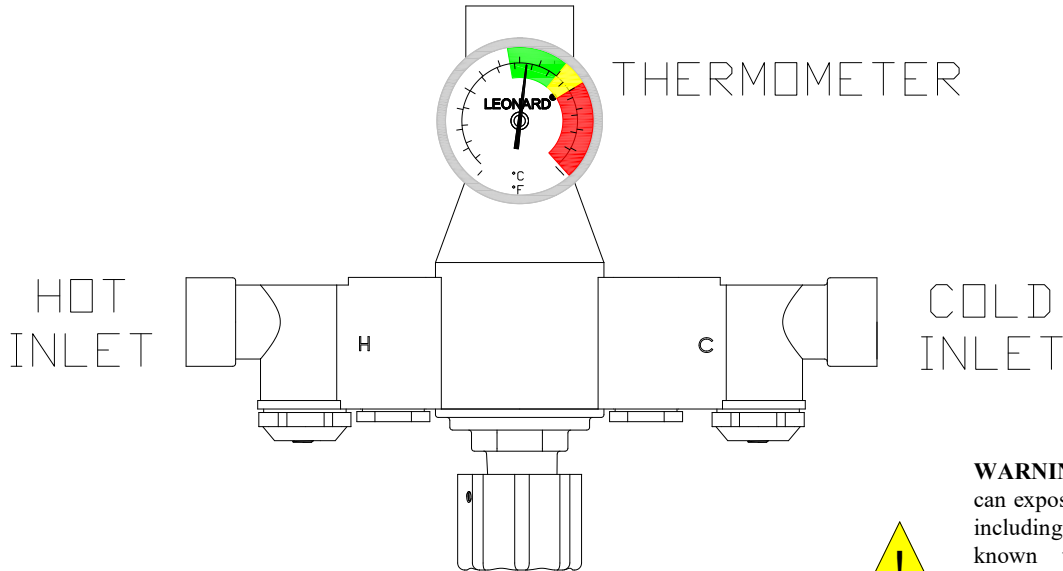


INSTALLATION SETUP AND OPERATING INSTRUCTIONS EMERGENCY MIXING VALVE SYSTEM EXL-800-LF

Compliance.....ANSI Z 358.1

EXL-800-LF



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

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. The installation / field adjustment of the valve are the responsibility of the installer and shall be carried out in accordance with the instructions with this O&M. 2. Valve should be installed at a location where it can easily be cleaned, adjusted or repaired. 3. The mixing valve has integral checkstops. | <ol style="list-style-type: none"> 4. The inlets are clearly marked on the valve body casting. Connect the hot water into the inlet marked "H" and cold water into the inlet marked "C". The unit will NOT work properly if the inlets are not piped properly. 5. 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. |
|---|---|

NOTE: It may be necessary to recirculate the tempered water to the emergency fixture should the piping be exposed to excessive hot or cold conditions. Consult factory for proper piping.

IMPORTANT! These systems are designed to provide mixed water from 60 to 90°F (15 to 32°C) for emergency fixture applications only. Call Leonard for systems designed to operate at temperatures outside of this range.

REMEMBER! THIS IS A CONTROL SYSTEM WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD MGR-1001).

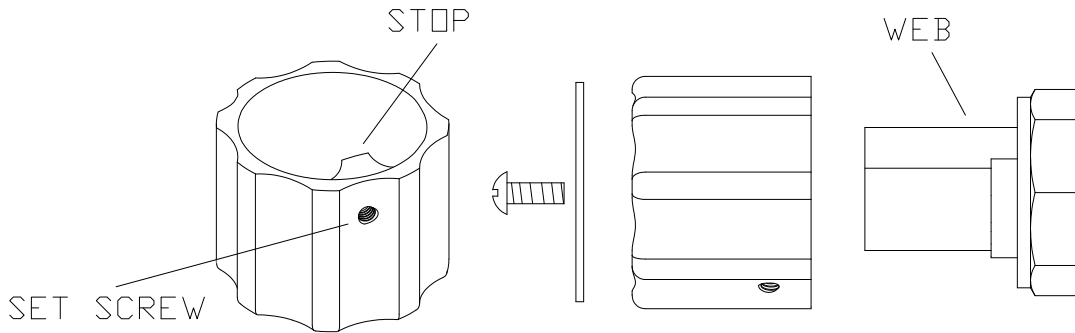
1360 Elmwood Avenue, Cranston, RI 02910 USA
 Phone: 401.461.1200 Fax: 401.941.5310
 Email: info@leonardvalve.com
 Web Site: <http://www.leonardvalve.com>

ADJUSTMENT AND SERVICE

Leonard Type EXL 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 and ANSI Z358.1).

