

3/4" IC/FP

INTERCHANGEABLE CARTRIDGE FREEZE PROTECTION VALVE

BENEFITS

- Protects piping and equipment from freeze damage
- Can be used as primary protection or failsafe backup
- Long service life
- Self operating
- Fast response
- No outside power required
- Discharges minimum amount of water required

DESIGN FEATURES

- Brass or stainless steel body, fittings, and plugs
- Corrosion resistant
- Exclusive **Thermoloid**® sensor/controller
- Narrow temperature band
- Compact and low mass
- Two wrench flats for easy installation
- Ram-type plug for reliable shutoff

APPLICATIONS

Typically freeze protection is effected by cracking open manual bleed valves. This method is at best risky. Human error or plugging of partially cracked valves annually accounts for large amounts of freeze damage to expensive equipment. The 3/4" IC/FP (Freeze Protection) valves are ideal for the protection of piping, safety showers, solar collectors & piping, condensate systems, fire lines, spray nozzles, or as backup protection on traced systems, where an unrestricted flow is required under normal operating conditions. Its sensitivity to water temperature makes this valve ideal for applications where water conservation or wastewater disposal are a prime concern.



OPERATION

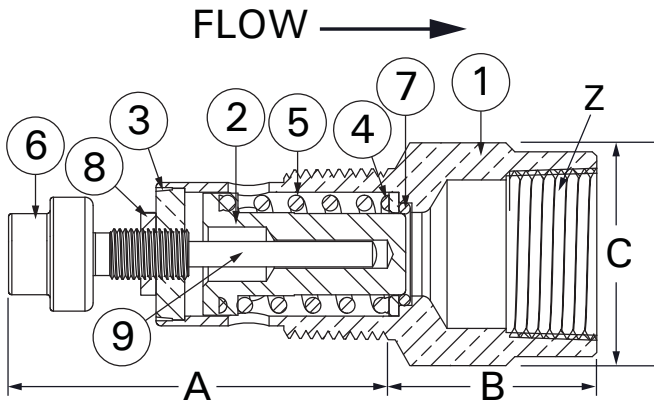
The 3/4" IC/FP will screw into any 3/4" NPT threaded opening with adequate internal clearance (see drawing at "Parts and Materials"). When the water temperature approaches freezing, and freeze damage is imminent, the thermal actuator modulates the valve open. When the makeup water temperature returns to the safe range, the valve then modulates closed, minimizing water loss. Due to the actuator's placement in the water stream, this valve is unaffected by ambient air temperature, and opens only when the water is in danger of freezing, being open at 35°F (1.7°C), and closed at 40°F (4.4°C)

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PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	CARTRIDGE BODY	Brass or 300 Series S/S
2	RAM TYPE PLUG	300 Series S/S
3	ACTUATOR BUSHING	Brass or 300 Series S/S
4	BODY SEAL RETAINER	Brass or 300 Series S/S
5	OPERATING SPRING	300 Series S/S
6	ACTUATOR	Brass or 300 Series S/S
7	SEAT SEAL	PTFE
8	CALIBRATION LOCKNUT	300 Series S/S
9	PISTON	300 Series S/S

DIMENSIONS & CAPACITIES

Connection	A		B		C		Z (Drain)	C _v	Weight		Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	in	m			Lb	Kg		
3/4" NPT	2.15	54.6	1.33	33.8	1.38	35.1	3/4 NPT	1.3	0.5	0.23	100 PSIG (6.9 BAR)	300°F (149°C)

ORDERING

Part Number	Description
185 - 000000 - 035	3/4" IC/FP Cartridge
185 - 110000 - 035	3/4" IC/FP Cartridge 316 S/S
185 - 220000 - 035	3/4" IC/FP Cartridge 303 S/S

NOTES

1. Open/Close temperatures: 35°F/40°F.
2. All 3/4" IC/FP valves are covered by an 18 month warranty.
3. A #20 mesh strainer is recommended.



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Because of continuous improvements, ThermOmegaTech, Inc. reserves the right to change the design and specifications without notice