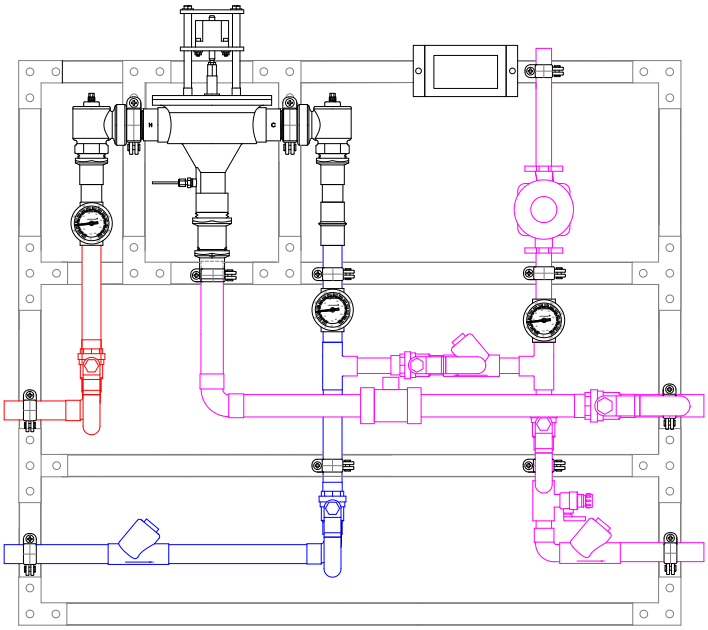
MEGATRON NEUTRON DIGITAL ELECTRONIC EMERGENCY MIXING VALVE

Submittal Data Sheet S-ENV-6100-LF-M
February, 2025

MEGATRON M-ENV-6100-LF

MEGATRON® MODEL M-ENV-6100-LF NEUTRON DIGITAL EMERGENCY CONTROL STATION



- Digital Electronic Emergency Mixing Valve
- 1-1/4" copper tubing inlets, 1-1/2" copper tubing outlet (32mm X 38mm)
- Valve controls at times of no use, 0.0 GPM**
- Maximum operating pressure: 125 PSIG (862 KPA)
- Controls water temperature to +/- 2°F in accordance with ASSE 1071
- Controls water temperature to +/- 2°F during times of low / no system demand
- Self-Balancing, do not need to adjust or balance recirculation
- Self-Cleaning, daily shuttle sweep keeps shuttle free of debris
- Automatic Hot Water shutoff upon cold water inlet supply failure
- Automatic cold water bypass of 40 GPM (in accordance with ASSE 1071) upon hot water inlet supply failure
- Alerts user when unit requires maintenance
- User programmable set point range between 65°F and 90°F, Displays outlet temperature
- Simple/intuitive user setup
- Reminder to test weekly as per ANSI Z358.1-2014 (ability to turn on / off)
- UL Listed control box and 120V plug in power supply with 6' cord
  - Option for Backup Uninterruptable Power Supply in the event of primary power loss w/ approx. two hours run time

STANDARD CONTROL BOX

NEW "ENHANCED FEATURE SET" CONTROL BOX

SEE SELECTABLE OPTIONS PAGE 2

****NOTE:** The valve will maintain temperature with 0.0 GPM flow from the emergency loop when properly installed near the hot water source with a continuously operating recirculation pump at minimum flow of 5 GPM.

Valve is ASSE 1071 Certified

Valve is CSA Certified

Valve electronics are UL Certified

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

This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

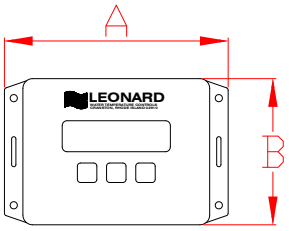
LEONARD®
WATER TEMPERATURE CONTROLS

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

CONTROLLER OPTIONS

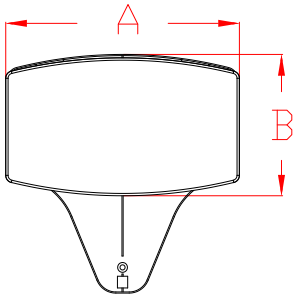
Standard Controller 1.0 Version

A = 6” **B** = 4”
Depth = 1-3/4”



Enhanced Controller 2.0, 2.5, 3.0 Versions

A = 8” **B** = 4-3/4”
Depth = 1-1/4”