TO RESET ADJUSTABLE HIGH TEMPERATURE LIMIT STOP:



1. Remove screw in center of handle, remove handle.
2. Turn emergency fixture on.
3. Replace handle on stem and turn stem until desired maximum temperature is reached.
4. Remove handle.
5. Replace handle so that the "stop" inside the handle is up against the "web" on the valve cover, handle should not be able to be turned any "hotter".
6. Replace handle screw, tighten set screw if desired.

WARNING

WARNING! This Thermostatic Mixing Valve has an adjustable high temperature limit stop which must be checked. If temperature is too high, the installer **MUST RESET** this stop immediately. Always check the temperature of the mixed water when the lever handle is turned to full **HOT**. Excessively hot water is **DANGEROUS AND MAY CAUSE SCALDING!**

The high temperature limit stop is factory set at approximately 90°F (32°C) with an incoming hot water supply temperature of 135°F (57°C). If the incoming hot water on the job is higher than 135°F, the valve when turned to full hot will deliver water in excess of 90°F (32°C) and the high temperature limit stop **MUST BE RESET BY THE INSTALLER.**

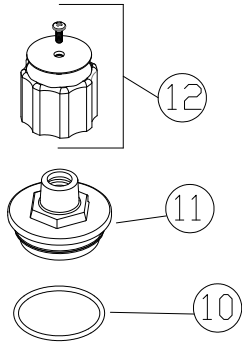
INFORMATION / INSTRUCTIONS

- 1" female NPT inlets and 1-1/4" female NPT outlet
- Maximum Operating Pressure 125PSI (860 KPA)
- Outlet temperature range from 60 to 90°F (15 to 32°C) for drench / eye / eye/face wash applications only
- Hot water inlet temperature range is 120 to 180°F (49 to 82°C)
- Cold water inlet temperature range is 33 to 75°F (.5 to 24°C)
- Installer needs to verify that no single emergency fixture supplied by this device has a minimum flow rate less than 3.0 GPM (11.4 L/M)
- Valve must be accessible for testing, adjustment and/or maintenance in its installed position
- If shut-off valves are installed for maintenance purposes, provisions must be made to prevent unauthorized shut-off

REMEMBER! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS. (SEE MAINTENANCE GUIDE AND RECORD, MGR-1001).

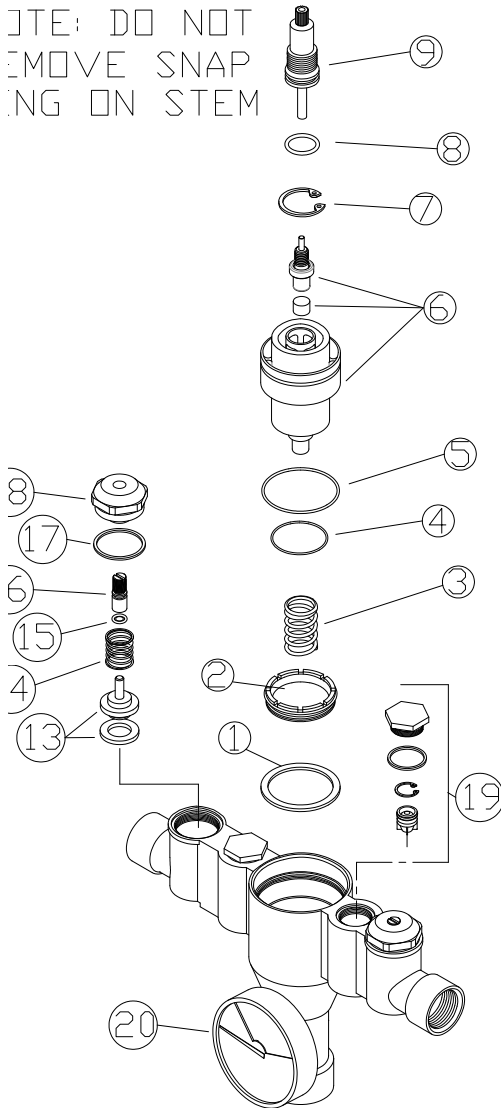
TROUBLESHOOTING INSTRUCTIONS

- Leak from stem, cover or between body and cover
 - replace o-rings with
KIT 1/EXL800



