LAWLER
MANUFACTURING CO., INC.

SUBMITTAL DATA SHEET

temperedwater.com
5330 East 25th St.
Indianapolis, IN 46218
Phone (317) 261-1212
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Neptune EMX 100 MS Electronic Mixing System Eng. No. 943610

Pressure Drop PSI		5	10	20	30
Valve	**Inlet Size**	**CAPACITY GPM**			
NEPTUNE EMX 100	1”	25.5	37	52	64

Minimum flowrate: 1/4 gpm when properly installed at or near the hot water source recirculating tempered water with a properly sized continuously operating recirculation pump. (5 gpm min per valve)

- 1” inlets and outlet
- Stainless Steel Construction
- ASSE 1017 and NSF 372 (lead free) listed
- Maximum operating pressure: 150 psi
- Controls water temperature to +/- 2°F when properly installed in a continuous recirculation system
- Low Load algorithm keeps temperature steady in low demand periods
- Fails “last position” during power failure
- Automatic Hot/Cold water shutoff upon cold/hot water inlet supply failure
- Recommended recirculation pipe size: 3/4” or greater
- System includes recirculation pump, circuit setting balancing valve, thermometers, ball valves, check valves, mounting strut and test connection
- Programmable high temperature alarm function
- Programmable set point range between 95°F to 180°F (Default set temperature 120°F)
- Control box supplied with 4 ft. 120 VAC power cord and NEMA 4 enclosure
- Modbus communication standard
- Easy integration into BMS system
- Operating Voltage: 24 VDC
- Simple user commissioning and setup
- Displays outlet temperature
- Removeable and serviceable thermocouple probe
- Factory Assembled and Tested
- Minimum hot water supply temperature: 2°F (1°C) above set point with equal incoming pressures

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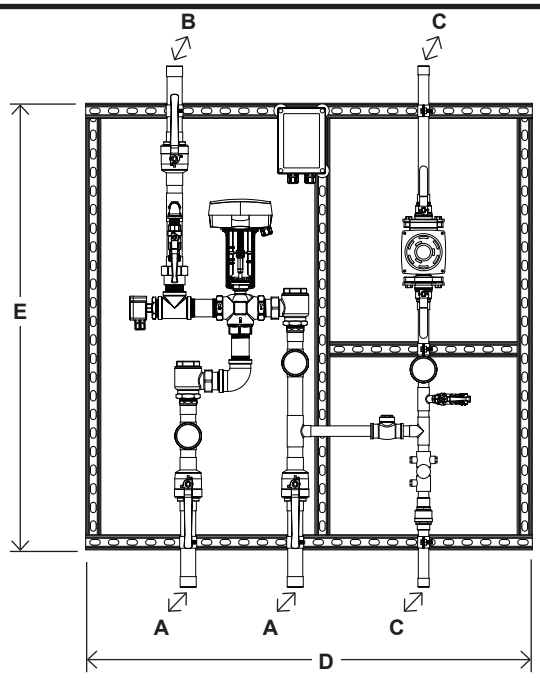

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Typical Installation

Install the mixing valve below the hot water tank or heater. If this is not possible, pipe in a heat trap as shown in Figure 1 with an approximate 2' drop.

Connect a tempered water return line as shown in Figure 1. This allows flow through both ports of the mixing valve during periods of no draw.

If a dual temperature system is used, a separate recirculating loop and pump are required to return high temperature hot water to the water heater. See Figure 2.

Install the water heater per manufacturer's instructions.

DIMENSIONS

Valve Number	A	N.P.T.	B	N.P.T.	C	N.P.T.	D	E
EMX 100		1"		1"		3/4"	49"	49"

Dimensions are for reference purposes only. For rough-in dimensions please refer to Lawler's Revit/BIM models found at temperedwater.com.

Figure 1

When used in a single temperature recirculating system

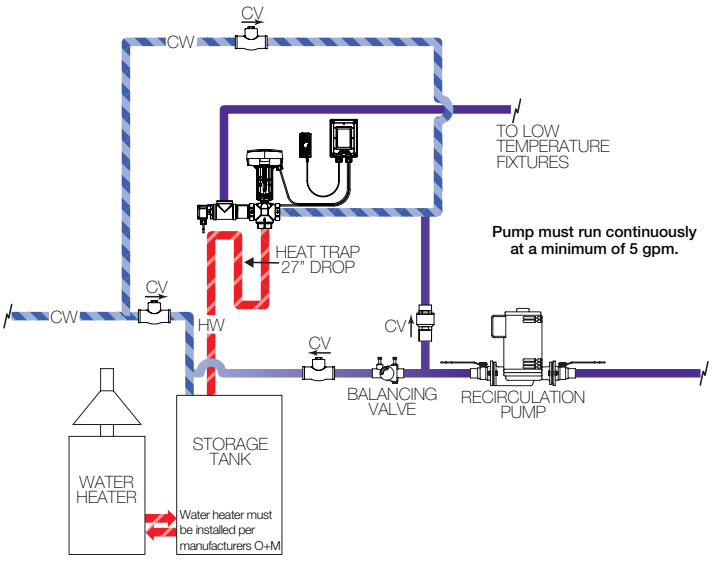

Figure 2

When used in a dual temperature recirculating system