COMPLETE WATER TEMPERATURE CONTROL STATION
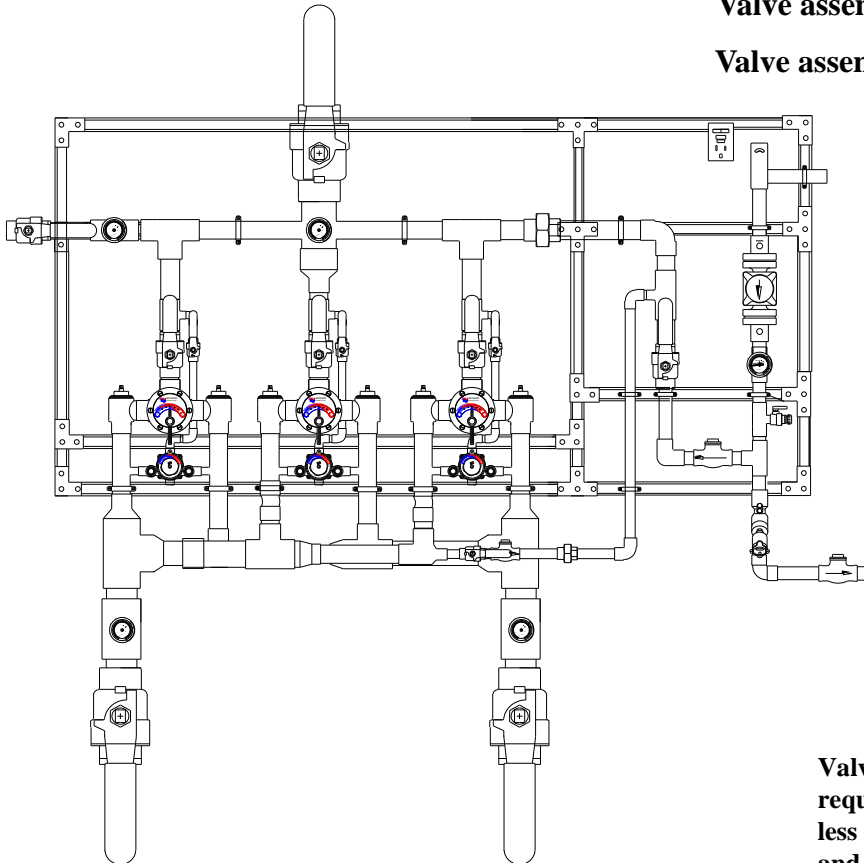
ECO-MIX ™

MEGATRON® MODEL 10NB-LF

- **4" HOT & COLD INLETS**
- **4" MIXED OUTLET**
- **2" RETURN PIPING**

Valve assemblies are ASSE 1017 listed

Valve assemblies are CSA B125.3-12 listed

See page 2 for Specification detail

See page 3 for Drawing detail

See page 4 for Flow capacity chart

See page 5 for Options

Valve assembly is certified to meet Low-Lead requirements of wetted surface area containing less than 0.25% lead by weight. All other fittings and components, the sum total of which comprise the wetted surface of this product contains less than one quarter of one percent of lead by weight.

⚠️ **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

Product is non-cancellable and non-returnable from date from order with factory. Signed submittal required with purchase order.

Engineer's Approval	Job # _____
	Arch/Eng. _____
	Contractor _____

Note: The models shown represent Leonard Products which are believed to be equivalent in type and function to items specified. Leonard Valve Company is not responsible for errors or omissions due to differences in interpretations of information provided.

