

TV/HAT-RA-LP

IN-LINE TEMPERATURE CONTROL VALVE

BENEFITS

- Downstream actuator for greater sensitivity
- Unaffected by pressure variations
- Wide choice of set points
- Operates in any position
- Control leakport for increased sensitivity

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 perfect to control cooling water for compressors, engines, heat exchangers, welding equipment, electrical equipment, molding equipment, pump bearings. The TV/HAT-RA-LP continually senses cooling water outlet temperature and automatically modulates to maintain desired temperature. Optimum equipment temperature improves efficiency, reduces wear and conserves cooling water.



OPERATION

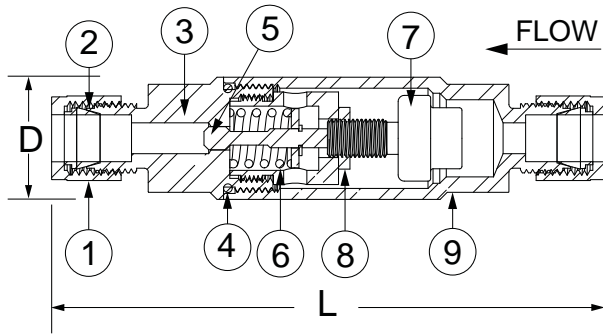
The TV/HAT-RA-LP is installed on the cooling water outlet of the equipment as an afterflow controller. At start-up, the valve is closed except for the "control leakage", which allows a small amount of flow so that the actuator inside the valve can sense the changing equipment temperature. As the outlet 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 slightly, the valve then modulates toward the closed position, reducing flow. This modulating action maintains a relatively constant outlet water temperature even as the cooling load changes.

TV/HAT-RA-LP

HIGH SAMPLE TEMPERATURE VALVE



PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	TUBING NUT ²	300 Series S/S
2	FERRULE ²	300 Series S/S
3	SEAT HOUSING	300 Series S/S
4	SEALING O-RING	EDPM or Viton ⁵
5	RAM-TYPE PLUG	300 Series S/S
6	OPERATING SPRING	300 Series S/S
7	ACTUATOR	300 Series S/S
8	LOCK NUT	300 Series S/S
9	VALVE BODY	300 Series S/S

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	0.52	0.24	0.5	150 PSIG (10 BAR)	150°F ⁶ over setpoint
1/2"	1.0	25	4.7	119	0.54	0.25			

ORDERING

Part Number ^{1,4}	Description ^{2,3}
223 - 102X00 - XXX	3/8" TV/HAT-RA-LP ¼ GPM
223 - 112X00 - XXX	3/8" TV/HAT-RA-LP ¼ GPM (Swagelok)
224 - 102X00 - XXX	1/2" TV/HAT-RA-LP ¼ GPM
224 - 112X00 - XXX	1/2" TV/HAT-RA-LP ¼ GPM (Swagelok)

NOTES

- Standard 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.
 - Note: Closing temperature is typically 10°F below opening temperature.
- Parker fittings standard unless noted.
- Leak port discharge rate determined @ 60 PSIG.
- 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 and petroleum based hydraulic oils.
- All TV/HAT-RA-LP valves are factory tested and covered by a 36 month prorated warranty.
- A #20 mesh strainer is recommended for use with all port sizes



Therm-Omega-Tech, Inc. 1-877-379-8258
 353 Ivyland Road www.ThermOmegaTech.com
 Warminster, PA 18974 valves@thermomegatech.com

