



## The Next Generation of Digital Mixing Valve Solutions



ASSE 1017 CERTIFIED | NSF 372 COMPLIANT  
PROUDLY ASSEMBLED IN THE USA

## WATER TEMPERATURE SOLUTIONS START WITH LEONARD

-  Self-balancing
-  Daily self-cleaning feature
-  ± 2 °F temperature accuracy
-  Integral check valves available
-  Flow rates ideal for small to mid-sized design projects
-  Self-diagnostic
-  Digital electronic control with 2-line LCD display
-  Programmable temperature setpoint
-  Easy setup/easy error coding
-  Upon power failure, holds last set temperature to avoid thermal shock

### PROTON SERIES: MODEL FEATURES GUIDE

|   | Proton 1.0 | Proton 2.0 | Proton 2.5 | Proton 3.0 |
|---|------------|------------|------------|------------|
| Simple and intuitive user commissioning and setup                         | ●          | ●          | ●          | ●          |
| Alarms for when unit maintenance is required                              | ●          | ●          | ●          | ●          |
| User programmable set point range between 65 °F and 180 °F                | ●          | ●          | ●          | ●          |
| Automatic hot/cold water shutoff upon cold/hot water inlet supply failure | ●          | ●          | ●          | ●          |
| Valve controls at time of no use: 0.0 GPM*                                | ●          | ●          | ●          | ●          |
| Single valves available in 1" to 3" valve outlet sizes                    | ●          | ●          | ●          | ●          |
| Manifold assemblies available in up to 6" valve outlet sizes              | ●          | ●          | ●          | ●          |
| Enhanced controller with programmable disinfection mode                   |            | ●          | ●          | ●          |
| Enhanced controller with BACnet MS/TP connection                          |            |            | ●          | ●          |
| Enhanced controller with Wi-Fi  |            |            |            | ●          |
| Three additional temperature probes (inlet hot, inlet cold, return temp.) |            | +          | +          | ●          |
| Five relay contacts that switch on during alarm states                    |            | +          | +          | ●          |
| Remote alerts to assist Maintenance and Service Personnel                 |            | +          | +          | ●          |
| Loss of power alert   |            | +          | +          | ●          |
| Broken temperature probe alert  |            | +          | +          | ●          |
| "Out of range" temperature alert (± 10 °F)                                |            | +          | +          | ●          |
| Motor connectivity and operation alert                                    |            | +          | +          | ●          |
| Service required @90% full shuttle movement alert                         |            | +          | +          | ●          |

\*When properly installed near the hot water source with a continuously operating recirculation pump

● Standard  
+ Optional

# Big Digital Performance

## Available in:

- ¾" inlet - 1" outlet valve assembly (PNV-100-LF)
- 1" inlet - 1¼" outlet valve assembly (PNV-125-LF)
- 1¼" inlet - 1½" outlet valve assembly (PNV-150-LF)
- 2" inlet - 2" outlet valve assembly (PNV-200-LF)
- 3" inlet - 3" outlet valve assembly (PNV-300-LF)

Additional sizes available

## Options:

- ✓ BPS | Backup Power Supply: Up to 2 hours of uninterruptable run time
- ✓ LC | Less Circulator (Only available for Megatron configurations)
- ✓ 150, 200, and 300 models available with or without servicable check/stop valves
- ✓ All assemblies available with optional bronze ball valves

