ThermOmegaTech®

TV/HAT

IN-LINE TEMPERATURE CONTROL VALVE

BENEFITS

- Eliminates live steam losses
- Self-operating, no power or signal required
- Downstream thermal actuator for greater sensitivity
- Unaffected by pressure variations
- Operates in any position
- Easy to install
- Wide choice of set-points



DESIGN FEATURES

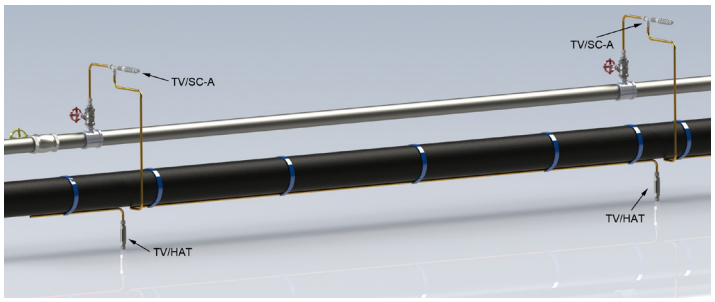
- Exclusive **Thermoloid**® thermal actuator
- Stainless steel body, fittings, spring and plug
- Compact, low mass - fast response
- Corrosion resistant - long service life
- Ram-type plug for tight reliable shutoff
- Operates in narrow temperature band

APPLICATIONS

TV/HAT (Tube Valve/Heat Actuated Trap) valves are ideal for use in conjunction with tracer tubing and tracing systems using pre-traced tubing bundles. **TV/HAT** valves replace conventional steam traps on winterization tracing, instrument tracing, condensate return system freeze protection, tracing for processes under 150°F (66°C), and other applications requiring in-line flow control based on temperature.

Excessively hot samples can cause damage to expensive and sensitive hardware and electronics. For process analyzers and similar instrumentation, it is important to assure that the process samples fluids are always below the maximum allowable temperature for such instruments. Sample coolers are commonly used to reduce sample temperatures to the acceptable limits. In the event of a loss of cooling fluid to the sample cooler, or if the desired sample temperature is exceeded for any reason, the **TV/HAT** valve will close to prevent equipment damage.

SAMPLE APPLICATION



OPERATION

The **TV/HAT** valve responds only to temperature. After condensate forms and cools to near the set-point, the **TV/HAT** valve modulates the flow to maintain a constant condensate discharge temperature. **TV/HAT** valves are wide open at start-up for rapid venting and initial heat-up. **TV/HAT** valves are self-draining after shutdown, to eliminate freeze damage.

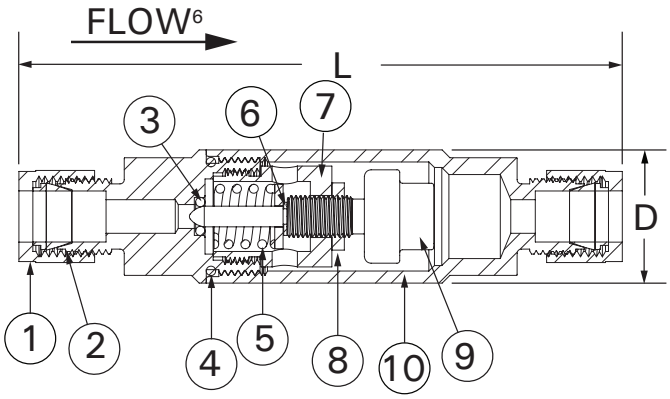
For heating of temperature sensitive instruments or process fluids, the reduced temperature available for tracing simplifies operations and eliminates overheating problems.

For other heat transfer fluids, **TV/HAT** valves maintain a constant discharge temperature, thus providing benefits of accurate process temperature control and improved efficiency.

TV/HAT

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	OPERATING SPRING	300 Series SS
6	E-CLIP	PH15-7 MO
7	RETAINER	300 Series SS
8	LOCKNUT	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_v	Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	Lb	Kg			
1/4″	1.0	25	4.4	112	0.5	0.2	0.5	300 PSIG (20.7 BAR)	Range 150°F (83.3°C) over set-point with a limit of 300°F (149°C)
3/8″	1.0	25	4.5	114	0.5	0.2			
1/2″	1.0	25	4.9	125	0.6	0.3			

ORDERING

Part Number[1,4]	Description
212 - 100X00 - XXX	1/4″ TV/HAT-SS[2] (303 SS)
212 - 110X00 - XXX	1/4″ TV/HAT-SS-SW[3] (303 SS)
213 - 100X00 - XXX	3/8″ TV/HAT-SS[2] (303 SS)
213 - 110X00 - XXX	3/8″ TV/HAT-SS-SW[3] (303 SS)
214 - 100X00 - XXX	1/2″ TV/HAT-SS[2] (303 SS)
214 - 110X00 - XXX	1/2″ TV/HAT-SS-SW[3] (303 SS)

Part Number[1,4]	Description
212 - 201X00 - XXX	1/4″ TV/HAT-S6[2] (316 SS)
212 - 211X00 - XXX	1/4″ TV/HAT-S6-SW[3] (316 SS)
213 - 300X02 - XXX	3/8″ TV/HAT-S6[2] (316 SS)
213 - 310X02 - XXX	3/8″ TV/HAT-S6-SW[3] (316 SS)
214 - 200X02 - XXX	1/2″ TV/HAT-S6[2] (316 SS)
214 - 210X02 - XXX	1/2″ TV/HAT-S6-SW[3] (316 SS)

NOTES

1. Full open temperatures “XXX” available: 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 120°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F.
   a. **Note: Closing temperature is typically 10°F above 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. Other seals available, consult our engineers.
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. Flow direction is reversed on valves that close over 210°F (98.9°C)
7. A #20 mesh strainer is recommended.
8. 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