ThermOmegaTech®

IC/FP

INTERCHANGEABLE CARTRIDGE FREEZE PROTECTION VALVE

BENEFITS

- Protects against freeze damage
- Primary protection or fail-safe backup
- Self operating, no power or signal required
- Long service life
- Fast response
- Discharges minimum amount of water required
- Some valves are NSF/ANSI/CAN 61 & 372 Certified



DESIGN FEATURES

- Exclusive **Thermoloid**® thermal actuator
- Brass or stainless steel body, fittings, and plugs
- Compact and low mass
- Corrosion resistant
- Ram-type plug for reliable shutoff
- Operates in narrow temperature band
- Two wrench flats for easy installation

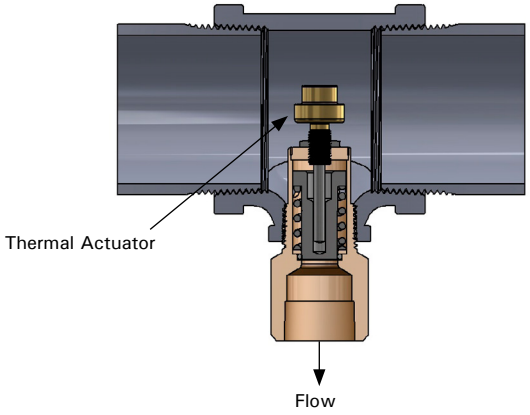
APPLICATIONS

The self-actuating **IC/FP** valve eliminates the human errors associated with manual valves. The automatic **IC/FP** valve is ideal for protecting piping, safety showers, solar collectors & piping, condensate systems, fire lines and spray nozzles from freezing. It can also be used to provide backup protection for traced systems.

Its sensitivity to water temperature makes this valve ideal for applications where water conservation or wastewater disposal are a prime concern.

When using FP valves in a Solar Application, it's essential to incorporate a minimum 12-inch long dead leg before the valve. This helps mitigate residual high temperatures that may reach or exceed 300°F (148.9°C).

TYPICAL INSTALLATION



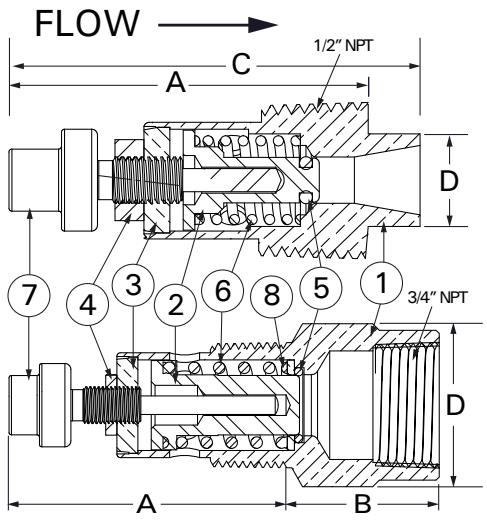
OPERATION

The **IC/FP** is installed into a minimum 1" Tee with a 1" x 3/4" NPT reducer bushing or a 1-1/4" x ¾" x 1-1/4" NPT reducer Tee (no bushing) with adequate internal clearance. When the water temperature approaches freezing, 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 sensing element, the thermal actuator, always being wetted, this valve is unaffected by ambient air temperature, and opens only when the water is in danger of freezing. Typically, the valve opens below 35°F (1.7°C), and closes at 40°F (4.4°C).

IC/FP

INTERCHANGEABLE CARTRIDGE FREEZE PROTECTION VALVE

PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	CARTRIDGE BODY	Brass or 300 Series SS
2	RAM-TYPE PLUG	300 Series SS
3	ACTUATOR BUSHING	Brass or 300 Series SS
4	CALIBRATION LOCKNUT	300 Series SS
5	SEAT SEAL	EPDM (1/2")/ PTFE (3/4")
6	OPERATING SPRING	300 Series SS
7	THERMAL ACTUATOR	Brass or 300 Series SS
8	BODY SEAL RETAINER	Brass or 300 Series SS

DIMENSIONS & CAPACITIES

Size (NPT)	A		B		C		D		C_v	Weight		Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	in	mm	in	mm		Lb	Kg		
1/2"	2.0	50.8	N/A	N/A	2.3	58.4	.5 sq.	12.7 sq.	0.6	0.1	0.05	150 PSIG (10.3 BAR)	Range 150°F (83.3°C) over set-point with a limit of 300°F (149°C)
3/4"	2.2	55.9	1.33	33.8	N/A	N/A	1.4	35.6	1.3	0.5	0.23	100 PSIG (6.9 BAR)	

ORDERING

Part Number	Description
180 - 000000 - 035	1/2" IC/FP-35 Brass Cartridge[1]
180 - 000000 - 039	1/2" IC/FP-39 Brass Cartridge[1]
180 - 110000 - 035	1/2" IC/FP-35 300 Series SS Cartridge[1 2]
180 - 110000 - 039	1/2" IC/FP-39 300 Series SS Cartridge[1 2]
185 - 000000 - 035	3/4" IC/FP Brass Cartridge[1]
185 - 110000 - 035	3/4" IC/FP Cartridge 316 SS[1]
185 - 220000 - 035	3/4" IC/FP Cartridge 303 SS[1 2]

NOTES

1. Full open/close temperatures: 35°F (1.7°C)/40°F (4.4°C); 39°F (3.9°C)/48°F (8.9°C) (others temperatures available - consult with our engineers).
2. This valve is NSF/ANSI/CAN 61 & 372 Certified.
3. A #20 mesh strainer is recommended.
4. Warranty information disclosed at www.thermomegatech.com/terms-conditions/

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