All assemblies available with any Proton Series control box

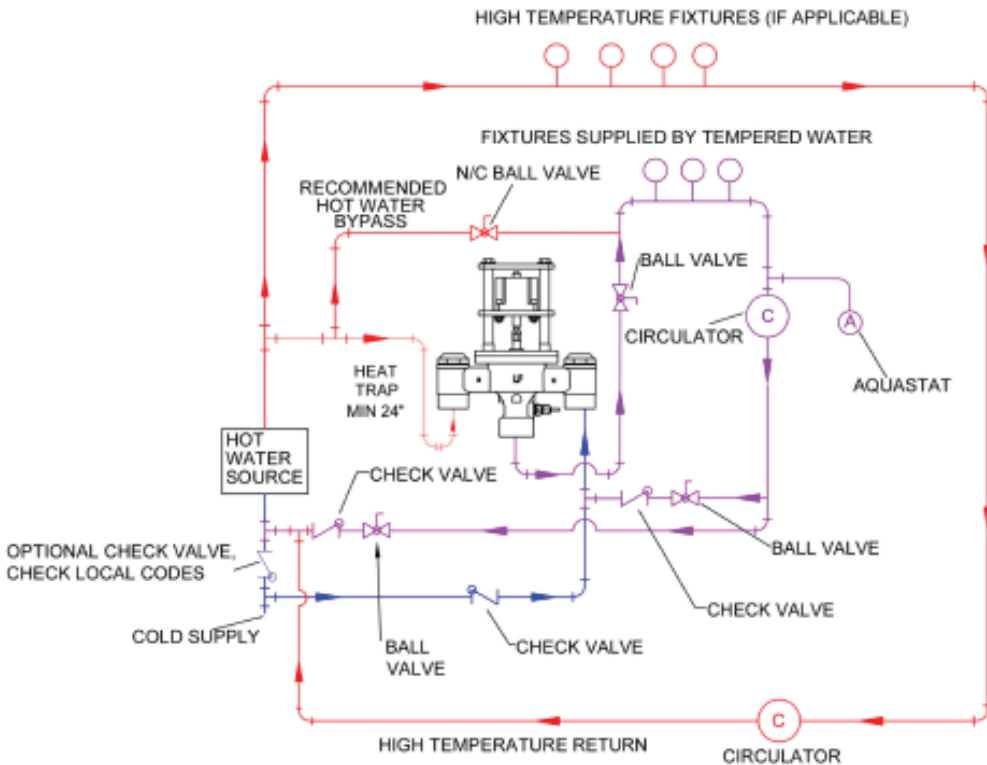
Control box also for use with The Neutron/ENV-6100-LF Digital Emergency Mixing Valve

## Flows & Capacities

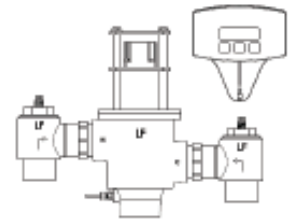
| MODEL   | IN                | OUT               | MIN. FLOW GPM | PRESSURE DROP         |      |      |      |      |      |      |      |      |      |       | PSI |
|---|-------------------|-------------------|---------------|-----------------------|------|------|------|------|------|------|------|------|------|-------|-----|
|   |                   |                   |               | 5                     | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |       |     |
|   |                   |                   |               | L/MIN                 | 0.3  | 0.7  | 0.97 | 1.4  | 1.7  | 2.1  | 2.4  | 2.8  | 3.1  | 3.4   |     |
| PNV-100-LF  | ¾"<br>19.1 mm     | 1"<br>25.4 mm     | 0.25*         | 17                    | 25   | 28   | 32   | 36   | 39   | 43   | 45   | 48   | 51   | GPM   |     |
|   |                   |                   | 0.95*         | 64                    | 95   | 106  | 121  | 136  | 148  | 163  | 170  | 182  | 193  | L/MIN |     |
| PNV-125-LF  | 1"<br>25.4 mm     | 1-1/4"<br>31.6 mm | 0.25*         | 40                    | 56   | 66   | 77   | 86   | 95   | 104  | 109  | 114  | 120  | GPM   |     |
|   |                   |                   | 0.95*         | 151                   | 212  | 250  | 291  | 326  | 360  | 394  | 413  | 432  | 454  | L/MIN |     |
| PNV-150-LF  | 1-1/4"<br>31.6 mm | 1-1/2"<br>38.1 mm | 0.25*         | 50                    | 72   | 86   | 100  | 115  | 122  | 136  | 140  | 158  | 165  | GPM   |     |
|   |                   |                   | 0.95*         | 189                   | 273  | 326  | 379  | 435  | 462  | 515  | 530  | 598  | 625  | L/MIN |     |
| PNV-200-LF  | 2"<br>50.8 mm     | 2"<br>50.8 mm     | 0.25*         | 80                    | 115  | 130  | 147  | 165  | 173  | 189  | 198  | 215  | 226  | GPM   |     |
|   |                   |                   | 0.95*         | 303                   | 435  | 492  | 556  | 625  | 655  | 715  | 750  | 814  | 856  | L/MIN |     |
| PNV-300-LF  | 3"<br>76.2 mm     | 3"<br>76.2 mm     | 0.25*         | 97                    | 135  | 163  | 191  | 213  | 235  | 262  | 288  | 296  | 303  | GPM   |     |
|   |                   |                   | 0.95*         | 366                   | 510  | 616  | 722  | 805  | 888  | 990  | 1089 | 1119 | 1145 | L/MIN |     |
| PNV-150-LF-2PS  | 2"<br>50.8 mm     | 3"<br>76.2 mm     | 0.25*         | 100                   | 144  | 177  | 200  | 222  | 244  | 262  | 280  | 305  | 330  | GPM   |     |
|   |                   |                   | 0.95*         | 378                   | 544  | 669  | 758  | 839  | 922  | 990  | 1058 | 1153 | 1247 | L/MIN |     |
| PNV-200-LF-2PS  | 3"<br>76.2 mm     | 4"<br>102 mm      | 0.25*         | 160                   | 230  | 262  | 294  | 320  | 346  | 371  | 396  | 424  | 451  | GPM   |     |
|   |                   |                   | 0.95*         | 605                   | 896  | 990  | 1111 | 1210 | 1308 | 1402 | 1497 | 1603 | 1709 | L/MIN |     |
| PNV-300-LF-2PS  | 4"<br>102mm       | 5"<br>127 mm      | 0.25*         | 194                   | 270  | 326  | 382  | 432  | 470  | 523  | 576  | 596  | 606  | GPM   |     |
|   |                   |                   | 0.95*         | 733                   | 1021 | 1232 | 1444 | 1633 | 1777 | 1977 | 2177 | 2253 | 2291 | L/MIN |     |
| PNV-200-LF-3PS  | 4"<br>102 mm      | 4"<br>102 mm      | 0.25*         | 240                   | 345  | 390  | 441  | 495  | 519  | 567  | 594  | 645  | 678  | GPM   |     |
|   |                   |                   | 0.95*         | 908                   | 1306 | 1476 | 1669 | 1874 | 1965 | 2146 | 2249 | 2442 | 2567 | L/MIN |     |
| PNV-300-LF-3PS  | 5"<br>127 mm      | 6"<br>152 mm      | 0.25*         | 291                   | 405  | 489  | 573  | 639  | 705  | 785  | 864  | 887  | 909  | GPM   |     |
|   |                   |                   | 0.95*         | 1100                  | 1531 | 1848 | 2166 | 2415 | 2665 | 2967 | 3266 | 3353 | 3436 | L/MIN |     |
| VALVE ASSEMBLY(S) ARE ASSE STANDARD 1017 LISTED<br>ALL VALVES ASSEMBLY(S) ARE 3RD PARTY CERTIFIED TO BE LEAD-FREE<br><br>*WHEN INSTALLED NEAR HOT WATER SOURCE AND WITH A PROPERLY SIZED, CONTINUOUSLY OPERATING RECIRCULATION PUMP |                   |                   |               | MAXIMUM FLOW CAPACITY |      |      |      |      |      |      |      |      |      |       |     |