STANDARD CONTROLLER:

_____ **1.0** – See PAGE 1 for info

ENHANCED CONTROLLER OPTIONS:

_____ **2.0** – Enhanced Proton Controller with Programable Disinfection Mode

Options:

_____**3T**– Three Additional Temperature Sensors for Monitoring of Inlet Hot, Inlet Cold, and Return Temperatures

_____ **REL** – 5 Relay Contacts that Switch during Alarm State

- Helpful for Remote Alerts Within Building to Assist Maintenance and Service Personnel
- 5 Unique States:
  - Loss of Power
  - Broken Temperature Probe
  - “Out of Range” Temperature (±10°F)
  - Motor Connectivity and Operation
  - Maintenance (Service Required) @ <90%Full travel

_____ **2.5** – Enhanced Proton Controller including all of 2.0 as well as BACnet MS/TP Connection which provides ability to serve up all data to BMS system

Options:

_____**3T** – Three Additional Temperature Sensors for Monitoring of Inlet Hot, Inlet Cold, and Return Temperatures

_____ **REL** – 5 Relay Contacts that Switch during Alarm State (as shown above)

_____ **3.0** – Enhanced Proton Controller including all of 2.5 as well as all items below as standard,

- WiFi – Wifi enabled
- 3T - 3 Additional Temperature Sensors for Monitoring of Inlet Hot, Inlet Cold and Return Temperatures
- REL - 5 Relay Contacts that Switch during Alarm State

Leonard Valve Company reserves the right of product, or design modifications without notice or obligation.

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LEONARD MEGATRON® MODEL M-ENV-6100-LF

Complete Digital Emergency Control Station

to include:

- 1-1/4” inlet connections (copper tube)
- 1-1/2” outlet connection (copper tube)
- 1” return connections (copper tube)
- Leonard Neutron Digitally Controlled Mixing Valve with simple two line LED display
- Leonard factory check valves and locking full port ball valves on inlet piping
- Outlet locking full port ball valve
- Return piping with 1” return, Taco 0034E PLUS electronic circulator, full port ball valves and check valves
- System mounted on 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
- Factory assembled and tested
- All electrical connections to be completed by Electrical Contractor

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.	

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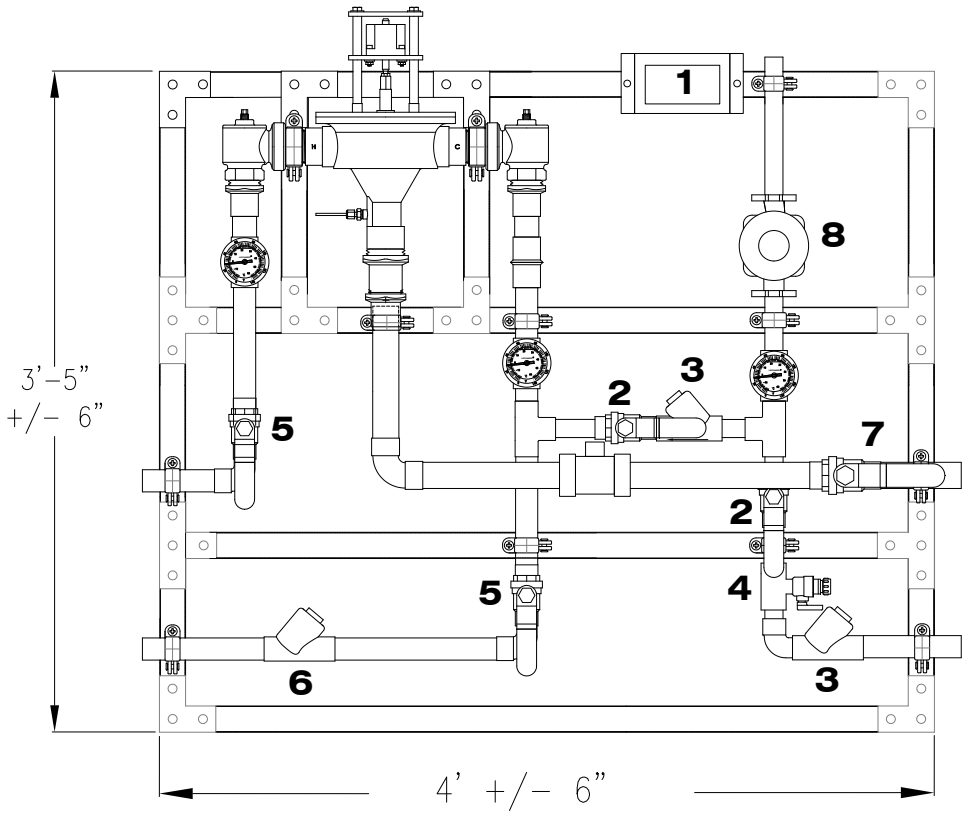
LEONARD MEGATRON® MODEL M-ENV-6100-LF DIGITAL EMERGENCY CONTROL STATION

