

HydroGuard® Water Tempering with Automatic Balancing System

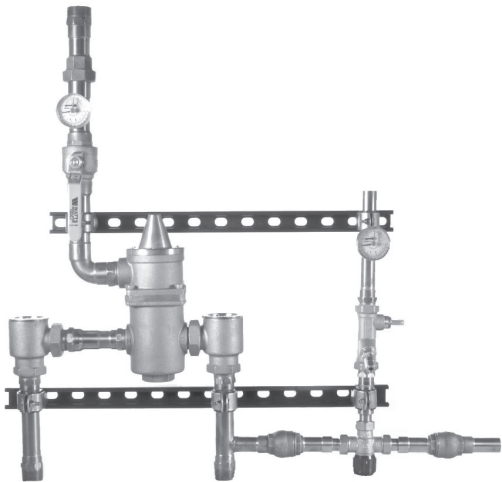
Product Specification

Description ■

The new HydroGuard® water tempering and recirculation system is an economical way to provide a safe, balanced system for stand-alone master tempering valves. The system monitors return line temperature, and automatically directs water to the cold side of the valve (if within set point) or to the hot water source (if too cool). This is accomplished with Powers exclusive automatic balancing valve (ABV), featuring parafin-based, advanced actuation technology.

Each HydroGuard® system is mounted on heavy-duty welded struts, comes fully assembled and factory tested, includes temperature/pressure gauges for system diagnostics and a return-line flow meter to insure minimum flow requirements are met.

ABV Loop assemblies can also be purchased without the master-tempering valve for existing installations where consistent water temperature is a problem.



Specifications ■

- Maximum Pressure Differential 100psi (689 kPa)
 - Maximum Static Pressure 125psi (861 kPa)
 - Maximum Hot Water Temperature 200°F (93°C)
 - Minimum Flow* 0.5 gpm (1.89 lpm)
- Minimum Flow at which valve will control to ASSE 1017 requirements.**
- 431 4.0 gpm (15 lpm)
 - 432 7.0 gpm (26 lpm)
 - 433 10.0 gpm (38 lpm)
 - 434 15.0 gpm (57 lpm)
 - 1432 1.5 gpm (6 lpm)
 - 1434 5.0 gpm (19 lpm)
- Approach Temperature 15°F (8°C)
 - Temperature Adjustment Range 40° - 160°F (4° - 71°C)

* Minimum flow when the valves are installed at or near hot water source with a properly sized continuously operating re-circulating pump.



