.0 PERIODIC MONITORING AND MAINTENANCE

1. Monitoring of the output of the blend valve must be carried out periodically to ensure that the water temperature is meeting the facility requirements. This should be recorded in a periodic log.
2. Regular cleaning and checking of thermostat assembly helps to maximize valve life and mixing function.
3. The filter screens need to be cleaned and checked periodically. The fiber washer needs to be checked periodically for wear and tear. Below are a list of procedures to follow.
 - a. To clean and check valve assembly, first close the hot water and cold water supply coming to the blend valve body.
 - b. Once water supply has been closed, loosen the union nuts on the blend valve to remove the filter screens and the fiber washer.
 - c. The filter screens can be sprayed or wiped off to remove any sediment or residue.
 - d. Check the fiber washer for nicks or damage, if damaged replace washer immediately.

5.0 BYPASS OPERATION

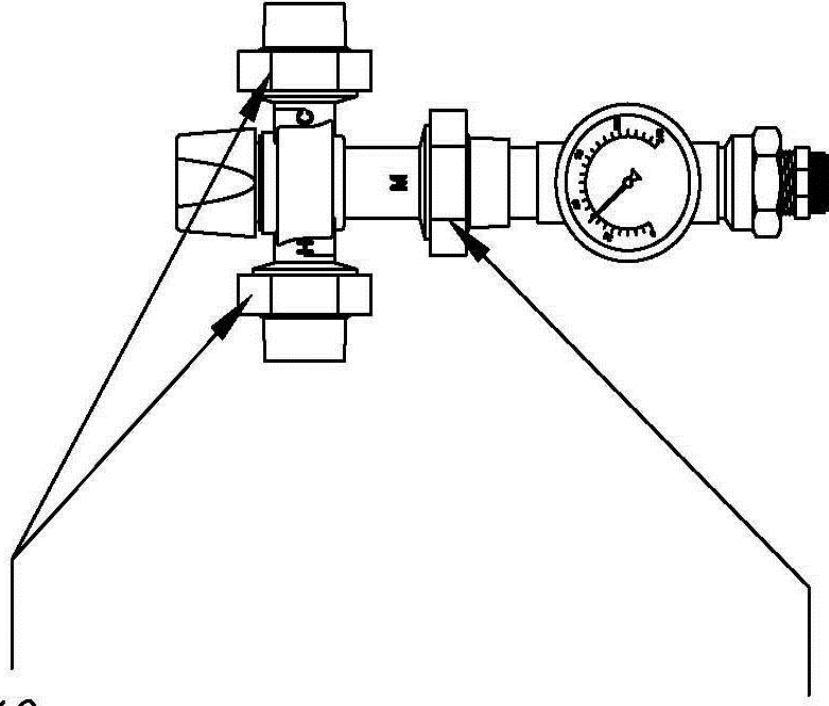
It is recommended that the customer install a 3 valve bypass as shown in installation drawing. If you need to bypass the blend valve, simply close valve #1 & valve #2 and open valve #3. When ready to return to normal operation, simply reverse these steps.

6.0 SYSTEM INSTALLATION AND MAINTENANCE DRAWINGS



MAINTENANCE DRAWING

LOOSEN THE UNION NUTS
AND REMOVE THE FILTER
SCREENS FOR CLEANING



LOOSEN THE UNION NUT
AND REMOVE THE FIBER
WASHER FOR REPLACEMENT

7.0 PARTS LIST

Description	Part Number
Thermometer, 0-140 F	39530708
Blend Valve Repair Kit, 1"	54-0050

8.0 SERIES L1170-US-M2 VALVE SUPPLEMENT





Watts 1170-M2, LF1170-M2, L1170-M2, LFL1170-M2 Troubleshooting Guide

Problem & Cause

Answer

- A. Unable to reach required set point or set point difficult to set
- A.1 Supply temperatures not within specified limits
 - A.2 Hot and cold supplies reversed
 - A.3 Filters are blocked by debris

- A.1 Check differential temperature between hot and cold supplies and outlet 10°F (5.6°C) minimum required
- A.2 Reinstall valve with supplies connected to marked inlets
- A.3 Clean filters

- B. Unable to achieve required flow
- B.1 Too much pressure drop at fixture
 - B.2 Checks valve/filters blocked by debris

- B.1 Measure supply pressures and check against flow chart. Look for restrictions in valve or piping
- B.2 Clean check valves/filters

- C. Valve does not maintain required temperature or temperature changes over time
- C.1 Fluctuation in supply pressures
 - C.2 Check valve/filters blocked by debris
 - C.3 Recirculation loop not piped properly

- C.1 Stabilize water pressures with pressure regulating or balancing valves
- C.2 Clean check valves/filters
- C.3 Pipe recirculated tempered water return so it connects to hot water source and cold side of mixing valve (see Product Guide for piping details)

- D. Discharge temperature too hot or cold
- D.1 Valve not calibrated properly

- D.1 Readjust valve temperature per installation instructions

- E. Hot water from cold water tap or cold from hot
- E.1 Check valves fouled

- E.1 Clean check valves/filters

- F. Valve is noisy
- F.1 Water velocity is too high
 - F.2 Valve not sized properly

- F.1 Reduce water velocity with pressure regulating valves
- F.2 Check flow required versus rated flow capacity of valve

- G. No flow from valve
- G.1 Hot or cold water supply failure or shutoffs closed
 - G.2 Check valve/filters blocked by debris

- G.1 Open shutoffs or restore hot and cold supply
- G.2 Clean check valves and filters

- H. Flow from valve fluctuates
- H.1 Fluctuation in supply pressures
 - H.2 Check valve/filters blocked by debris

- H.1 Stabilize water pressure with pressure regulating valves
- H.2 Clean check valves and filters

ATTENTION INSTALLER: After installation, please leave this Instruction Sheet for occupant's information.
IMPORTANT: Inquire with governing authorities for local installation requirements.

WARNING!

For valves with CPVC or PEX end connections do not exceed the tubing manufacturers pressure and temperature ratings. Refer to the tubing manufacturers product specifications for that information.

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: www.watts.com/prop65

Limited Warranty: Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**



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 **WARNING**

This product can expose you to chemicals such as vinyl chloride (used in the production of PVC) or Nickel (used in the production of stainless steel), that are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Dear Valued Customer,

California Proposition 65 (Prop 65) is the Safe Water and Toxic Enforcement Act of 1986. The State of California began enforcing amendments to California Prop 65 at the end of August 2018. Prop 65 requires manufacturers to provide a clear and resonable warning to residents of California about chemicals used in products that they purchase that are included on the Prop 65 Chemical List. The chemicals included on the list are chemicals that are know to the State of California to cause cancer, birth defects, or other reproductive harm. One such chemical is Vinyl Chloride, a compound used to produce Polyvinyl Chloride (PVC). The AmeriWater system you have purchased may contain PVC or stainless steel parts.

While warnings are only required in the State of California, AmeriWater has intiated the use of Prop 65 labeling for all products to ensure compliance with California regulations. Please note that the above warning does not necessarily mean that the product that you have purchased is unsafe. Products that have been cleared for market by FDA have been determined to be safe and effective by the United States Food and Drug Administration. The warning is simply a requirement by the State of California. If you wish to obtain additional information, please visit: p65warnings.ca.gov. You may also contact your AmeriWater representative if you have any questions.

Thank you for your understanding and we look forward to continuing to serve you.