LEONARD®
WATER TEMPERATURE CONTROLS

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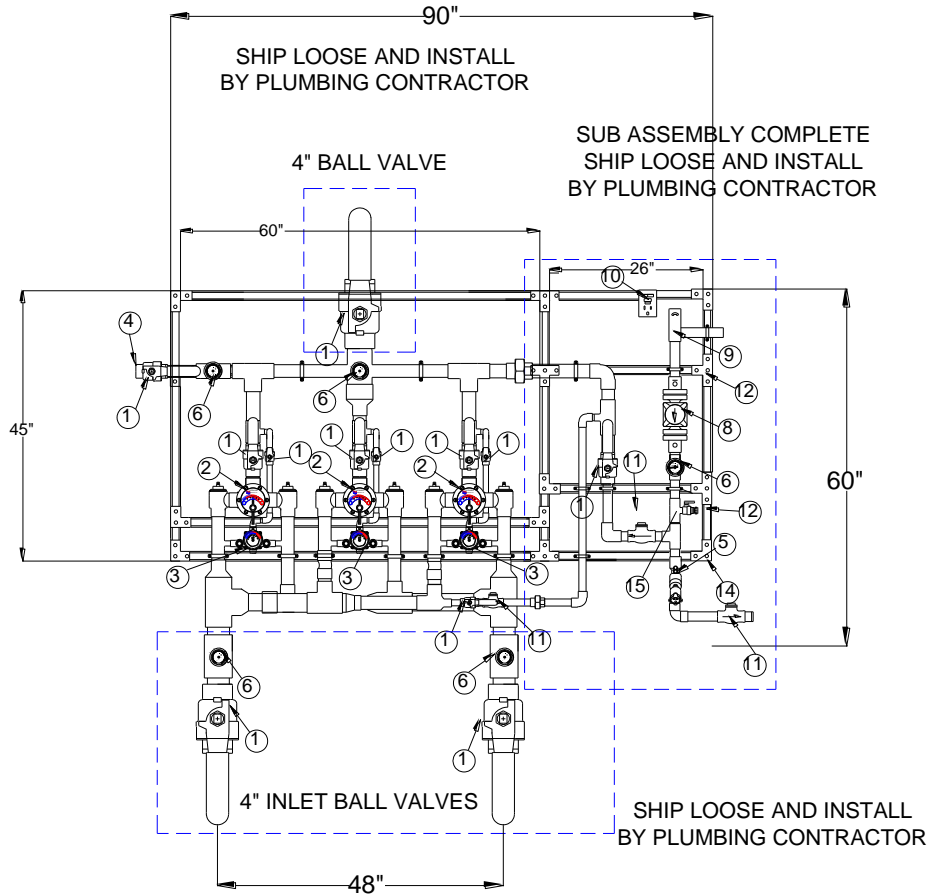**Web Site: http://www.leonardvalve.com**

MEGATRON® MODEL 10NB-LF

LEONARD MEGATRON® MODEL 10NB-LF Complete Water Temperature Control Station to include:

- 4" bottom inlet connections (copper tube)
- 4" top outlet connection (copper tube)
- Large thermostatic water mixing valves with DURA-trol® solid bimetal thermostat (with Extended 7 Year Limited Warranty) directly linked to hot and cold valve porting, adjustable high temperature limit stop set for 120°F (49°C)*, color-coded dial: C-H, locking temperature regulator, inlet union angle strainer checkstops
- Full port ball valve, pressure gauge on mixed water outlet piping
- Small thermostatic water mixing valves with DURA-trol® solid bimetal thermostat (with Extended 7 Year Limited Warranty) directly linked to hot and cold valve porting, adjustable high temperature limit stop set for 120°F (49°C)*, color-coded dial: Cold-Hot, integral checkstops on inlets.
- Full port ball valve on outlet of small mixing valve
- Dial thermometer (range:0 to 140°F, -10 to 60°C) on mixed water outlet of the system.
- Outlet Test Connection with ball valve and 1¼" connection.
- Full port ball valve mounted downstream of test connection on mixed water outlet of the system
- Inlet piping manifold with full port ball valves and dial thermometers (20 to 240°F, -7 to 116°C on hot supply, 0 to 140°F, -10 to 60°C on cold supply) on hot and cold supply inlets
- Subassembly with return piping, 2", with aquastat, circulator, dial thermometer (0 to 140°F, -10 to 60°C), balancing valve (with positive shutoff) to balance system, and check valve
- Aquastat with temperature differential of 5 to 30°F (3 to 17°C)
- GFCI* switch. The GFCI switch will be used to turn the circulator on or off for setup. *Ground Fault Interrupter
- Bypass piping, 2", with check valve and isolation ball valve to connect to 2" method # 5 piping
- Maximum operating pressure: 125 PSIG (860KPA)
- System mounted on 2 separate struts, galvanized. Struts shall be assembled with three hole flat angle plate on corners, four hole tee plates or two hole flat plate connectors on all other support pieces using 3/8" grip lock nuts and 3/8"x 1" hex head cap screws, washers and lock washers.
- All electrical connections to be completed by Electrical Contractor
- Standard pump is B&G PL-55B

MEGATRON® MODEL 10NB-LF
2" RETURN PIPING METHOD #5

SHIP LOOSE AND INSTALL
BY PLUMBING CONTRACTOR

SUB ASSEMBLY COMPLETE
SHIP LOOSE AND INSTALL
BY PLUMBING CONTRACTOR

4" BALL VALVE

4" INLET BALL VALVES

SHIP LOOSE AND INSTALL
BY PLUMBING CONTRACTOR

Dimensions may vary with the addition of options see page #5

LEGEND

1. Full port ball valve	6. Dial thermometer	11. Flapper check
2. Large TM mixing valve	7. Pressure gauge	12. Galvanized Strut
3. Small TM mixing valve	8. Circulator-As specified by Engineer	13. Tee bracket
4. Test connection	9. Aquastat	14. Corner Bracket
5. Balancing Valve	10. Circulator power switch	15. Boiler Drain

MEGATRON® MODEL 10NB-LF
Flow Capacity

TRIPLE FLOWRATE WHEN ALL VALVES ARE OPERATING
SINGLE VALVE ASSEMBLY FLOWRATES SHOWN
(MINIMUM FLOW RATE HAS BEEN TRIPLED TO 3 GPM)

MINIMUM FLOW (GPM)	SYSTEM PRESSURE DROP (PSIG)										
	5	(10)	(15)	(20)	25	30	35	40	45	50	PSI
(l/min)	.3	.7	.97	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
3.0	78	113	129	145	163	172	188	197	214	226	GPM
11.4	295	428	488	549	617	651	712	746	810	856	l/min

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.

