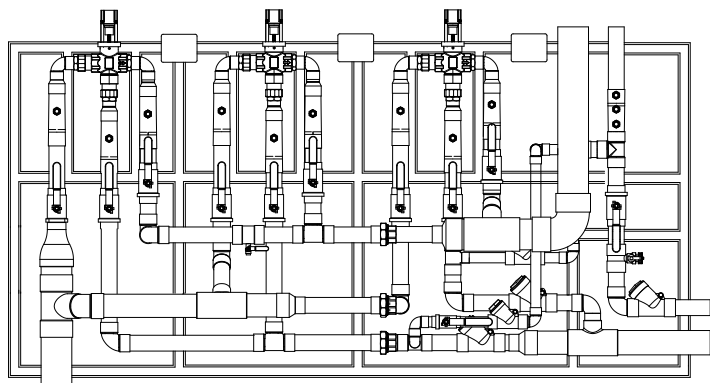


# PROTON PLUS MEGATRON STATION



- Digital Mixing Valve with inlets, outlet and return piping
- Outlet sizes from 4" to 6"
- Stainless steel construction of valve body and all valve parts contacted by water
- Valve controls at times of no use, 0.0 GPM\*
- Maximum operating pressure: 125 PSIG (860 KPA)
- Controls water temperature to +/- 2°F in accordance with ASSE 1017
- 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 / Cold Water shutoff upon cold / hot water inlet supply failure
- Alerts user when unit requires maintenance
- User programmable set point range between 95°F and 160°F, Displays outlet temperature
- Simple / intuitive user commissioning and setup
- ETL Listed control box and 120V plug in power supply with 6' cord, optional BPS
- Suitable for indoor use only
- Not for use in process applications nor intended to deliver final temperature control
- Primary use as an ASSE 1017 Distribution Valve / Master Mixer in a Domestic Hot Water System when combined with proper downstream protection devices approved to ASSE 1016, 1069, 1070 or 1071

**STANDARD CONTROL BOX**  
(see page 2 for more information)



**\*NOTE:** The valve will maintain temperature with 0.0 GPM flow from the domestic hot water loop when properly installed near the hot water source with a continuously operating recirculation pump, see minimum flow for minimum pump flow rate

This product meets Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

Valve is ASSE 1017 Certified



Valve is CUPC Certified



Valve is NSF 61 Compliant / pending

Valve electronics are ETL Certified



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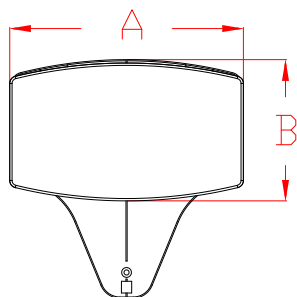
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# PROTON PLUS CONTROLLER



**A = 8"      B = 4-3/4"**  
**Depth = 1-1/4"**



## Enhanced Proton Plus Controller includes

- BACnet MS/TP or Modbus RTU Connection which provides ability to serve up all data to BMS system
- Wi-Fi – Wi-Fi enabled
- Programable Disinfection Mode
- Megatron Assemblies include the 3T standard, Three Additional Temperature Sensors for Monitoring of Inlet Hot, Inlet Cold, and Return Temperatures

## Options:

      REL – 5 Relay Contacts that Switch during Alarm State

- Helpful for Remote Alerts Within Building to Assist Maintenance and Service Personnel
- 5 Unique States:
  - Maintenance (Service Required)
  - “Out of Range” Temperature ( $\pm 10^{\circ}\text{F}$ )
  - Broken Temperature Probe
  - Motor Connectivity and Operation
  - Loss of Power

# PROTON PLUS MEGATRON STATION

Megatron Station to include:

- Inlets, outlet and return connections (copper tube)
- Leonard Proton Digitally Controlled Mixing Valve with simple two line LED display
- Inlet check valves, return line check valves
- Unions on inlets and outlet of mixing valve
- Inlets, outlet and return ball valves
- 3T, Three Additional Temperature Sensors for Monitoring of Inlet Hot, Inlet Cold, and Return Temperatures
- Outlet Test Connection with ball valve and 3/4" hose connection
- Subassembly with return piping, full port ball valves and check valves
- System mounted on struts, galvanized. Struts shall be assembled with three hole flat angle plate 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