- Water crossing over from hot to cold or cold to hot
 - Clean checkstops, if that does not fix issue repair checkstops with
KIT 4/EXL800 (kit includes parts for both left and right checkstops)

NOTE: DO NOT REMOVE SNAPPING RING ON STEM

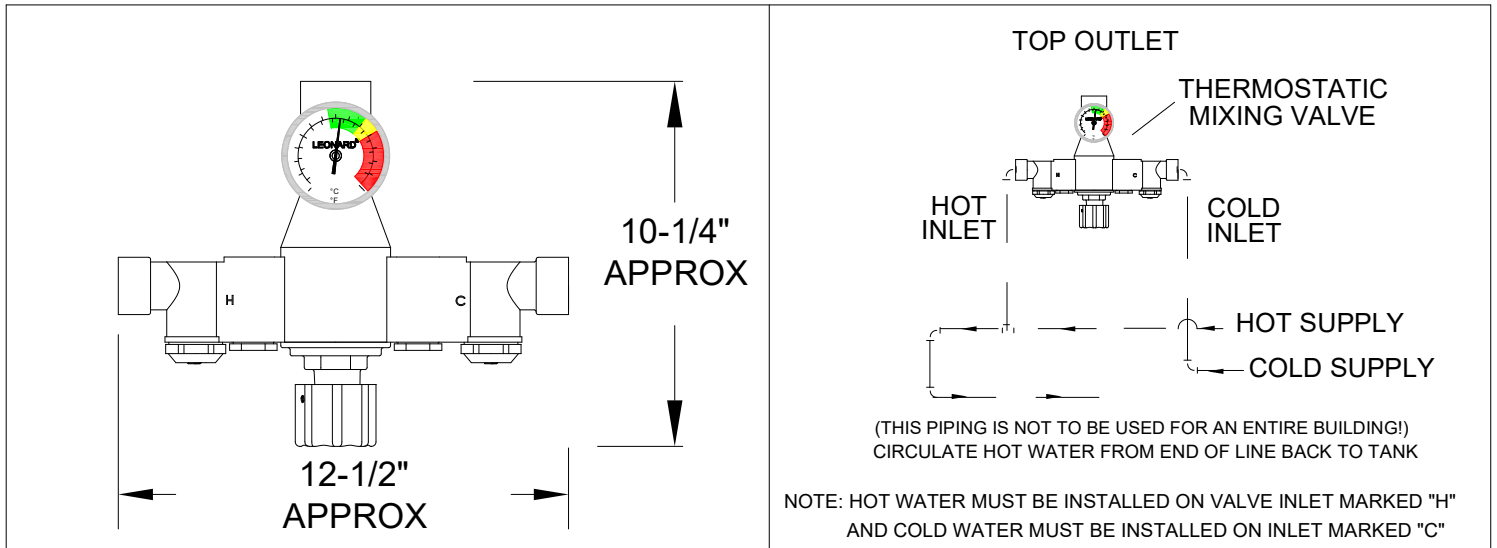


- Valve outlet temperature is too hot or cold and cannot be adjusted
 - Clean valve interior, if that does not fix issue repair valve with
KIT R/EXL800

KIT #	TYPE KIT	INCLUDES
KIT 1/EXL800	O-RING KIT	1, 4, 5, 8, 10
KIT R/EXL800	REPAIR KIT	1 THRU 10
KIT 4/EXL800	CHECK	13 THRU 19

