

HAT/FP

FREEZE PROTECTION VALVE

BENEFITS

- Protects against freeze damage
- Primary protection or fail-safe backup
- Self operating - no power or signal required
- Discharges minimum amount of water required
- Two wrench flats for easy installation
- Valves with stainless steel internals are NSF/ANSI/CAN 61 & 372 Certified

DESIGN FEATURES

- Exclusive **Thermoloid**® thermal actuator
- Stainless steel body, fittings, and plugs
- Compact and low mass - Fast response
- Corrosion resistant - long service life
- Ram-type plug for reliable shutoff
- Narrow temperature band

APPLICATIONS

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

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).

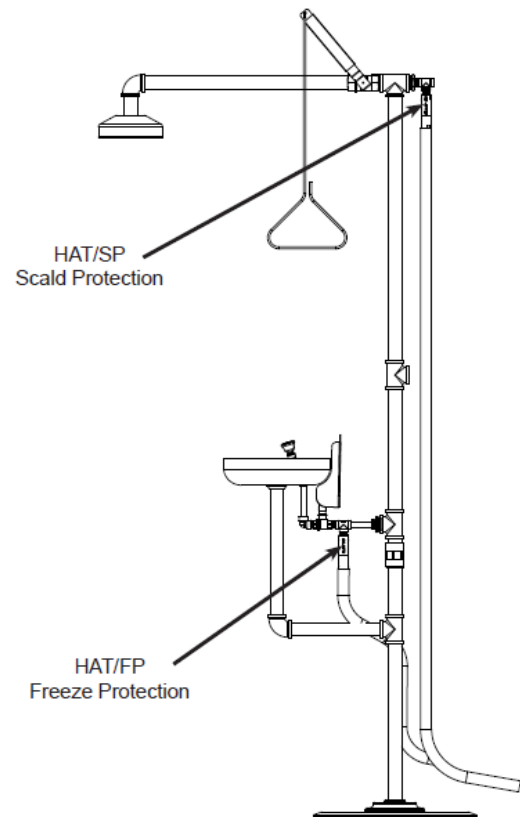
OPERATION

The **HAT/FP** should be installed at the lowest point or dead leg branch within a system to monitor the temperature. The valve will initiate flow when the its thermal actuator senses 35°F (1.7°C) and will remain open as long as the discharge water temperature is below 40°F (4.4°C).

When installed in the ambient sensing position (standard flow), the actuator will respond to ambient temperature to initiate flow and then respond to water temperature once flow is established; when installed in the fluid sensing position (reverse flow), the actuator will always respond to water temperature.



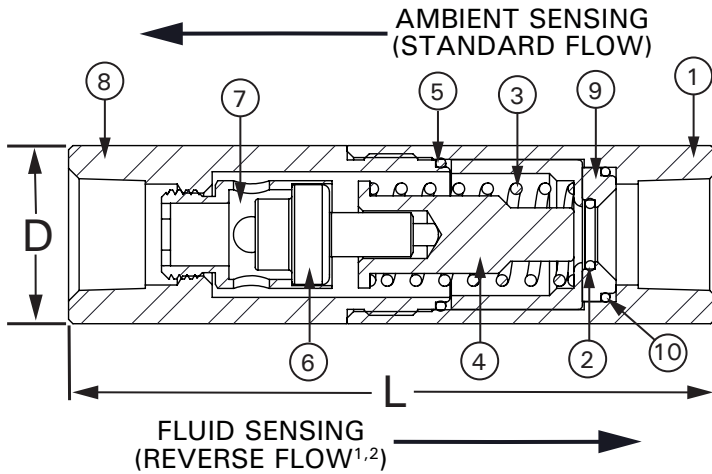
SAMPLE APPLICATION



HAT/FP

FREEZE PROTECTION VALVE

PARTS & MATERIALS



| ITEM | DESCRIPTION | MATERIAL |
|------|------------------|------------------------|
| 1 | BODY - HALF | 300 Series SS |
| 2 | SEAT SEAL | FEP Encapsulated Viton |
| 3 | OPERATING SPRING | 300 Series SS |
| 4 | RAM-TYPE PLUG | 300 Series SS |
| 5 | BODY SEAL | EPDM |
| 6 | THERMAL ACTUATOR | Brass or SS |
| 7 | ACTUATOR CARRIER | Brass or SS |
| 8 | BODY - HALF | 300 Series SS |
| 9 | SEAT INSERT | 300 Series SS |
| 10 | SEAT INSERT SEAL | EPDM |

DIMENSIONS & CAPACITIES

| SIZE (NPT) | D | | L | | Weight | | Port Size | C _v | Maximum Operating Pressure ^{1&2} | Maximum Temperature |
|------------|-----|----|-----|-----|--------|-----|-----------|----------------|---|---|
| | in | mm | in | mm | Lb | Kg | | | | |
| 1/2" | 1.3 | 33 | 4.5 | 114 | 0.9 | 0.4 | B | 0.8 | 300 PSIG (20.7 BAR) | 150°F (66°C) over set-point limit 300°F (149°C) |
| 1/2" | 1.3 | 33 | 4.5 | 114 | 0.9 | 0.4 | C | 1.3 | | |
| 3/4" | 1.5 | 38 | 5.5 | 140 | 1.4 | 0.6 | D | 2 | | |

ORDERING

| Part Number | Description ³ |
|--------------------|---|
| 114 - 212100 - 035 | ½" HAT/FP-35-B-SS-E (Ambient Sensing) |
| 114 - 812100 - 035 | ½" HAT/FP-35-B-SS-RF-E ¹ (Fluid Sensing) |
| 114 - 302100 - 035 | ½" HAT/FP-35-C-E (Ambient Sensing) |
| 114 - 702100 - 035 | ½" HAT/FP-35-C-RF-E ² (Fluid Sensing) |
| 114 - 312100 - 035 | ½" HAT/FP-35-C-SS-E (Ambient Sensing) |
| 114 - 712100 - 035 | ½" HAT/FP-35-C-SS-RF-E ² (Fluid Sensing) |
| 114 - 324100 - 035 | ½" HAT/FP-35-C-S6-E (Ambient Sensing) |
| 114 - 724100 - 035 | ½" HAT/FP-35-C-S6-RF-E ² (Fluid Sensing) |
| 115 - 502100 - 035 | ¾" HAT/FP-35-D-E (Ambient Sensing) |
| 115 - 512100 - 035 | ¾" HAT/FP-35-D-SS-E (Ambient Sensing) |
| 115 - 712100 - 035 | ¾" HAT/FP-35-D-SS-RF-E ² (Fluid Sensing) |

NOTES

- Reverse flow option for B port is rated for 200 PSIG (13.8 BAR).
- Reverse flow option for C & D ports are rated for 150 PSIG (10.3 BAR).
- SS = 303 Stainless Steel and S6 = 316/316L Stainless Steel. Consult our engineering team if you require other materials.
- Full open/close temperatures: 35°F (1.7°C)/40°F (4.4°C).
- A #20 mesh strainer is recommended.
- Warranty information disclosed at www.thermomegatech.com/terms-conditions/



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