ThermOmegaTech®

TV/HAT-RA & TV/HAT-RA-LP

IN-LINE TEMPERATURE CONTROL VALVE

BENEFITS

- Regulates coolant flow to maintain constant temperature
- Self-operating, no power or signal required
- Unaffected by pressure variations
- Operates in any position
- Easy to install
- Wide choice of set-points





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 tight reliable shutoff
- Operates in narrow temperature band
- Leak Port (LP) option senses changing upstream temperature

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.

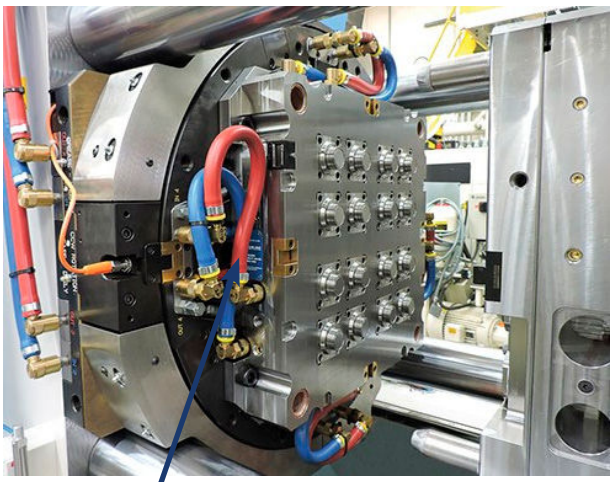
TV/HAT-RA-LP valves are ideal for controlling cooling water for compressors, engines, heat exchangers, welding equipment, electrical equipment, and molding equipment.

OPERATION

As the fluid temperature increases to within the operating range of the **TV/HAT-RA** or **TV/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 outlet fluid temperature.

At start-up, the **TV/HAT-RA-LP** is closed except for its "control leakage", which allows a small amount of flow to sense the changing equipment temperature.

SAMPLE APPLICATION

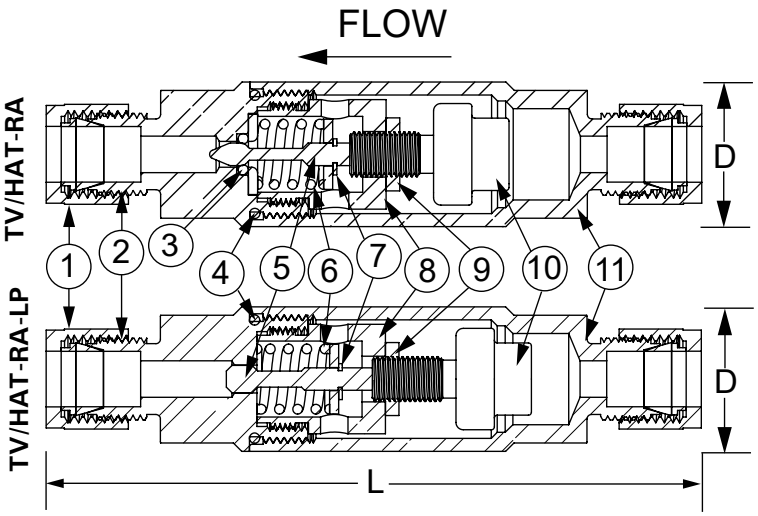


Install TV/HAT/RA-LP on each red line to keep entire molding block at the same temperature so all parts cool at the same rate.

TV/HAT-RA & TV/HAT-RA-LP

IN-LINE TEMPERATURE CONTROL VALVE

PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	TUBING NUT[2]	300 Series SS
2	DOUBLE FERRULE[2]	300 Series SS
3	SEAT SEAL	PTFE
4	SEALING O-RING	EPDM or Viton[5]
5	RAM-TYPE PLUG	300 Series SS
6	OPERATING SPRING	300 Series SS
7	E-CLIP	PH15-7 MO
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)	Range 150°F (83.3°C) over set-point with a limit of 300°F (149°C)
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[2]
223 - 110X00 - XXX	3/8" TV/HAT-RA-SS-SW[3]
224 - 100X00 - XXX	1/2" TV/HAT-RA-SS[2]
224 - 110X00 - XXX	1/2" TV/HAT-RA-SS-SW[3]

Part Number[1,5]	Description[4]
223 - 102X00 - XXX	3/8" TV/HAT-RA-LP ¼ GPM
223 - 112X00 - XXX	3/8" TV/HAT-RA-LP-SW[3] ¼ GPM
224 - 102X00 - XXX	1/2" TV/HAT-RA-LP ¼ GPM
224 - 112X00 - XXX	1/2" TV/HAT-RA-LP-SW[3] ¼ 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. Standard fittings are Parker A-LOK.
3. Swagelok fittings replace standard Parker fittings.
4. Replace singular "X" with 0 for EPDM body seals; 1 for Viton body seals
5. Seal material compatibility:
   a. EPDM - air, water, steam, ketones, and synthetic hydraulic oils.
   b. Viton - air, fuel, oil, gas, petroleum-based hydraulic oils.
6. A #20 mesh strainer is recommended.
7. 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