INSTALLATION ADJUSTMENT SERVICE
MEGATRON XL-690-LF
THERMOSTATIC
WATER MIXING VALVE

IMPORTANT! Provide valve serial number, (located on valve cover) when ordering parts!!

ECO-MIX ™

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.Ca.gov

INSTALLATION

1. Assembly should be installed at a location where it can easily be cleaned, adjusted or repaired.
2. The inlets are clearly marked on the valve body. Union angle strainer checkstops furnished must be installed on both supply lines as shown above.
3. Flush pipes thoroughly after system has been connected.
4. Refer to page 2 of this bulletin for correct Setup Instructions

125 PSI (8.6 BAR) MAXIMUM OPERATING PRESSURE

CAUTION
All thermostatic water-mixing valves have limitations. They will not provide the desired accuracy outside of their flow capacity range. Consult the flow capacity chart on page 5.

Minimum flow must be no less than as shown.

REMEMBER! THIS IS A CONTROL SYSTEM WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD MGR-1000).
1. Verify that the temperature of the hot water source is properly set and maintained. Shutoff and isolate the circulator pump.

2. Loosen LTR set screw located on temperature adjustment knob with Allen wrench on both valves.

3. To set the small valve, turn off large valve using the ball valve on the outlet. Turn on enough fixtures to flow approximately 1.5 GPM, turn knob clockwise until it stops (full cold) then counterclockwise until it stops (full hot), three times to exercise the thermostatic element.

4. Set mixing valve to the desired temperature, (See warning tag for temperature set point). Tighten LTR set screw.

5. To set the large valve, turn off small valve using the ball valve on the ¾” outlet. Turn on enough fixtures to flow approximately 5 GPM, turn knob clockwise until it stops (full cold) then counterclockwise until it stops (full hot), three times to exercise the thermostatic element.

6. Set mixing valve to the desired temperature, (See warning tag for temperature set point). Tighten LTR set screw.

7. Open ball valve on the ¾” line on the outlet of the small valve and shut off all fixtures. Setup is complete.

8. Turn on circulator. With all fixtures still off, (no water flowing) observe the circulation temperature until it stabilizes.

9. If temperature rises, close balance valve until desired temperature is reached.
INSTALLATION CONTINUED

WARNING

WARNING! This Thermostatic Mixing Valve has an Locking Temperature Regulator (LTR) which must be checked. If the temperature is too high, the installer MUST RESET this adjustment immediately. Always check the temperature of the mixed water after installation. Excessively hot water is DANGEROUS AND MAY CAUSE SCALDING!

The LTR is factory set at approximately 120°F (49°C) with an incoming hot water supply temperature of 150°F (65°C). If the incoming hot water supply for your installation is higher than 150°F (65°C), the valve may deliver water in excess of 120°F (49°C) and the LTR MUST BE RESET BY THE INSTALLER.

SERVICE

Leonard Type XL Thermostatic Water Mixing Valves are simple in design and may be easily cleaned, adjusted and repaired. If the installation is accessible, servicing may be completed without disconnecting the valve.

NOTE: Thermostatic Water Mixing Valves are REGULATING mechanisms, which must be regularly maintained to provide best performance. Frequency of cleaning depends on quality of local water conditions and usage. (See Maintenance Guide and Record MGR-1000).

TROUBLESHOOTING INSTRUCTIONS

| ITEM: PACKINGS & GASKETS | PROBLEM: 1. Leak at stem. 2. Leak between valve cover and base. | RECOMMENDED REPAIR KITS (LARGE VALVE) KIT 1/XL82 | RECOMMENDED REPAIR KITS (SMALL VALVE) KIT 1/WX |
| ITEM: SHUTTLE ASSEMBLY | PROBLEM: 3. Valve delivers either all hot or all cold water, or will not mix consistently. | RECOMMENDED REPAIR KITS (LARGE VALVE) KIT R/XL82 | RECOMMENDED REPAIR KITS (SMALL VALVE) KIT R/269 |
| ITEM: CHECKSTOPS | PROBLEM: 4. Hot water bypass into cold line. 5. Supplies cannot be shut off completely. 6. Leak at checkstop bonnet. | RECOMMENDED REPAIR KITS (LARGE VALVE) KIT 2/690 | RECOMMENDED REPAIR KITS (SMALL VALVE) KIT 4/220 |

REMEMBER! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS. (SEE MAINTENANCE GUIDE AND RECORD, MGR-1000).
### LARGE VALVE PARTS LIST

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**SMALL VALVE PARTS LIST**

**RETURN SPRING**

**CHECK**

**SHUTTLE ASSEMBLY**

**SHUTTLE O'RING**

**STEM ASSEMBLY**

**STEM ASSEMBLY O'RING**

**COVER O'RING**

**COVER**

**RETAINING CLIP**

**KNOB**

**SCREW**

**DIAL PLATE**

**KNOB SET SCREW**

**MODEL 269-LF**

**1/WX** Gasket Kit
- Shuttle o-ring
- Stem assembly o-ring
- Cover o-ring

**R/269** Rebuild Kit
- Return spring
- Shuttle assembly
- Shuttle o-ring
- Stem assembly o-ring
- Cover o-ring

**4/220 Check valve Kit**
- 2 Check valves
- 3 Check clips

**DISMANTLING & CLEANING**

1. Shut off hot and cold water to the valve as well as the valve outlet port.
2. Loosen lock screw on side of knob with 5/64” allen wrench.
3. Remove the knob screw on top of knob.
4. Remove temperature adjustment knob.
5. Remove valve cover, which includes the stem assembly.
6. The shuttle assembly can now be removed, cleaned and inspected. Be sure to check the condition of the shuttle o-ring and replace if necessary.
7. Lubricate the shuttle o-ring before installing the shuttle assembly.
8. Install the cover assembly including o-ring back onto valve and tighten.
9. Replace knob and knob screw.
10. Valve temperature must be reset after any repairs or cleaning!! See Page 2. Temperature Adjustment

**TROUBLESHOOTING**

1. Leaking water under knob, order gasket kit, replace stem assembly o-ring. Remove knob screw and knob, remove retaining clip, thread out the stem assembly and replace o-ring. Lubricate o-ring, thread stem into cover, replace retaining ring, knob and screw. **Valve temperature must be reset after any repairs or cleaning!! See page 2.**
2. Leaking water between cover and body, order gasket kit, replace cover o-ring. Remove knob screw and knob and remove valve cover and replace o-ring. Replace valve cover, knob and knob screw. **Valve temperature must be reset after any repairs or cleaning!! See page 2.**
3. Hot water bypass into cold line, order checkstop kit and replace checks within inlets of valve.
4. Valve not controlling temperature even after cleaning, order complete rebuild kit. Remove knob screw and knob and remove valve cover. Replace shuttle assembly and return spring being sure to lubricate shuttle o-ring. Replace valve cover, knob and knob screw. **Valve temperature must be reset after any repairs or cleaning!! See page 2.**
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NOTE: Flowrates will vary depending on existing field conditions. Leonard Valve Company always recommends using CASPAK® sizing software for proper valve sizing and model number applications.