ITEM #	DESCRIPTION	QTY.	PART # / KIT #
1	SHUT OFF DISK	1	KIT 1/EXL800, KIT R/EXL800
2	LOCKING RING	1	KIT R/EXL800
3	RETURN SPRING	1	KIT R/EXL800
4	O-RING, SHUTTLE, LOWER	1	KIT 1/EXL800, KIT R/EXL800
5	O-RING, SHUTTLE, UPPER	1	KIT 1/EXL800, KIT R/EXL800
6	SHUTTLE ASSEMBLY	1	KIT R/EXL800
7	SNAP RING, COVER	1	KIT R/EXL800
8	O-RING, STEM	1	KIT 1/EXL800, KIT R/EXL800
9	STEM	1	KIT R/EXL800
10	O-RING, COVER	1	KIT 1/EXL800, KIT R/EXL800
11	COVER	1	8504
12	KNOB ASSEMBLY	1	852700
13	LOWER STEM & PACKING	2	KIT 4/EXL800
14	SPRING,CHECK	2	KIT 4/EXL800
15	O-RING, UPPER STEM	2	KIT 4/EXL800
16	STEM, UPPER CHECK	2	KIT 4/EXL800
17	PACKING, BONNET	2	KIT 4/EXL800
18	BONNET	2	KIT 4/EXL800
19	BYPASS ASSEMBLY	2	KIT 4/EXL800
20	THERMOMETER	1	2129

EXL-800-LF



CAUTION! It may be necessary to recirculate the tempered water to the eye/face wash should the piping be exposed to excessive hot or cold conditions. See page 5 for piping for a tepid recirculation loop.

FLOW CAPACITIES

MODEL	IN	OUT	MINIMUM FLOW (GPM) L/MIN	INTERNAL COLD WATER BY-PASS AT 30 PSI DROP	PRESSURE DROP									PSI BAR
					5	10	15	20	25	30	35	40	45	
EXL-800-LF	1"	1-1/4"	3	20	21	29	35	41	46	51	56	59	61	GPM
			11.4	75.7	79	110	132	155	174	193	212	223	231	L/MIN
MAXIMUM FLOW CAPACITY														

Flow rate with cold water shut-off, less than .2 GPM (.75 L/M)

The Emergency drench / eye/face wash Mixing Valve shall control and maintain the temperature of the water to the station. Unit shall be self contained and include a thermostatic water mixing valve, a dial thermometer on the outlet, checkstops, unit set for 85°F (29°C) and a maximum temperature of 90°F (32°C). Unit must be able to be set to the correct temperature for the specific contaminant but must be locked in place to prevent changing of the temperature by accident. Unit must be checked weekly for performance in conjunction with the requirements of ANSI Z358.1.

WARNING! IT IS THE RESPONSIBILITY OF THE SPECIFIER TO DETERMINE THE DELIVERED WATER TEMPERATURE TO EACH SAFETY FIXTURE. A COMFORTABLE RANGE IS 60°F TO 90°F (15° TO 32°C). IN CIRCUMSTANCES WHERE A CHEMICAL REACTION IS ACCELERATED BY WATER TEMPERATURE, A MEDICAL ADVISOR SHOULD BE CONSULTED FOR THE OPTIMUM TEMPERATURE FOR EACH APPLICATION.

Specifications are subject to change without notice!

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 and DO NOT OVERSIZE. Minimum flow must be no less than indicated.



