

TV/HAT-RA

IN-LINE TEMPERATURE CONTROL VALVE



BENEFITS

- Regulates coolant flow to maintain constant temperature
- Fully wetted actuator assures sensitivity to fluid temperature
- Unaffected by pressure variations
- Wide choice of set points
- Operates in any position

DESIGN FEATURES

- Compact, low mass for fast response
- Corrosion resistant - Long service life
- Stainless steel body, fittings, spring and plug
- Ram-type plug for tight reliable shutoff
- Operates in narrow temperature band
- Easy to install

APPLICATIONS

The **TV/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 **TV/HAT-RA** valves open on rising temperatures, they can be used in many thermal relief valve applications. The **TV/HAT-RA** continually senses fluid temperature and automatically modulates to maintain desired temperature. Optimum operating temperature improves efficiency, reduces wear, and conserves energy.



OPERATION

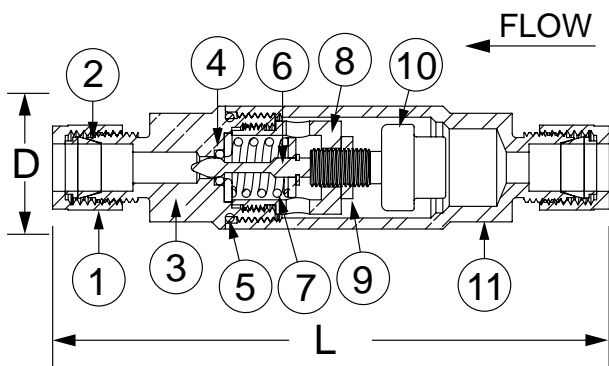
As the fluid temperature increases to within the operating range of the **TV/HAT-RA**, the thermal actuator modulates the valve open. If the fluid temperature is above the acceptable range, the valve will continue to modulate open allowing additional fluid discharge. As the outlet temperature falls,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

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PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	TUBING NUT ³	300 Series SS
2	FERRULES ³	300 Series SS
3	SEAT HOUSING	300 Series SS
4	SEAT SEAL	PTFE
5	SEALING O-RING	EPDM or Viton ⁵
6	RAM-TYPE PLUG	300 Series SS
7	OPERATING SPRING	300 Series SS
8	RETAINER	300 Series SS
9	LOCK NUT	300 Series SS
10	THERMAL ACTUATOR	300 Series SS
11	VALVE BODY	300 Series SS

DIMENSIONS & CAPACITIES

TUBE O.D. SIZE	D		L		Weight		C _v	Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	Lb	Kg			
3/8"	1.0	25	4.4	112	0.5	0.2	0.5	150 PSIG (10 BAR)	150°F (66°C) over setpoint
1/2"	1.0	25	4.7	119	0.5	0.2			

ORDERING

Part Number ^{1,4}	Description
223 - 100X00 - XXX	3/8" TV/HAT-RA-SS
223 - 110X00 - XXX	3/8" TV/HAT-RA-SS-SW ³
224 - 100X00 - XXX	1/2" TV/HAT-RA-SS
224 - 110X00 - XXX	1/2" TV/HAT-RA-SS-SW ³

NOTES

- 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.**
- Standard fittings are Parker A-LOK.
- Swagelok fittings replace standard Parker fittings.
- Replace singular "X" with 0 for EPDM body seals; 1 for Viton body seals
- Seal material compatibility:
 - EPDM - air, water, steam, ketones, and synthetic hydraulic oils.
 - Viton - air, fuel, oil, gas, petroleum-based hydraulic oils.
- A #20 mesh strainer is recommended.
- Warranty information disclosed at www.thermomegatech.com/terms-conditions/



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TVHATRA
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