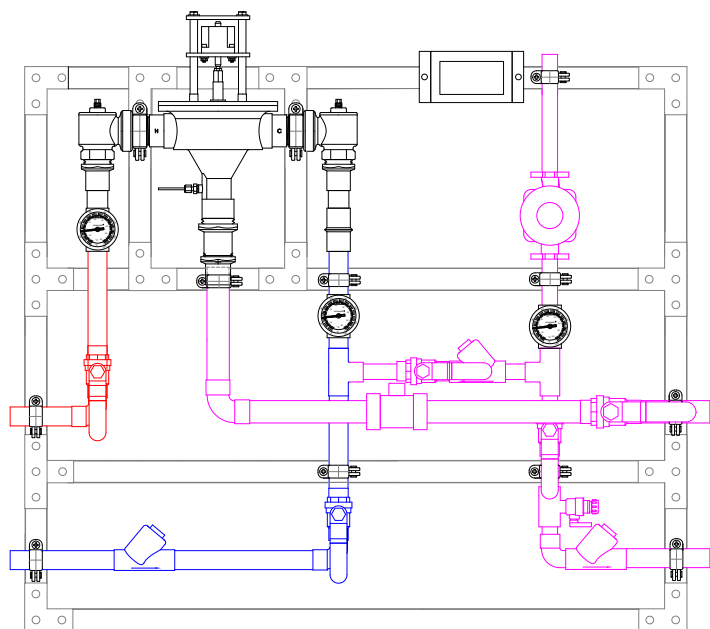


# MEGATRON NEUTRON DIGITAL ELECTRONIC EMERGENCY MIXING VALVE

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



STANDARD CONTROL BOX



NEW "ENHANCED FEATURE SET" CONTROL BOX  
SEE SELECTABLE OPTIONS PAGE 2



**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](http://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

- 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

**\*\*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



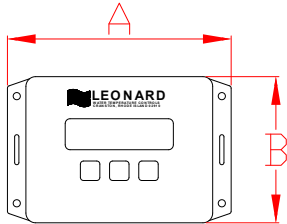
1360 Elmwood Avenue, Cranston, RI 02910 USA  
Phone: 401.461.1200 Fax: 401.941.5310  
Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)  
Web Site: <http://www.leonardvalve.com>

# CONTROLLER OPTIONS

## Standard Controller 1.0 Version



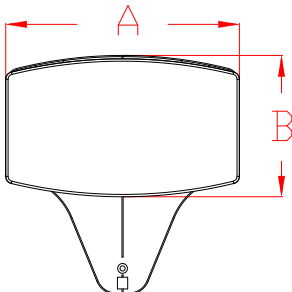
A = 6"    B = 4"  
Depth = 1-3/4"



## 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 Neutron Controller with Programmable 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 ( $\pm 10^{\circ}\text{F}$ )
  - Motor Connectivity and Operation
  - Maintenance (Service Required) @ <90% Full travel

\_\_\_\_\_ 2.5 – Enhanced Neutron 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 Neutron 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.



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)