***Image not to scale*, Dimensions will vary with any options**



1. **NEUTRON VALVE AND CONTROLS**
2. **1" FULL PORT BALL VALVE**
3. **1" CHECK VALVE**
4. **¾" TEST CONNECTION**
5. **1-1/4" LOCKING FULL PORT BALL VALVE**
6. **1-1/4" CHECK VALVE**
7. **1-1/2" LOCKING FULL PORT BALL VALVE**
8. **TACO 0034E PLUS CIRCULATOR**

NEUTRON VALVE CONTROL BOX

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LEONARD MEGATRON® MODEL M-ENV-6100-LF DIGITAL EMERGENCY CONTROL STATION

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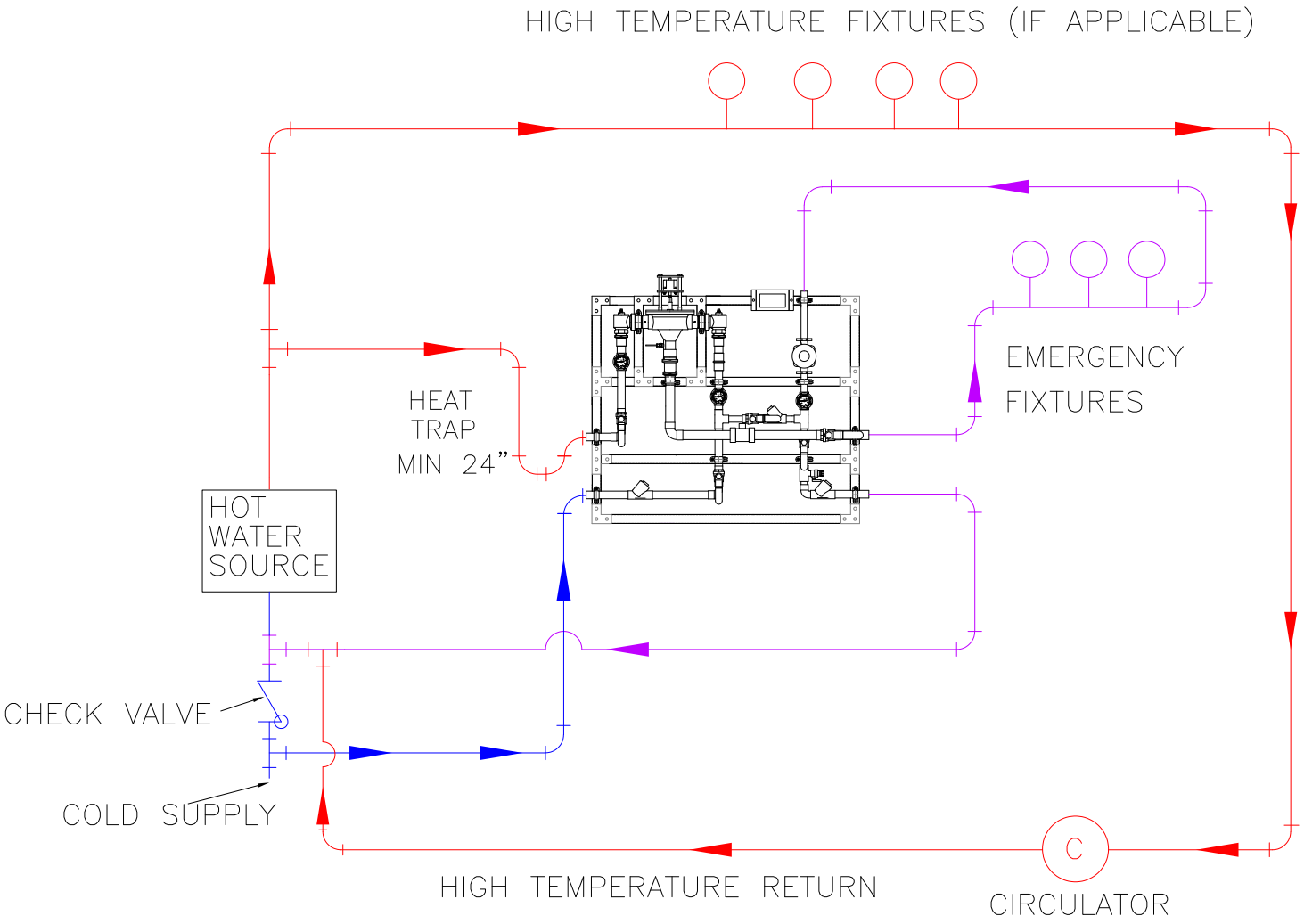