Note: The High Low model must be selected based upon the following:

Maximum system demand for mixed water

System pressure drop*

Designer's estimated minimum mixed water flow requirement

*System pressure drop= the pressure available at the inlet of the mixing valve unit minus the pressure required to operate the farthest fixture, i, e,. Shower valves, in the building.
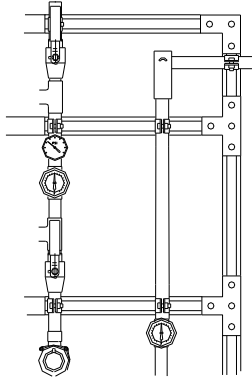
WIRING DIAGRAM
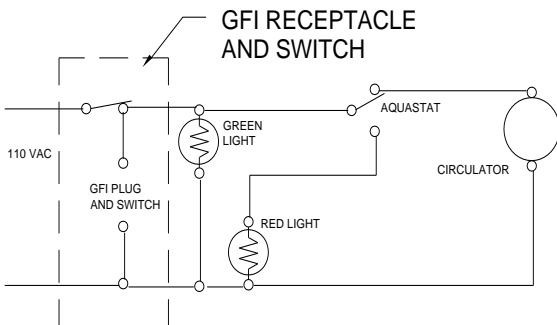
OPTIONS

LC

Megatron® furnished without a circulator. Tie return line here

OPTIONS *

___**LC** Less circulator
___**265-1** Timer, Analog, 24 hour
___**265-3** Timer, Digital, 7 day
___**HOA** HOA switch

OPTIONS (shown on next page) *

___**AL** Audio Visual Alarm
___**RDU** Remote Display Unit
___**LMS-188-4P** Leonard
                    Monitoring system
___**LMS-188-4P-BMS** with BMS
___**User chosen pump** (specify on
                    next page)

* Any option chosen will alter pricing

LEONARD
WATER TEMPERATURE CONTROLS

OPTION AL: Leonard Single Probe Digital Temperature Alarm

- Single Point Temperature Probe - Range: -148ºF to 212ºF Resolution: 1ºF
- User adjustable high & low set points and initial alarm delay period
- Audible & visual alarms
- Remote alarm contacts (SPDT) with adjustable relay delay period
- AL option replaces analog outlet dial thermometer with a single digital display

OPTION RDU: Leonard Remote Display Unit

- Activation by Primary Alarm's (pictured above) remote alarm contacts
- Alarm Delay Module with yellow, red, green LED indicators
- Recommended maximum distance from controller to RDU is 500'

OPTION LMS-188-4P: Leonard 4 Point Digital Monitoring with Alarm

- Four (4) Temperature Probes - Range: -148ºF to 212ºF Resolution: 1ºF
- User adjustable high & low set points and initial alarm delay period
- Audible & visual alarms
- Remote alarm contacts (SPDT) with adjustable relay delay period
- 10/100 Ethernet Connection
- Web Server Interface for Setup & Commissioning
- Unit can send an E-mail transmission of alarms for up to 8 contacts
- Unit can send an E-mail report daily with temperatures readings over the previous day
- LMS-188-4P option replaces analog dial thermometers with a single digital display for all 4 temperatures, incoming hot, incoming cold, outlet and return

OPTION LMS-188-4P-BMS: Leonard 4 Point Digital Monitoring
System with Alarm & Enhanced Protocol Communication Interface Module

Primary Alarm Box includes:
- Same as above

ProtoNode Accessory Box includes:
- Interface Module to connect LMS-188-4P-BMS to Building Management System (-BMS) Network, Complete Protocol Package
- Supported protocols include BACnet MS/TP, BACnet IP, Modbus RTU, Modbus TCP/IP, SNMP, JC N2, available simply by selecting the proper DIP switches
- Cat 5 Ethernet Cable not included
- LMS-188-4P-BMS option replaces analog dial thermometers with a single digital display for all 4 temperatures, incoming hot, incoming cold, outlet and return

_____**OPTION**

USER CHOSEN PUMP

Standard pump is TACO 0013, if another manufacturer is preferred
please specify, but note that ANY change from standard pump will
result in a **PRICE INCREASE**