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

# 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

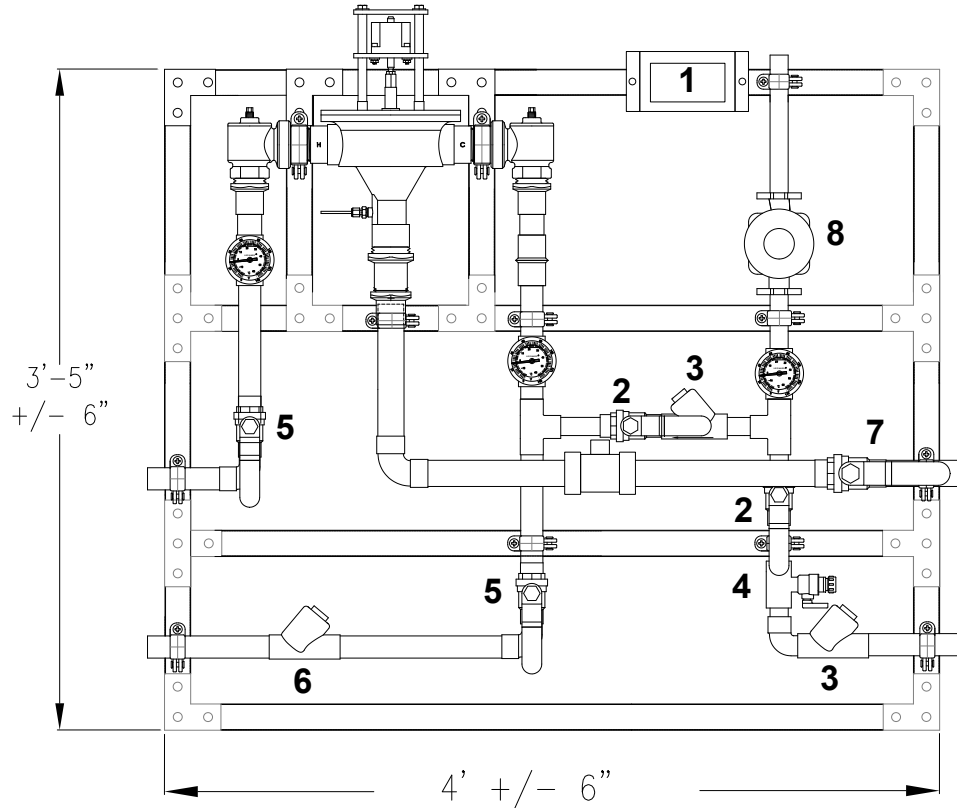
<b>Engineer's Approval</b>	<b>Job #</b> _____  <b>Arch/Eng.</b> _____  <b>Contractor</b> _____
<small>Note: The models shown represent Leonard Products which are believed to be equivalent in type and function to items specified. Leonard Valve Company is not responsible for errors or omissions due to differences in interpretations of information provided.</small>	



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

# 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. 3/4" 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



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

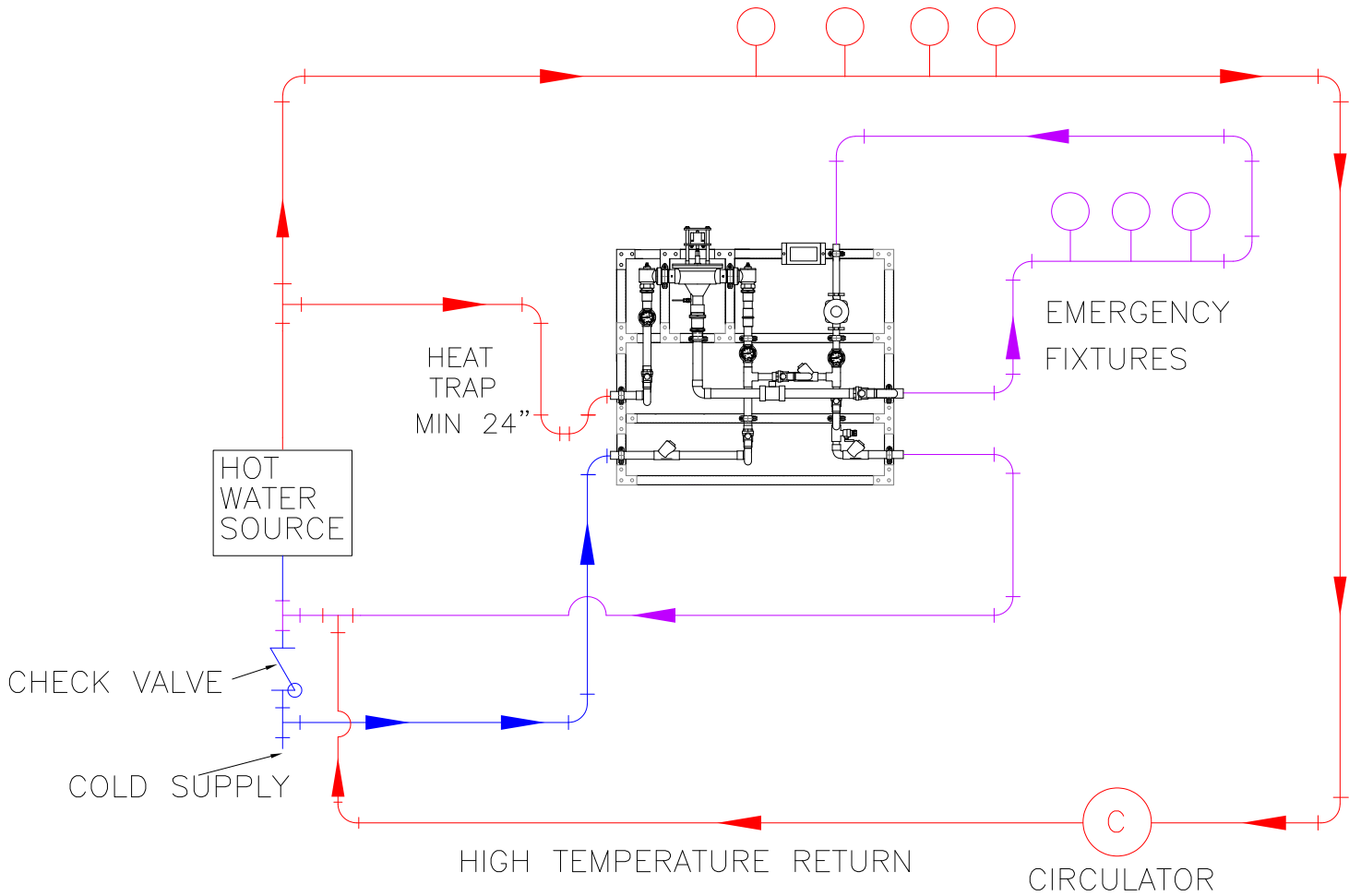
Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)

