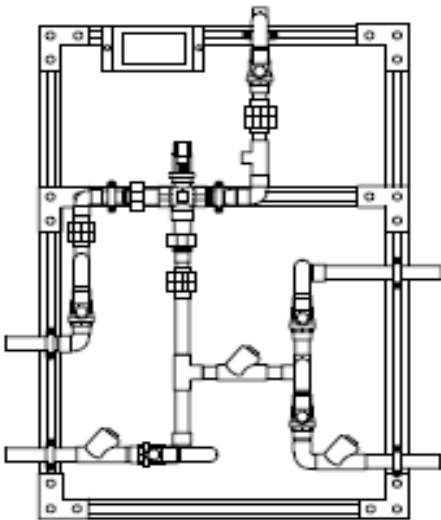


Proton Plus Digital Mixing Valve With Recirculation Piping

1. Proton Plus Digital Mixing Valve With Recirculation Piping

- a. PPV Recirculation models shall:
 - 1. Have inlet and outlet NPT female connections
 - 2. Be constructed of 100% stainless steel
 - 3. 2-line, 16-character LED display
 - 4. Integral RTD Sensor
 - 5. Maintain temperature with 0.0 GPM flow from the domestic hot water loop
 - 6. Have maximum Operating Pressure no greater than 200 PSI
 - 7. Be certified to ASSE standard 1017 and CSA B125.3-18 and so certified and identified
 - 8. Be cULus listed and identified
 - 9. Be NSF 61 Compliant
- b. PPV Recirculation models shall have all the following operational capabilities:
 - 1. Daily shuttle sweep designed to prevent scale buildup on internal mechanical components
 - 2. +/- 2°F water temperature control at times of use and no demand
 - 3. Self-balancing and does not need to have recirculation balanced or adjusted
 - 4. Automatic shutoff of hot water upon cold water inlet supply failure
 - 5. Automatic shutoff of cold water upon hot water inlet supply failure
 - 6. Maintain last control position in the event of power failure or be equipped with UPS standby power for approximately 2 hour run time
 - 7. Programmable set point range of 95-180°F (18-82°C)
 - 8. Simple/intuitive user commissioning and setup
 - 9. ETL Listed control box and 120v plug in power supply with 6' cord
- c. Control Box shall have the following options:
 - 1. Disinfection Option standard
 - 2. BMS connectivity utilizing BACnet MS/TP connection or Modbus RTU standard
 - 3. Wi-Fi enabled standard
 - 4. Optional 3T (3 additional temperature probes for hot and cold inlet in addition to return)
 - 5. Optional REL (Connectivity for 5 relay states)
 - 6. Optional Back up Powers Supply for uninterruptable power supply for up to two hours run time in the event of primary power loss



		Pressure Drop (PSI)									
Model #	Minimum Flow*	5 PSI	10 PSI	15 PSI	20 PSI	25 PSI	30 PSI	35 PSI	40 PSI	45 PSI	50 PSI
PPV-075-LF-R34	3 GPM	16	24	28	33	37	40	43	46	49	52
PPV-100-LF-R1	5 GPM	35	56	66	77	86	93	102	107	112	118
PPV-125-LF-R125	7 GPM	52	75	92	104	118	131	140	148	156	164
PPV-150-LF-R150	10 GPM	73	100	120	134	147	159	168	177	185	192
PPV-200-LF-R2	12 GPM	106	148	182	205	230	244	256	266	274	280
Flow in Gallons per Minute (GPM)											
Valves should be sized based on a 5 to 10 PSI drop											
Valve Size will most likely be less than inlet/outlet pipe sizes											