1360 Elmwood Avenue, Cranston, RI 02910 USA

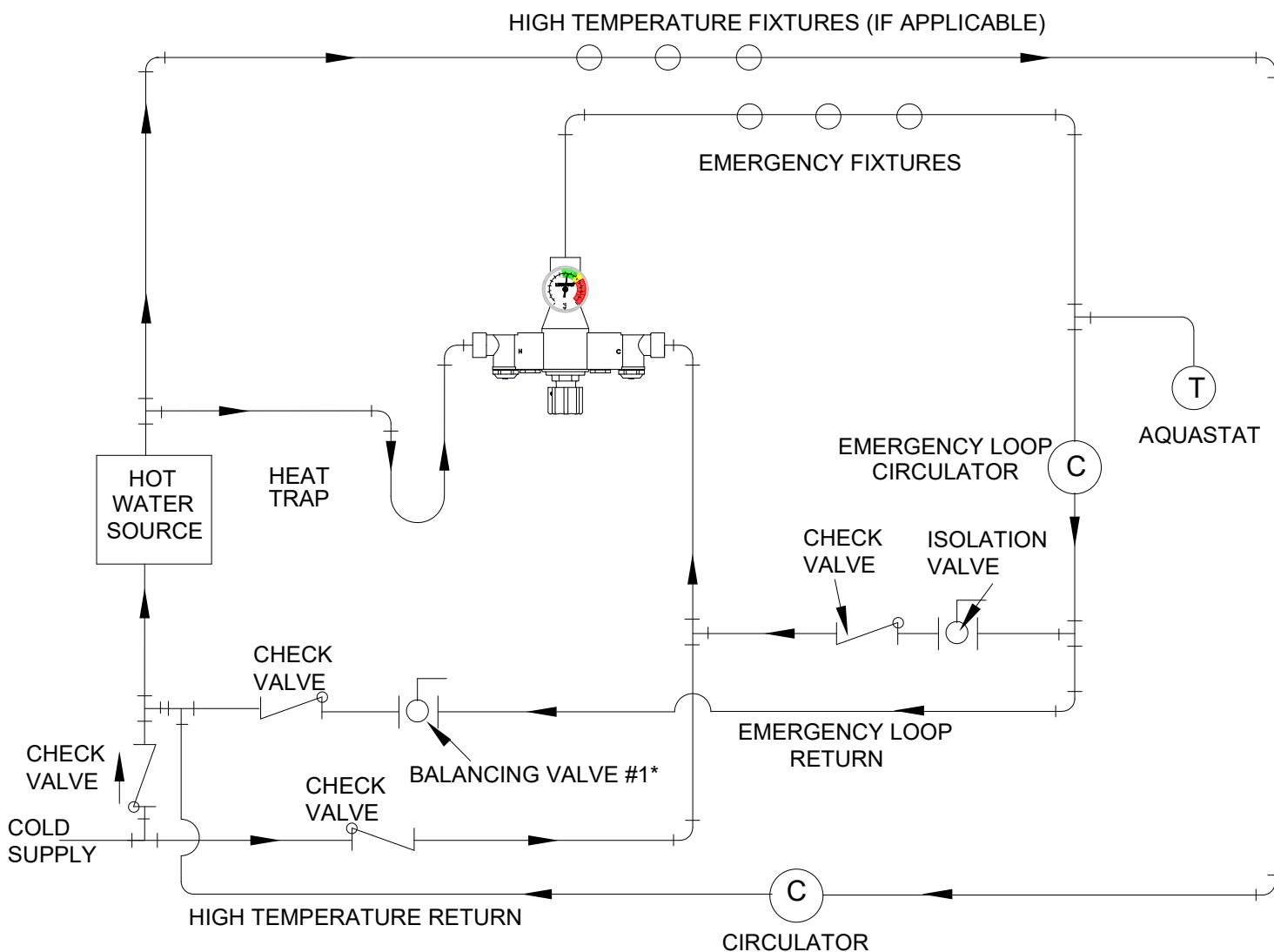
Phone: 401.461.1200 Fax: 401.941.5310

Email: info@leonardvalve.com

Web Site: <http://www.leonardvalve.com>

REQUIRED METHOD OF PIPING FOR A TEPID EMERGENCY RECIRCULATION LOOP

CAUTION: THIS PIPING METHOD IS SPECIFIC TO A THERMOSTATIC MIXING VALVE BEING USED FOR EMERGENCY DRENCH APPLICATIONS. SAFETY IS OF THE UTMOST CONCERN, AND ADJUSTMENTS TO BALANCE THE RECIRCULATION LOOP MUST BE DONE WITH CARE AND DILIGENCE. IMPROPER ADJUSTMENTS MAY RESULT IN INJURY OR DEATH.



*** WARNING:** BALANCING VALVE #1 MUST BE FIELD ADJUSTED, IF NOT SET PROPERLY LOOP TEMPERATURE CAN REACH TANK TEMPERATURE AND MAY RESULT IN INJURY OR DEATH TO THE EMERGENCY EQUIPMENT USER, SEE SET-UP BELOW.

PROCEDURE TO BALANCE CIRCULATION SYSTEM

1. MAKE SURE NO WATER IS BEING DRAWN IN THE LOOP. OPEN BALANCING VALVE #1 ONLY APPROXIMATELY 5% (95% CLOSED) AND START CIRCULATOR.
2. OBSERVE TEMPERATURE UNTIL IT STABILIZES.
3. CLOSE BALANCING VALVE #1 SLIGHTLY IF TEMPERATURE IS TOO HOT, OR OPEN IT SLIGHTLY IF TEMPERATURE IS TOO COLD. ALLOW TEMPERATURE TO STABILIZE, REPEAT UNTIL DESIRED CIRCULATION TEMPERATURE IS SET.