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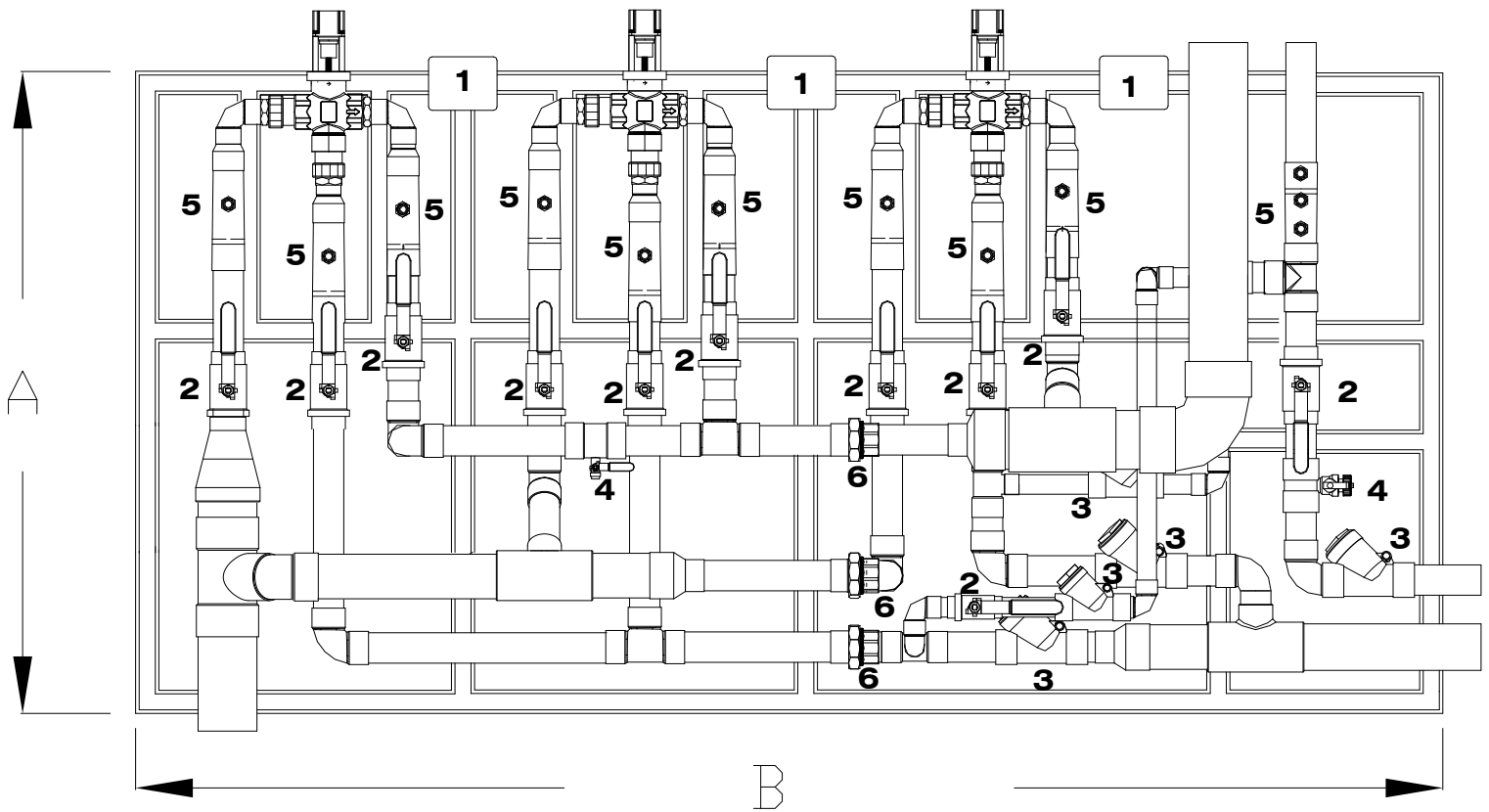
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# PROTON PLUS MEGATRON STATION

