

## TV/US-X & TV/US-XR

TEMPERATURE CONTROL VALVE



### BENEFITS

- Prevents process overheating
- Discharges minimum amount of media for temperature control
- Maintains optimal process temperature
- Quick and easy installation
- Long service life

### DESIGN FEATURES

- All stainless steel construction
- Exclusive **Thermoloid®** sensor/controller
- Narrow temperature band
- Compact low mass - fast response
- Ram-type plug for reliable shut off
- Unaffected by pressure variations

### APPLICATIONS

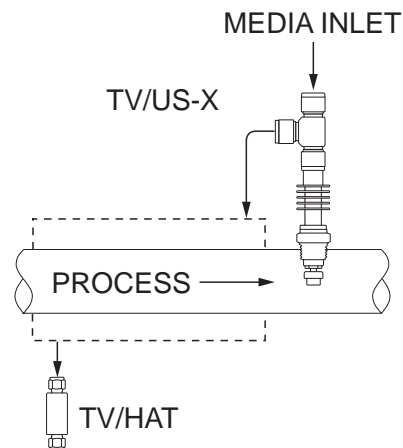
These compact self contained control valves can maintain very tight temperature control of any number of control loops using steam, liquid phase heat transfer media such as Dowtherm®, hot water, hot oil, glycol, compressed air, etc. In general they can be used whenever accurate but low cost control is required. The reverse acting model, **TV/US-XR** can be used to control cooling media to economically remove heat from equipment or a process. Controlling air flow to a vortex cooling device is a common application. Another common application is use of the **TV/US-XR** to control cooling media flow to a sample cooler in response to sample temperature. Sample heating applications are commonly controlled by the **TV/US-X**.

### OPERATION

The **TV/US-X** and **TV/US-XR** valves' **Thermoloid®** sensor/controller element may be placed in contact with the process line or pipe with the optional band-o-let fitting, or in the line with the integral 3/4 NPT bushing. This allows the temperature element to be in contact with the process to control the valve and regulate the inflow of heating media (or cooling media with the **TV/US-XR**). Input temperatures or steam supply can vary widely, but the control temperature is maintained within desired limits.



### SAMPLE APPLICATION

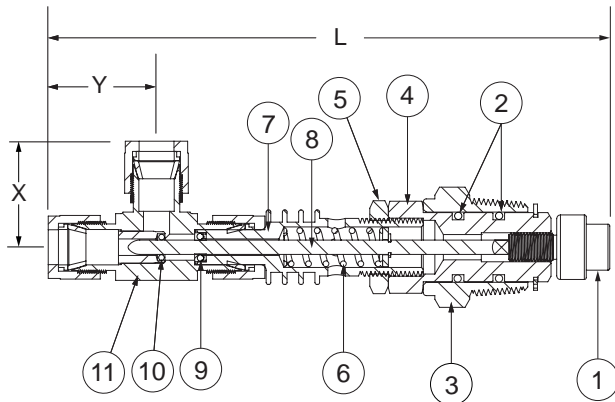


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TEMPERATURE CONTROL VALVE



## PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	THERMAL ACTUATOR	300 Series SS
2	BUSHING SEALS	See Note 3
3	BUSHING - 3/4" NPT	300 Series SS
4	ADAPTER	300 Series SS
5	LOCKNUT	See note #2
6	OPERATING SPRING	300 Series SS
7	YOKE	300 Series SS
8	PLUG/STEM ASSEMBLY	300 Series SS
9	STEM SEAL	PTFE
10	SEAT SEAL	PTFE
11	VALVE BODY	300 Series SS

## DIMENSIONS & CAPACITIES

TUB O.D. Size	L		X & Y		Weight		C <sub>v</sub>	Maximum Operating Pressure	Maximum Temperature	
	in	mm	in	mm	Lb	Kg			Valve End	Sensing End
3/8"	6.2	158	1.20	30	0.6	0.27	0.5	200 PSIG (13.8 BAR)	388°F (198°C)	150°F over setpoint
1/2"			1.42	36						

## ORDERING

Part Number <sup>1</sup>	Description
783 - 000000 - XXX	3/8" TV/US-X
784 - 000000 - XXX	1/2" TV/US-X
793 - 000000 - XXX	3/8" TV/US-XR
794 - 000000 - XXX	1/2" TV/US-XR

### NOTES

- Full open temperatures "XXX" available:
  - X Series:** 035°F, 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.
  - XR Series:** 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 above opening temperature for Direct Acting valves and 10°F below opening temperature for Reverse Acting valves. Consult factory for special higher or lower settings
- Optional Band-O-Let type attachment fitting must be specified when ordering.
- Viton is standard, others are available.
- Parker fittings are standard. Swagelok fittings are available.
- A #20 mesh strainer is recommended.
- Warranty information disclosed at [www.thermomegatech.com/terms-conditions/](http://www.thermomegatech.com/terms-conditions/)



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

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