MINIMUM FLOW	PRESSURE DROP										
	5	(10)	(15)	(20)	25	30	35	40	45	50	PSI
	.3	.7	.97	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
3.0	30	40	47	52	57	60	66	71	76	80	GPM
11.4	114	151	178	197	216	227	250	269	288	303	l/min

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.

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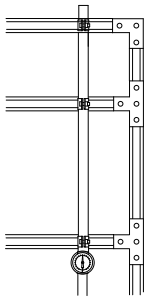
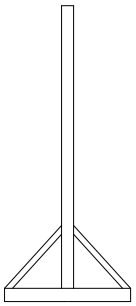
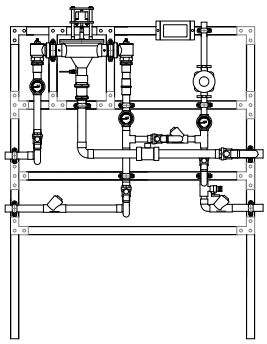
OPTIONS



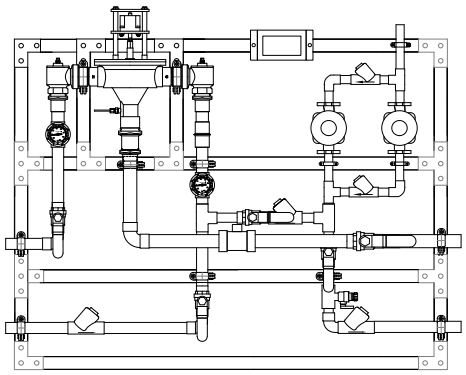
LC
Megatron® furnished without a circulator.



FM
Megatron® with 3 legs, 3 ½" feet and 45 degree braces front and back for mounting to floor in center of room.



FS
Megatron® with separate legs to floor to support the unit without hangers.



2 PUMPS R
Redundant recirculation pump

OPTIONS *

___**LC** Less circulator
___**FM** Floor mount
___**FS** Free standing
___**2 PUMP R** Redundant recirculator pump
___**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
___**SCO** Solenoid Control Option
___**BPS** Back up Power Supply
___**DA** Digital Aquastat
___**DG** Digital Gauges
___**User chosen pump** (specify on next page)

PIPING OPTIONS *

___**RP 1-1/4** 1-1/4" Return line size
___**RP 1-1/2** 1-1/2" Return line size

*** Any option chosen will alter pricing**

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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'

SCO: Solenoid Control Option

- For use with Alarm relay switch
- Galvanized box with dimensions 6" Wide x 6" High x 4" Deep
- Solid state relay and terminal strip mounted and wired
- UL listed 100-240VAC power supply with 10' cord
- For either normally open or normally closed operation
- For use with 24-240 VAC solenoids only

BPS: Backup Power Supply

- Uninterruptable Power Supply with up to 2 hours run time in case of primary power loss

OPTION DG: Digital Gauges

- Replaces all analog gauges with digital gauges, inlet hot, inlet cold, outlet and return temperature

OPTION DA: Digital Aquastat

- Electronic digital aquastat with Nema 1 case and SPDT Relay Output

_____ **OPTION**

USER CHOSEN PUMP

Standard pump is TACO 0034E PLUS, if another manufacturer is preferred please specify, but note that ANY change from standard pump will result in a **PRICE INCREASE**

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