

## TV/HAT-RA-LP

IN-LINE TEMPERATURE CONTROL VALVE



### ***BENEFITS***

- Unaffected by pressure variations
- Wide choice of set points
- Operates in any position
- Leak port (LP) senses changing upstream temperature

### ***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***

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



### ***OPERATION***

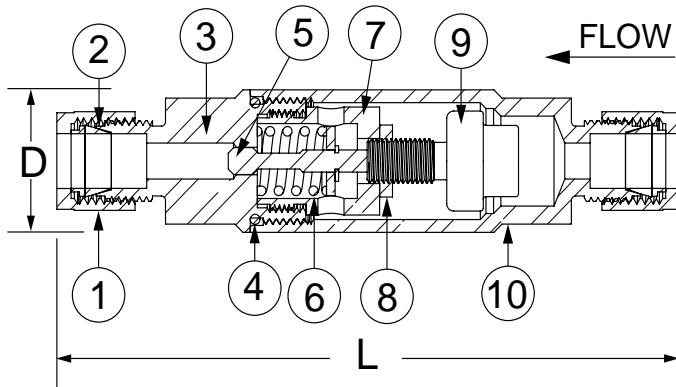
The *TV/HAT-RA-LP* is installed on the cooling water outlet of the equipment as an afterflow controller. At start-up, the valve is closed except for the “control leakage”, allowing a small amount of flow to sense the changing equipment temperature. As the outlet water temperature increases to within the operating range of the *TV/HAT-RA-LP*, the thermal actuator modulates the valve open. If the cooling water temperature is above the acceptable range, the valve will continue to modulate open allowing additional cooling flow. As the outlet water temperature falls, the valve then modulates toward the closed position, reducing flow. This modulating action maintains a relatively constant outlet water temperature.

# TV/HAT-RA-LP

## IN-LINE TEMPERATURE CONTROL VALVE



### PARTS & MATERIALS



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

### DIMENSIONS & CAPACITIES

TUBE O.D. SIZE	D		L		Weight		C <sub>v</sub>	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 <sup>1,5</sup>	Description <sup>4</sup>
223 - 102X00 - XXX	3/8" TV/HAT-RA-LP ¼ GPM
223 - 112X00 - XXX	3/8" TV/HAT-RA-LP-SW <sup>3</sup> ¼ GPM
224 - 102X00 - XXX	1/2" TV/HAT-RA-LP ¼ GPM
224 - 112X00 - XXX	1/2" TV/HAT-RA-LP-SW <sup>3</sup> ¼ GPM

### 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.
- Leak port discharge rate determined @ 60 PSIG (4.1 BAR).
- Replace singular "X" with 1 for EPDM body seals; 2 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/](http://www.thermomegatech.com/terms-conditions/)



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TVHATRALP  
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