Thermostatic

Rada Z358-40

Rada Z358-40 has been designed specifically to provide temperature controlled water to emergency fixtures as detailed in ANSI Z358.1-2009.

Z358-40 is a Thermostatic Mixing Valve designed specifically to deliver tepid water to emergency fixtures. Compact design and top or bottom blended water outlet makes Z358-40 ideal for OEM, new construction and upgrade/retrofit installations.

For Emergency Drench Showers. Rada Z358-40 will pass ANSI specified minimum of 20 gpm (75.7 lpm)—actual 46 gpm (147 lpm)—and will flow a minimum of 15 gpm (57 lpm) from direct cold water supply in hot failure mode at 45 psi (3 bar) pressure drop.

For Emergency Eye Wash Stations. For single or multiple fixture installation, Rada Z358-40 will control accurately at flow rates from 40 gpm (151 lpm) to below 2 gpm (7 lpm)—actual 46 gpm @ 45 psi pressure drop.

In 40 gpm (151 lpm) flow applications, Z358-40 will pass approximately 40% of original flow setting in hot failure mode.

In 30 gpm (114 lpm) flow applications, Z358-40 will pass approximately 50% of original flow setting in hot failure mode.

In 15 gpm (57 lpm) flow applications, Z358-40 will pass approximately 75% of original flow setting in hot failure mode.

Operational Specifications

1. Site Adjustable—Mechanical maximum temperature limit stop and single temperature locking features as functions of the temperature control handle design.
2. Thermal shutdown feature is designed to protect user from unsafe water temperatures or hot water/chemical reaction should cold supply be interrupted during use.
3. Unique constant cold water flow design ensures that in the event of a hot supply failure the Rada Z358-40 will allow cold water to flow to fixture.
4. Unique constant cold water flow feature allows the inlet hot water supply to be set within a prescribed range, thus limiting the potential outlet temperature to a safe maximum in the event of misadjustment, unauthorized tampering or thermostat failure. This feature presumes that the correct initial commissioning was performed and that the cold water supply has not been interrupted.

Technical Specifications

- 1-1/4" (32 mm) NPT inlets and 1-1/4" (32 mm) NPT outlet(s)
- Chrome-plated DZR brass/polymer construction with bright
- "Safety Yellow" control handle.
- Operating pressures must be nominally equal
  Maximum: 100 psi (6.9 bar)*
  Minimum: 40 psi (2.7 bar) drench showers
  20 psi (1.4 bar) eye wash
- Maximum recommended pressure drop 75 psi (5 bar)
- Maximum recommended outlet flow 53 gpm (200 lpm)
- Integral thermometer
- Integral replaceable cartridge-type inlet check valves
- Integral replaceable inlet strainers
- Dual thermostatic elements
- 15 gpm (57 lpm) constant cold water flow in hot failure mode to open outlet at 45 psi (3 bar) pressure drop
- Shipping weight 18 lb (8 kg)

*High water pressures may deliver a volume and spray force that are injurious to the user. Check with fixture manufacturer or regulate water pressures within acceptable range.

Table 1.
Safe Maximum Inlet Hot Water Supply Temperature
Refer to Table 1 below to correlate inlet hot water supply temperature with anticipated seasonal ground water temperatures (use best case/warmest scenario). For details, reference Safety benefit Bullet #4 at left.

Table 1

Inlet Hot Water Temp. °F	Cold Water Temperature °F				
	33	40	50	60	70
120	80	84	88	93	97
130	86	89	94	98	103
140	91	95	99	104	108
150	96	100	105	109	114
160	102	106	110	115	119
175	110	114	118	123	127
185	116	119	124	128	133

Table 2.
Minimum Inlet Hot Water Supply Temperature
Rada Z358-40 will require a minimum inlet hot water supply temperature, which must be correlated with the anticipated seasonal inlet cold water supply temperature (use worst case/coldest scenario) as per Table 2 below.

Table 2

Blend Temp °F	Cold Water Temperature °F				
	33	40	50	60	70
80	120	113	105	97	88
85	129	122	114	106	97
90	138	132	123	115	107
95	147	141	132	124	116

For expanded versions of Tables 1 and 2, consult factory or product installation and maintenance manual.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

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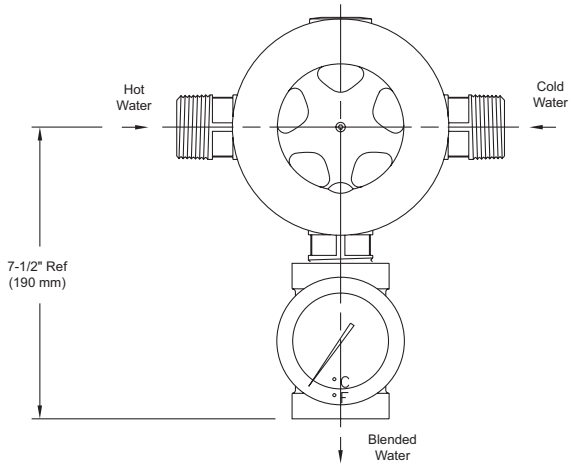
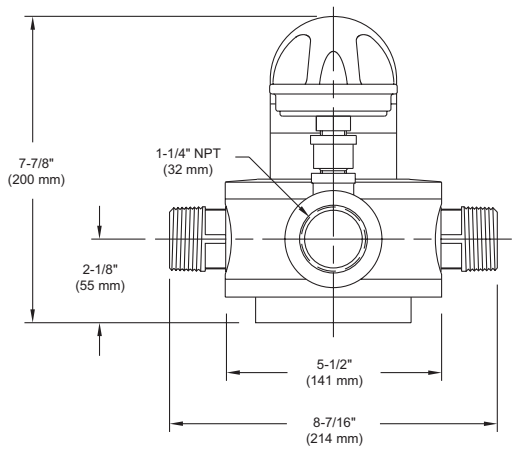
Water Temperature Control - Emergency Fixtures





For a submittal drawing, refer to CDLW1073.

Thermostatic Mixing Valves (gpm)											
Model	Pressure Drop (psi)										Min. Flow
	5	10	15	20	25	30	35	40	45	50	
Z358-20	8	11	13	15	17	19	20	22	23	24	1
Z358-40	15	22	27	31	35	38	41	44	46	49	2

Operating Specifications	
Maximum Recommended Hot Water Supply Temperature	130°F (54°C)
Minimum Cold Water Supply Temperature	33°F (1°C)
Optimum Inlet to Outlet Temperature Differential	Refer to Table 2
Minimum Flow Rate	1 gpm (3.8 lpm)
Maximum Inlet Supply Pressure (supplies must be nominally equal)	100 psi (6.9 bar)
Minimum Inlet Supply Pressure	40 psi (2.7 bar) Drench Shower 20 psi (1.4 bar) Eye Wash

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