POWERS™

PRODUCT SPECIFICATION

HydroGuard® Series Emergency Tempering Valves with Dual Internal Cold Water By-Pass

Model ES150

Form PS ES150 v4

DESCRIPTION

The Series ES HydroGuard thermostatically blends hot and cold water to deliver tepid water to emergency fixtures, quickly compensating for temperature variations due to changes in inlet temperature or pressure. Powers' exclusive Dual Internal By-Pass* ensures cold water flow in the event of a valve failure or loss of hot water.

** US Patent 6,575,377*

FUNCTION

The Series ES HydroGuard's advanced thermal actuator senses and adjusts the outlet water temperature to variations in temperature and/or pressure.

The dirt and lime resistant piston cylinder design ensures minimal maintenance. Checkstops included with each valve, prevent crossover and allow easy shutdown of the unit for servicing. Finally, the valve features a tamper-resistant temperature adjustment control.

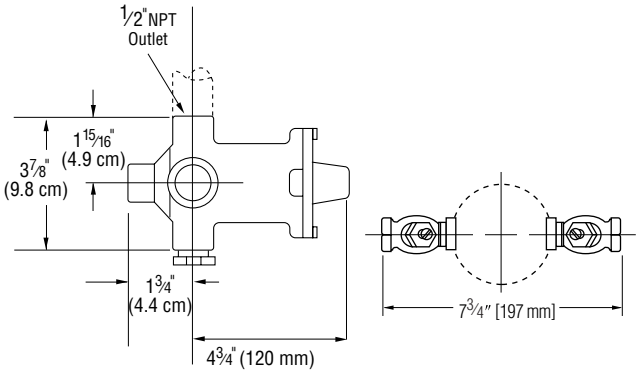
APPLICATIONS

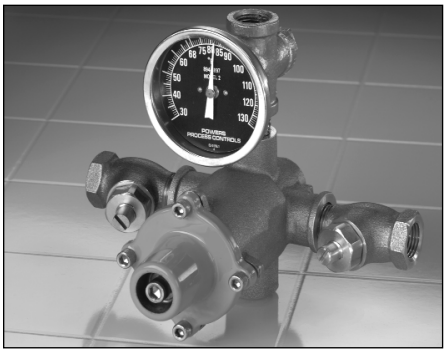
- Eye Wash Fixtures.
- Eye/Face Wash Fixtures.

FEATURES

- Powers' Advanced Thermal Actuator provides precise temperature control.
- Exclusive Dual Internal By-Pass ensures cold water flow if hot water is lost or actuator fails.
- Flow effectively shuts down upon loss of cold water supply.
- Large, easy to read dial thermometer included.
- Designed to comply with ANSI Z358-1 1998.

DIMENSION





Model ES150

SPECIFICATIONS

Operating

Maximum Pressure . . . . . 125 psi (861.25 kPa)
Maximum Hot Water Temperature . . . . . 180°F (82°C)
Approach Temperature . . . . . 15°F (8°C)
Temperature Adjustment Range . . . . . 60°F (15°C) - 95°F (35°C)
Factory Set Temperature . . . . . 85°F (29°C)
Compliance . . . . . ANSI Z 358-1 1998

Note: Set point cannot be less than the cold water temperature. For best operation, hot and cold water should be at least 15°F (8°C) from desired set point.

SIZING

Table 1, Capacity Tables, present the HydroGuard discharge capacity in gpm and lpm for various pressure differentials (the difference between the lowest inlet pressure and the discharge pressure at the HydroGuard).

Table 1- Capacity Tables

Flow Capacity in US gpm at 50-50 Mixed Ratio

Model	Min. Flow Rate*	Pressure Drop Across Valves in psi							
		5	10	20	30	40	45	60	75
ES150	1.0 gpm	4	6	9	14	16	17	20	23

** Minimum flow when HydroGuard is installed at or near hot water source with recirculated tempered water with continuously operating recirculating pump.*

Flow Capacity in lpm at 50-50 Mixed Ratio

Model	Min. Flow Rate*	Pressure Drop Across Valves in kPa						
		34	69	138	207	310	414	517
ES150	2.7 lpm	15.2	22.7	34.1	53.0	64.4	75.8	87.1

** Minimum flow when HydroGuard is installed at or near hot water source with recirculated tempered water with continuously operating recirculating pump.*

NOTE: By-Pass flows will vary based on inlet supply conditions including water pressure and cold water temperature.

ORDERING INFORMATION

Emergency Valve with Dial Thermometer and Fittings

1/2" IN
1/2" OUT
14 gpm @ 30 psid ---------- **ES150RB**

Emergency Tempering with Cabinet Options

ES 1 5 0 A □ □ □ □

	Order Code
Valve and Pipe Finish	
Rough Bronze	**A**
Piping Inlets/Outlets	
Bottom/Top	**E**
Bottom/Side	**G**
Cabinet Style	
Stainless Steel, Recessed	**N**
Stainless Steel, Wall Mount	**Q**
Painted, Recessed	**R**
Painted, Wall Mount	**U**
Options	
None	**0**
Vacuum Breaker	**1**
Dial Thermometers on inlets	**5**
Alarm System	
None	**0**
AquaSentry 2 Alarm*	**4**

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)
For more information: www.wattsind.com/prop65

*AquaSentry 2 includes control module, temperature sensor, sensor junction box, 4x4 electrical box UL/CSA approved 24 VAC-class 2 transformer and 25ft 4 station cable.

TYPICAL SPECIFICATION

Thermostatic mixing valve for supplying tepid water to emergency fixtures shall feature dual internal cold water bypass system to ensure flow in the event of valve failure or loss of hot water supply. The valve shall provide precise temperature control over a wide range of flow conditions, and effectively shut down on loss of cold water. The valve shall feature a powerful paraffin-based actuation technology.

ENGINEERING APPROVAL

Project:

Contractor:

Architect/Engineer:

POWERS™

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