INSTALLATION, OPERATION & MAINTENANCE MANUAL

170-LF
3/8" Compression
ASSE 1070

270-LF
1/2" - M-NPT
ASSE 1070/1017

370-LF
3/4" - M-NPT
ASSE 1070/1017

170-LF WARNING:
DO NOT use thread sealant on compression connections as it will cause damage.

270-LF / 370-LF WARNING:
When using flex hoses be careful, swivel connectors may damage inlet checks and/or element on outlet on 270-LF, 370-LF models. Coupling fittings may be needed if swivel connectors have a brass protruding tube or any protrusion that may damage the valve.

WARNING!!
WATER TEMPERATURES IN EXCESS OF 110°F (43°C) MAY CAUSE SCALDING, SEVERE INJURY, OR DEATH!!

1) Valve should be installed where it can be easily cleaned, adjusted or repaired.
2) 170 Inlets are furnished with 3/8” compression connections. If using copper tubing, DO NOT extend tubing more than 1/8” beyond the compression ferrule. DO NOT use thread sealant.
3) Verify tubing is straight, tighten compression nuts by hand, then tighten only 1/4 turn, overtightening will cause leaks and possibly crush checks.
4) 270 / 370 Inlets are furnished with NPT connections. When soldering close to this unit, DO NOT OVERHEAT, internal components may become damaged.
5) Leonard recommends that unions and shutoffs are installed on the inlets and outlet.

6) Use solder or pipe cement sparingly. Supply pipes should be flushed before the valve is connected. Flush outlet pipe and valve as soon as it is connected.
7) Open hot and cold water supply valves to mixing valve.
8) Open mixed water outlet.
9) With the fixture in the full open position, calibrate the mixed water outlet temperature by placing a thermometer in the mixed water stream. Loosen knob set screw with 5/64” Allen wrench. Adjust the setting of the valve to obtain the desired temperature (counter-clockwise to increase temperature – clockwise to decrease temperature).
10) Tighten knob set screw to lock temperature setting.

PRESSURE-TEMPERATURE:

<table>
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<tr>
<th>Maximum pressure:</th>
<th>125 PSI (8.6 BAR)</th>
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<tbody>
<tr>
<td>Maximum hot water temperature:</td>
<td>180°F (82°C)</td>
</tr>
<tr>
<td>Hot water inlet temperature range:</td>
<td>120-180°F (49-82°C)</td>
</tr>
<tr>
<td>Cold water inlet temperature range:</td>
<td>33-80°F (1-27°C)</td>
</tr>
<tr>
<td>Temperature adjustment range:</td>
<td>90-140°F (32-60°C)</td>
</tr>
</tbody>
</table>

Minimum Flow: 170 / 270 - .25 GPM, 370 - .5 GPM
IMPORTANT:

Maximum Operating Pressure: 125 PSI (860 KPA) These thermostatic water mixing valves can be adjusted to deliver water at temperatures exceeding 110°F (43°C). After installation, the installer must check the outlet water temperature and adjust the temperature setting to ensure delivery of a safe water temperature not exceeding 110°F (43°C).
# Troubleshooting Instructions

## Symptoms

- Leaking water between valve cover and body.
- Leaking water under knob.
- Valve will not control temperature after cleaning.
- Hot water by-passes into the Cold Water Supply Cold water by-passes into the Hot

## Repair Kit

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>170-LF</th>
<th>270-LF</th>
<th>370-LF</th>
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</thead>
<tbody>
<tr>
<td>Leaking water between valve cover and body.</td>
<td>GASKET KIT</td>
<td>1/WX</td>
<td>1/WX</td>
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<tr>
<td>Leaking water under knob.</td>
<td></td>
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<tr>
<td>Valve will not control temperature after cleaning.</td>
<td>REBUILDING KIT</td>
<td>R/170</td>
<td>R/270/370</td>
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<tr>
<td>Hot water by-passes into the Cold Water Supply Cold water by-passes into the Hot</td>
<td>CHECKSTOP KIT</td>
<td>4/108</td>
<td>4/220</td>
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</table>

## Diagram

![Diagram of valve components](image)

## Limited Warranty

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Email: info@leonardvalve.com Web Site: http://www.leonardvalve.com
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