

# HAT

## IN-LINE TEMPERATURE CONTROL VALVE

### BENEFITS

- Controls fluid return temperatures - ideal for glycol tracing
- Maintains constant discharge temperatures
- Self-operating, no power or signal required
- Improves system efficiency
- Unaffected by pressure variations
- Two wrench flats for easy installation

### DESIGN FEATURES

- Exclusive **Thermoloid**® thermal actuator
- Stainless steel body, fittings, spring, and plug
- Compact low mass - fast response
- Corrosion resistant - long service life
- Ram-type plug for reliable shut-off
- Operates in narrow temperature band
- Optional leak port (LP) available

### APPLICATIONS

To control temperatures in glycol heat tracing systems, **HAT** valves will maintain the discharge temperature. When glycol temperature exceeds the set point, the valve will modulate closed. As heat loss occurs and glycol cools to below the set point, the valve will open to allow warmer glycol to circulate.

**HAT** valves can act as freeze protection for condensate systems. **HAT** valves open when temperatures fall to allow condensate to discharge before freezing.

In commercial aircraft, high temperature water can unexpectedly travel to the cold water lines. **HAT** valves on cold water lines will limit flow when excessive temperatures are detected, preventing scalding of passengers and crew.

**HAT** valves used on tank heating coils limit the temperatures of the heating element. By closing before coil temperatures are too high, the **HAT** valves reduce the risk of over-temperature damage. When used as a subcooling steam trap, **HAT** valves reduce problems associated with overheating.

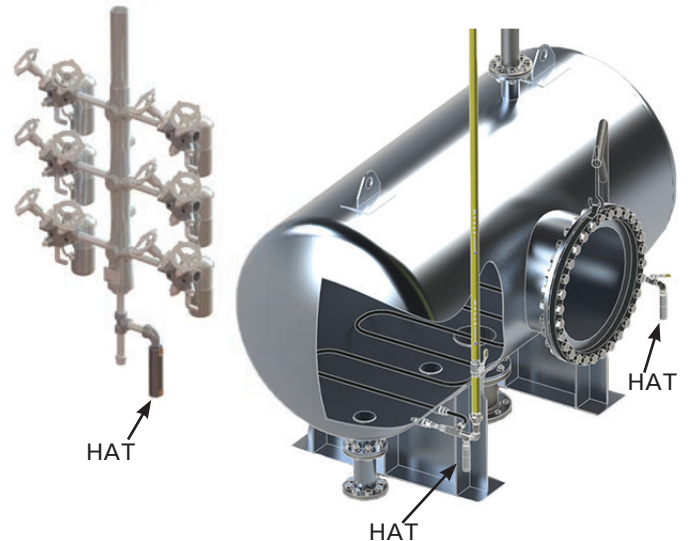
When used as a sampling system safety shutoff, **HAT** valves will remain open as long as sample temperatures are under the set point. If the sample temperature increases, the valve will shut off, protecting analyzing equipment from damage due to high temperature.



### OPERATION

A thermostatic element inside the valve senses temperature and if this falls below the set point, the valve modulates open to allow flow. When the temperature increases to near the set point, the **HAT** valve modulates closed. **HAT** valves are available with built-in leakage to allow bypass flow.

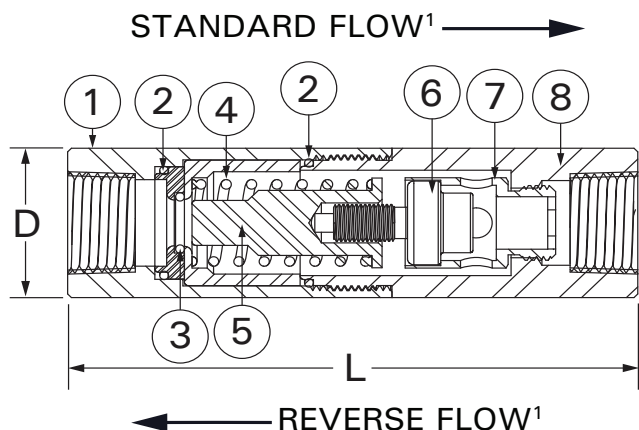
### SAMPLE APPLICATIONS



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### PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	BODY - HALF	300 Series SS
2	BODY SEAL (QTY 2)	EPDM or Viton <sup>2</sup>
3	SEAT RING SEAL	PTFE
4	OPERATING SPRING	300 Series SS
5	RAM-TYPE PLUG	300 Series SS
6	THERMAL ACTUATOR	Brass or 300 Series SS
7	ACTUATOR CARRIER	Brass or 300 Series SS
8	BODY - HALF	300 Series SS

### DIMENSIONS & CAPACITIES

SIZE (NPT)	D		L		Weight		Port Size	C <sub>v</sub>	Maximum Operating Pressure <sup>1</sup>	Maximum Temperature
	in	mm	in	mm	Lb	Kg				
1/2"	1.3	33	4.5	114	0.9	0.4	C	1.3	300 PSIG (20.7 BAR)	150°F(66°C) over set-point limit 300°F(149°C)
3/4"	1.5	38	5.5	140	1.4	0.6	D	2.0		

### ORDERING

Part Number <sup>2,4,6</sup>	Description
134 - 302X00 - XXX	1/2" HAT C-Port
134 - 312X00 - XXX	1/2" HAT C-Port, all SS
134 - 502X00 - XXX	1/2" HAT C-RF
134 - 324X20 - XXX	1/2" HAT C-Port, 316 SS Passivated
135 - 502X00 - XXX	3/4" HAT D-Port
135 - 512X00 - XXX	3/4" HAT D-Port, all SS

### NOTES

- Flow direction is reversed in valves that close over 210°F (98.9°C). Reverse flow valves are rated for 150 PSIG (10.3 BAR).
- Seal Material compatibility:
  - EPDM - air, glycol, water, steam, ketones, and synthetic hydraulic oils.
  - Viton - air, fuel, oil, gas, petroleum-based hydraulic oils.
  - Kalrez
  - Silicone
- Full open temperatures "XXX" available: 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 120°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F.
  - Note: Closing temperature is typically 10°F above opening temperature.**
- Replace singular "X" with 1 for EPDM body seals; 2 for Viton body seals. Other options available, consult our engineers.
- For optional leak port, consult sales department.
- A #20 mesh strainer is recommended.
- Warranty information disclosed at [www.thermomegatech.com/terms-conditions/](http://www.thermomegatech.com/terms-conditions/)



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