Valves Only



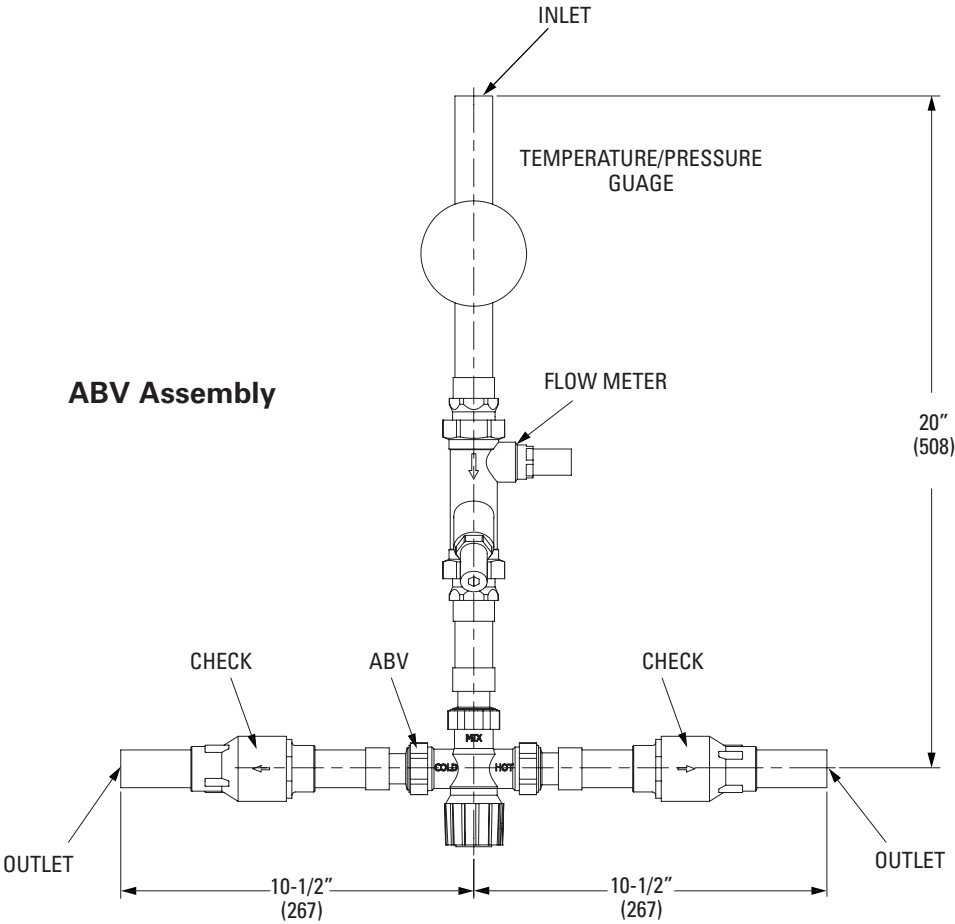
Advanced Thermal Activation

Capacity ■

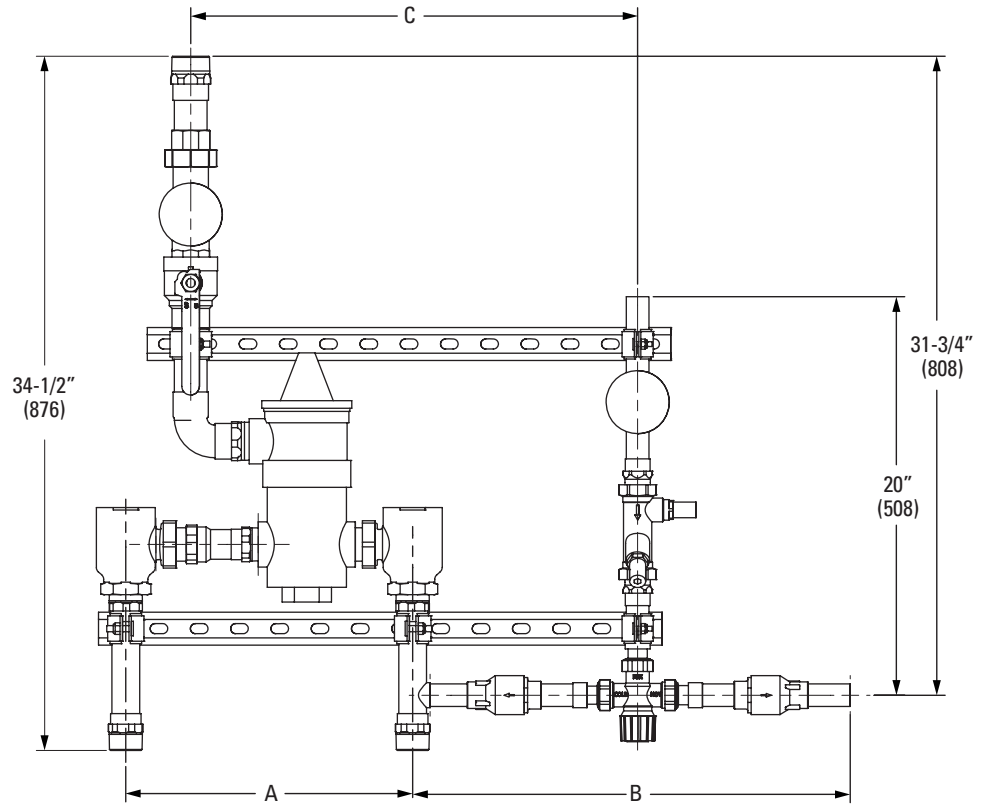
Flow Capacity When Tested to ASSE 1017 Standard									
Valve Model	Pressure Differential								
	C _v 1psi (7 kPa)	Min. Flow to ASSE 1017	5psi (34 kPa)	10psi (69 kPa)	15psi (103 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
431	3.73	4.0 gpm 15.0 lpm	8.3 gpm 31.0 lpm	11.8 gpm 45.0 lpm	14.4 gpm 55.0 lpm	16.7 gpm 63.0 lpm	20.4 gpm 77.0 lpm	25.0 gpm 95.0 lpm	28.9 gpm 109.0 lpm
432	6.71	7.0 gpm 26.0 lpm	15.0 gpm 57.0 lpm	21.2 gpm 80.0 lpm	26.0 gpm 98.0 lpm	30.0 gpm 113.0 lpm	36.8 gpm 139.0 lpm	45.0 gpm 170.0 lpm	52.0 gpm 197.0 lpm
433	11.93	10.0 gpm 38.0 lpm	26.7 gpm 101.0 lpm	37.7 gpm 143.0 lpm	46.2 gpm 175.0 lpm	53.4 gpm 202.0 lpm	65.3 gpm 247.0 lpm	80.0 gpm 303.0 lpm	92.4 gpm 350.0 lpm
434	18.63	15.0 gpm 57.0 lpm	41.7 gpm 158.0 lpm	58.9 gpm 223.0 lpm	72.2 gpm 273.0 lpm	83.3 gpm 315.0 lpm	102.0 gpm 386.0 lpm	125.0 gpm 473.0 lpm	144.3 gpm 546.0 lpm
1432	5.96	1.5 gpm 6.0 lpm	13.3 gpm 50.0 lpm	18.8 gpm 71.0 lpm	23.1 gpm 87.0 lpm	26.7 gpm 101.0 lpm	32.6 gpm 123.0 lpm	40.0 gpm 151.0 lpm	46.2 gpm 175.0 lpm
1434	14.91	5.0 gpm 19.0 lpm	33.3 gpm 126.0 lpm	47.2 gpm 179.0 lpm	57.8 gpm 219.0 lpm	66.7 gpm 252.0 lpm	81.7 gpm 309.0 lpm	100.0 gpm 379.0 lpm	115.5 gpm 437.0 lpm

