ThermOmegaTech®

HAT/RA & HAT/RA-LP

INLINE TEMPERATURE CONTROL VALVES

BENEFITS

- Controls cooling fluid return temperatures - ideal for glycol and water
- Self-operating, no power or signal required
- Maintains constant discharge temperatures
- Improves system efficiency
- Unaffected by pressure variations
- Conserves water
- Valves with stainless steel internals are NSF/ANSI/CAN 61 & 372 Certified



DESIGN FEATURES

- Exclusive **Thermoloid**® thermal actuator
- All 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
- Two wrench flats for easy installation
- Leak port (LP) option senses changing upstream temperature

OPERATION

As the fluid temperature increases to within the operating range of the **HAT/RA** and **HAT/RA-LP**, the thermal actuator modulates the valve open. If the fluid temperature is above the acceptable range, the valve will continue to modulate open allowing additional fluid discharge. As the outlet temperature falls, the valve then modulates toward the closed position, reducing flow. This modulating action maintains a relatively constant fluid temperature even as operating conditions vary.

At start-up, the **HAT/RA-LP** is closed except for its control leakage, which allows a small flow so that the actuator inside the valve can sense the changing equipment temperature.

APPLICATIONS

The **HAT/RA** reverse acting valve may be used to regulate the flow of cooling water, glycol or other cooling media in applications requiring economical removal of heat from equipment or a process. Since the **HAT/RA** valves open on rising temperatures, they can be used in many thermal relief valve applications.

HAT/RA-LP valves are ideal for controlling cooling water for compressors and die-casting equipment, engines, heat exchangers, welding equipment, electrical equipment, and molding equipment.

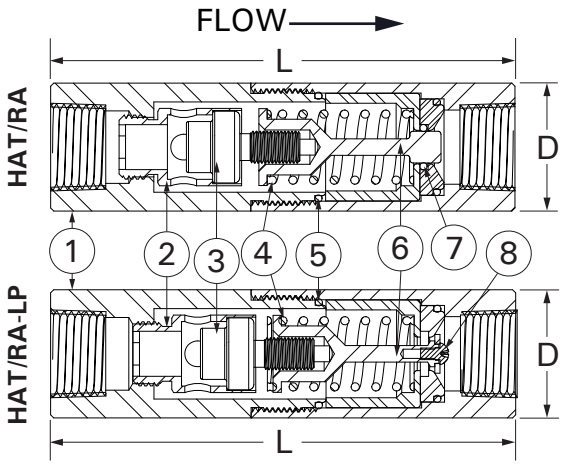
SAMPLE APPLICATION



HAT/RA & HAT/RA-LP

INLINE TEMPERATURE CONTROL VALVES

PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	BODY	300 Series SS
2	ACTUATOR CARRIER	Brass or SS
3	THERMAL ACTUATOR	Brass or SS
4	OPERATING SPRING	300 Series SS
5	BODY SEAL	EPDM or Viton[3]
6	PLUG	300 Series SS
7	SEAT SEAL RING	PTFE
8	LP WASHER	300 Series SS

DIMENSIONS & CAPACITIES

SIZE (NPT)	D		L		Weight		Port Size	C_v	Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	Lb	Kg				
1/2"	1.3	33	4.5	114	0.9	0.4	B	1.1	200 PSIG (13.8 BAR)	Range 150°F (83.3°C) over set-point with a limit of 300°F (149°C)
							C	1.5	150 PSIG (10.3 BAR)	
3/4"	1.5	38	5.5	140	1.4	0.6	D	2.0	70 PSIG (4.8 BAR)	

ORDERING

Part Number[1,4]	Description
144 - 202X00 - XXX	1/2" HAT/RA B-Port Brass internals
144 - 212X00 - XXX	1/2" HAT/RA B-Port All SS
144 - 302X00 - XXX	1/2" HAT/RA C-Port Brass internals
144 - 312X00 - XXX	1/2" HAT/RA C-Port All SS
145 - 502X00 - XXX	3/4" HAT/RA D-Port Brass internals
145 - 512X00 - XXX	3/4" HAT/RA D-Port All SS

Part Number[1,4]	Description[2]
144 - 202X02 - XXX	1/2" HAT/RA-LP B-Port Brass internals1/4 GPM
144 - 212X02 - XXX	1/2" HAT/RA-LP B-Port, All SS 1/4 GPM
144 - 302X02 - XXX	1/2" HAT/RA-LP C-Port, Brass internals 1/4 GPM
144 - 312X02 - XXX	1/2" HAT/RA-LP C-Port, All SS 1/4 GPM
145 - 502X02 - XXX	3/4" HAT/RA-LP D-Port Brass internals 1/4 GPM
145 - 502X03 - XXX	3/4" HAT/RA-LP D-Port Brass internals 1 GPM
145 - 512X02 - XXX	3/4" HAT/RA-LP D-Port, All SS 1/4 GPM
145 - 512X03 - XXX	3/4" HAT/RA-LP D-Port, All SS 1 GPM

NOTES

1. Full open temperatures "**XXX**" available: 040°F, 045°F, 050°F, 060°F, 070°F, 075°F, 085°F, 095°F, 100°F, 105°F, 110°F, 115°F, 120°F, 125°F, 130°F, 140°F, 150°F, 160°F, 170°F, 175°F, 180°F, 190°F, 200°F and 210°F.
   a. ***Note: Closing temperature is typically 10°F below opening temperature.***
2. Leak port flow rate specifications:
   a. All 144 Series (B and C-Port) leak flow rates at 60 PSIG (4.1 BAR)
   b. All 145 Serier (D-Port) leak flow rates at 40 PSIG (2.8 BAR)
3. Seal material compatibility:
   a. EPDM - air, water, steam, ketones, and synthetic hydraulic oils.
   b. Viton - air, fuel, oil, gas, petroleum-based hydraulic oils.
4. Replace singular "X" with 1 for EPDM body seals; 2 for Viton body seals
5. A #20 mesh strainer is recommended.
6. Warranty information disclosed at www.thermomegatech.com/terms-conditions/

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