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

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

\*Image not to scale\*

HIGH TEMPERATURE FIXTURES (IF APPLICABLE)



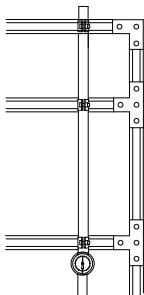
MINIMUM FLOW	PRESSURE DROP										
	5	10	15	20	25	30	35	40	45	50	PSI
	.3	.7	.97	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
3.0	30	40	47	52	57	60	66	71	76	80	GPM
11.4	114	151	178	197	216	227	250	269	288	303	l/min

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.



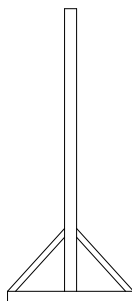
1360 Elmwood Avenue, Cranston, RI 02910 USA  
Phone: 401.461.1200 Fax: 401.941.5310  
Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)  
Web Site: <http://www.leonardvalve.com>

# OPTIONS



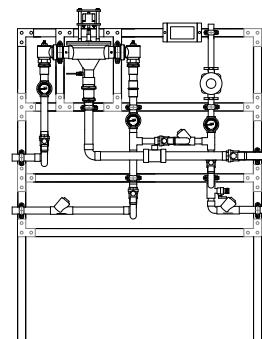
## LC

Megatron® furnished without a circulator.



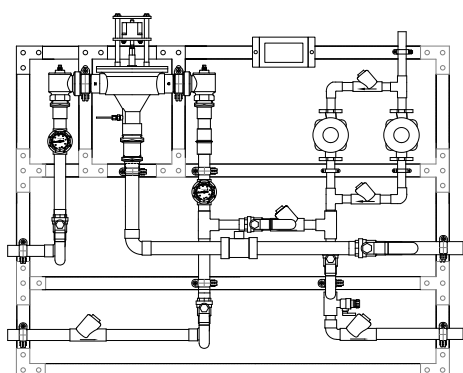
## FM

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**



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)

WEB: <http://www.leonardvalve.com>



### OPTION AL: Leonard Single Probe Digital Temperature Alarm

- Single Point Temperature Probe - Range: -148°F to 212°F Resolution: 1°F
- 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**

1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)

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