Dimensions ■

Model	Inlet	Outlet
RLOOP34	3/4" (19)	3/4" (19)
RLOOP10	1" (25)	1" (25)



Dimensions ■



Model	Inlets	Outlets	A	B	C	D
S431AEMS0-L34	3/4" (19)	3/4" (19)	9-3/16" (233)	21-1/4" (540)	28-11/16" (729)	3/4" (19)
S432AEMS0-L34	3/4" (19)	1" (25)	9-3/16" (233)	21-1/4" (540)	29-7/16" (748)	3/4" (19)
S433AEMS0-L34	1-1/4" (32)	1-1/4" (32)	14-1/4" (362)	21-1/2" (546)	31-5/8" (803)	3/4" (19)
S434AEMS0-L34	1-1/4" (32)	1-1/2" (38)	14-1/4" (362)	21-1/2" (546)	32-9/16" (827)	3/4" (19)
S431AEMS0-L10	3/4" (19)	3/4" (19)	9-3/16" (233)	21-1/4" (540)	28-11/16" (729)	1" (25)
S432AEMS0-L10	3/4" (19)	1" (25)	9-3/16" (233)	21-1/4" (540)	29-7/16" (748)	1" (25)
S433AEMS0-L10	1-1/4" (32)	1-1/4" (32)	14-1/4" (362)	21-1/2" (546)	31-5/8" (803)	1" (25)
S434AEMS0-L10	1-1/4" (32)	1-1/2" (38)	14-1/4" (362)	21-1/2" (546)	32-9/16" (827)	1" (25)
S1432AEMS0-L34	3/4" (19)	1" (25)	9-3/16" (233)	21-1/4" (540)	29-7/16" (748)	3/4" (19)
S1432AEMS0-L10	3/4" (19)	1" (25)	9-3/16" (233)	21-1/4" (540)	29-7/16" (748)	1" (25)
S1434AEMS0-L34	1-1/4" (32)	1-1/2" (38)	14-1/4" (362)	21-1/2" (546)	32-9/16" (827)	3/4" (19)
S1434AEMS0-L10	1-1/4" (32)	1-1/2" (38)	14-1/4" (362)	21-1/2" (546)	32-9/16" (827)	1" (25)

Note:
Dimensions are shown $\pm 1/4"$

Ordering Information ■

Product	Description	
RL00P34	Automatic Balancing Assembly only with 3/4" return	☐
RL00P10	Automatic Balancing Assembly only with 1" return	☐
S431AEMS0-L34	Automatic Balancing Assembly with 431 valve and 3/4" return	☐
S432AEMS0-L34	Automatic Balancing Assembly with 432 valve and 3/4" return	☐
S433AEMS0-L34	Automatic Balancing Assembly with 433 valve and 3/4" return	☐
S434AEMS0-L34	Automatic Balancing Assembly with 434 valve and 3/4" return	☐
S431AEMS0-L10	Automatic Balancing Assembly with 431 valve and 1" return	☐
S432AEMS0-L10	Automatic Balancing Assembly with 432 valve and 1" return	☐
S433AEMS0-L10	Automatic Balancing Assembly with 433 valve and 1" return	☐
S434AEMS0-L10	Automatic Balancing Assembly with 434 valve and 1" return	☐
S1432AEMS0-L34	Automatic Balancing Assembly with 1432 valve and 3/4" return	☐
S1434AEMS0-L34	Automatic Balancing Assembly with 1434 valve and 3/4" return	☐
S1432AEMS0-L10	Automatic Balancing Assembly with 1432 valve and 1" return	☐
S1434AEMS0-L10	Automatic Balancing Assembly with 1434 valve and 1" return	☐

Note:
Please contact Powers' Technical Support Department to ensure selection of proper model to meet specific application requirements.

Typical Specifications: Automatic Balancing Valve (ABV) Systems ■

Tempering and automatic balancing system shall feature HydroGuard® master tempering and automatic balancing valves with parafin-actuation technology for near instantaneous response. System shall be mounted on heavy-duty welded struts and ship fully assembled and factory tested. Master tempering valves shall be constructed of solid brass with triple-duty checkstops (integral filters) and balanced poppet design. Master Tempering Valves shall have temperature adjustment range of 40°F - 160°F (4°C - 71°C) and feature minimum flow control to ASSE 1017. All valves shall feature temperature locking mechanism to deter vandalism or unintended adjustment. ABV assembly shall feature temperature/pressure gauges for diagnostics, flow meter with volume control and in-line checks to prevent cross-flow. Systems shall be of Powers' S431, S432, S433, S434, S1432 or S1434. Any alternate must have written approval prior to bidding.

ENGINEERING APPROVAL	
Project:	_____
Contractor:	_____
Architect/Engineer:	_____

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