## DIGITAL TEMPERATURE CONTROL STATION

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



1. PROTON PLUS VALVE AND CONTROLS
2. FULL PORT BALL VALVE
3. CHECK VALVE

4. 3/4" TEST CONNECTION
5. 3T TEMPERATURE SENSORS
6. UNIONS

| MODEL #       | A (+/-12") | B (+/-12") |
|---------------|------------|------------|
| PPV150LF3PS-M | 46"        | 80"        |
| PPV200LF3PS-M | 48"        | 85"        |



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# PROTON PLUS MEGATRON STATION

| ✓ | MODEL #       | INLETS | OUTLET | RETURN |
|---|---------------|--------|--------|--------|
|   | PPV150LF3PS-M | 4"     | 4"     | 2"     |
|   | PPV200LF3PS-M | 6"     | 6"     | 3"     |

|                                                                                                                                                                                                                                                                               |                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <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> |                         |



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# PROTON PLUS FLOW RATES

Valve size will most likely be less than inlet / outlet pipe sizes

|                                                                    |           | PRESSURE DROP (PSI)              |        |        |        |        |        |        |        |        |        |
|--------------------------------------------------------------------|-----------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MODEL #                                                            | Min Flow* | 5 PSI                            | 10 PSI | 15 PSI | 20 PSI | 25 PSI | 30 PSI | 35 PSI | 40 PSI | 45 PSI | 50 PSI |
| PPV150LF3PS-M                                                      | 30 GPM    | 219                              | 300    | 360    | 402    | 441    | 477    | 504    | 531    | 555    | 576    |
| PPV200LF3PS-M                                                      | 36 GPM    | 318                              | 444    | 546    | 615    | 690    | 732    | 768    | 798    | 822    | 840    |
|                                                                    |           | Flow in Gallons per Minute (GPM) |        |        |        |        |        |        |        |        |        |
| Valves should be sized based on a 5 to 10 PSI pressure drop        |           |                                  |        |        |        |        |        |        |        |        |        |
| Valve size will most likely be less than inlet / outlet pipe sizes |           |                                  |        |        |        |        |        |        |        |        |        |

**\*NOTE:** The valve will maintain temperature with 0.0 GPM flow from the domestic hot water loop when properly installed near the hot water source with a continuously operating recirculation pump, see minimum flow for minimum pump flow rate

**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 as indicated.

NOTE: Flow rates 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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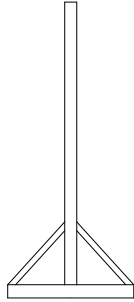
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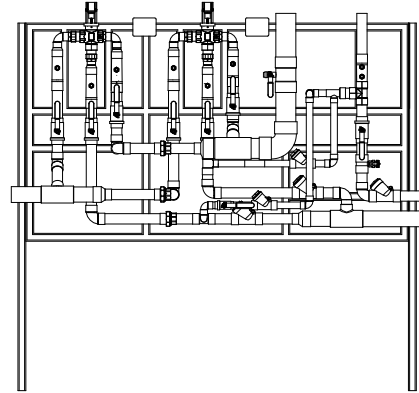


# OPTIONS



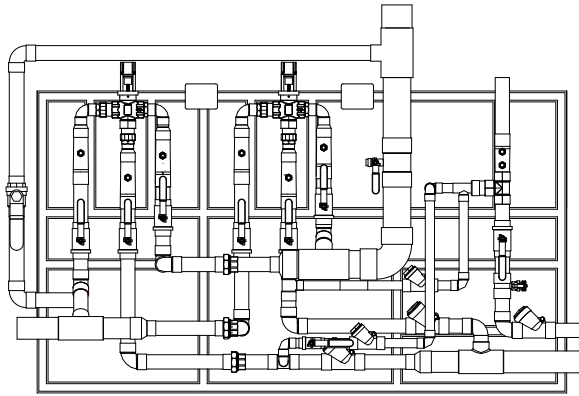
## FM

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.



## HBP

High temperature by-pass flush with locking ball valve

### OPTIONS \*

- ☐ **FM** Floor mount
- ☐ **FS** Free standing
- ☐ **HBP** High temperature by-pass flush

### 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

### PIPING OPTIONS \*

- ☐ **RP 3** 3" Return line size
- ☐ **RP 4** 4" Return line size
- ☐ **RP 5** 5" 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: -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 DA: Digital Aquastat

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



### OPTION DG: Digital Gauges

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



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