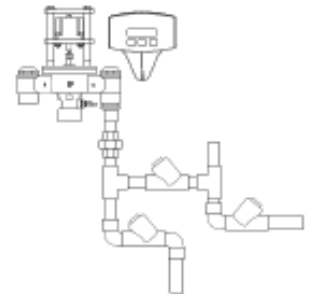
Leonard Digital Valves use Piping Method "W", an economical and environmentally friendly recirculation loop



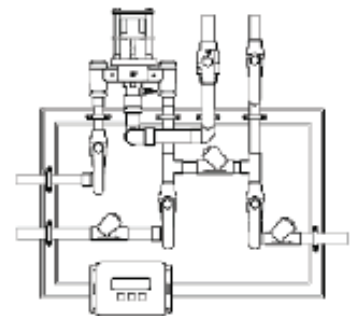
**PNV-200-LF**  
 Base Valve Only



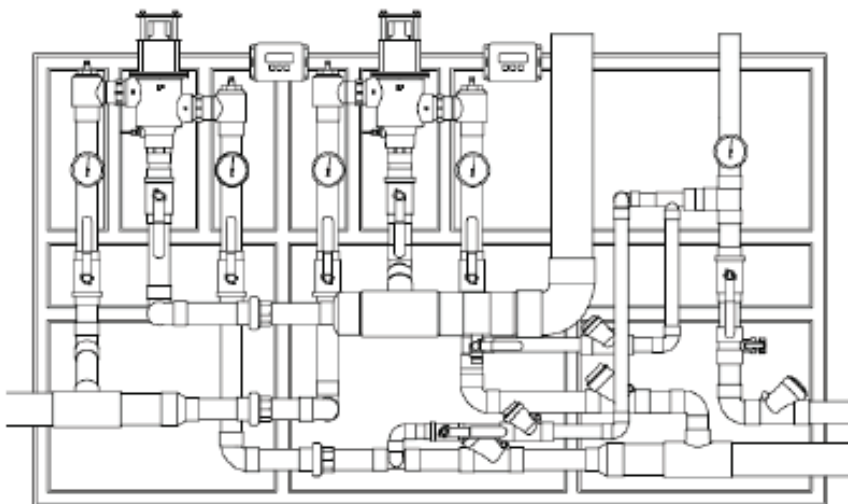
**PNV-125-LF-R**  
 Simple Recirculation



**PNV-100-LF-R34**  
 Enhanced Recirculation



**Megatron-PNV-200-2PS-LF-LC**  
 High-Capacity Proton Megatron



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 submittal sheets

