



Mixing and Diverting



The Most Advanced, Reliable and Compact Self-Actuating
Thermostatic Valves Available for Temperature Control, Freeze
Protection, Steam Tracing and Conservation of Energy

www.ThermOmegaTech.com

MIXING AND DIVERTING VALVES

ThermOmegaTech®'s M/D temperature control valve is designed for 3-way mixing or diverting applications. For fast response, the valve is compact and low mass. ThermOmegaTech®'s valves are designed around our exclusive Thermoloid® sensor/controller that automatically and accurately proportions the flow in response to fluid temperature. The Thermoloid® sensor/controller is the most advanced and reliable thermal actuator of its type available today.

For mixing applications, the M/D will proportion the flow from two inlet ports to produce the desired outlet port temperature. For diverting applications, the M/D will divert or switch the inlet flow to either of two outlet ports depending on the fluid temperature.

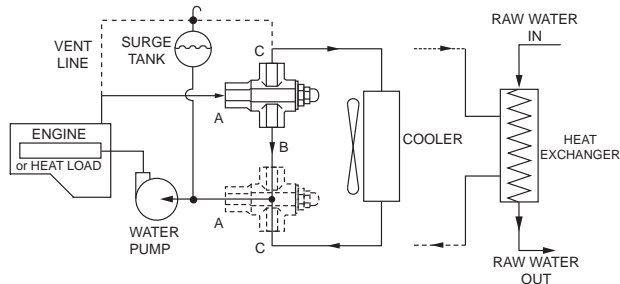
TYPICAL APPLICATIONS

- Cooling water control-Radiator
- Cooling water control-Heat Exchanger
- Hydraulic fluid cooling systems
- Direct cooling with raw water
- Lube oil cooling control
- Constant temperature baths, wash basins & sinks
- Loop-type circulation systems
- Direct injection water heating
- Hot water washdown stations
- Make-up water
- Electric system cooling
- Air conditioning
- Water conservation

SAMPLE APPLICATIONS

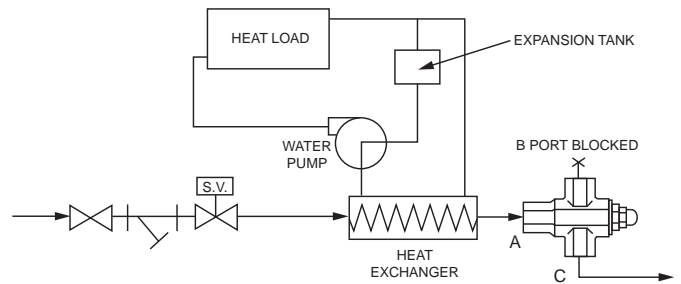
COOLING WATER CONTROL USING RADIATOR OR HEAT EXCHANGER

Valve shown in "diverting" position to control outlet temperature. In dotted position, valve will "mix" to control inlet water to engine.



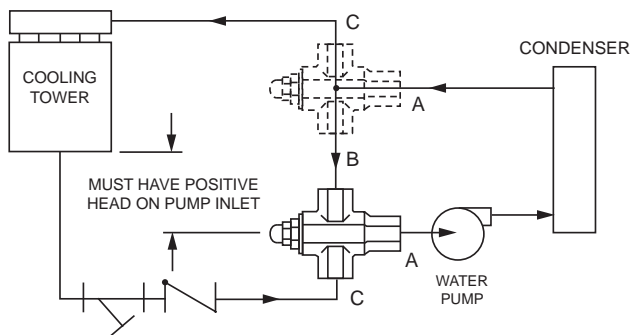
WATER SAVING APPLICATION

Valve as shown maintains minimum flow through cooler to conserve water, requires internal leak port to permit small flow for sensing.



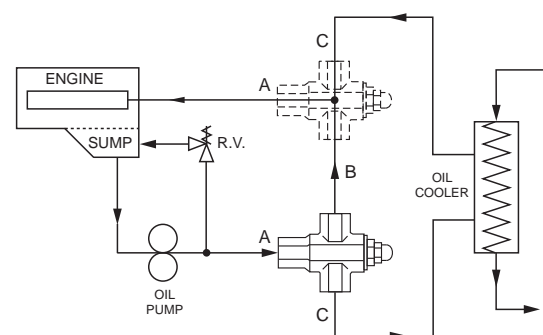
DIRECT COOLING WITH RAW WATER

Valve shown in "mixing" position to control temperature of inlet water to refrigeration system condenser. Valve in dotted position controls outlet temperature.



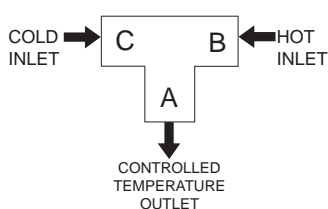
LUBE OIL CONTROL

Valve shown in "diverting" position to control oil sump temperature. In dotted position, valve will "mix" to control oil temperature to bearings or manifold.

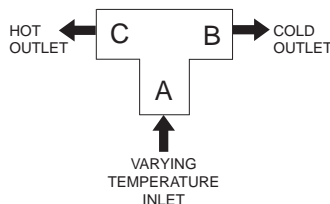


PLUMBING DIAGRAMS

FOR MIXING APPLICATIONS:



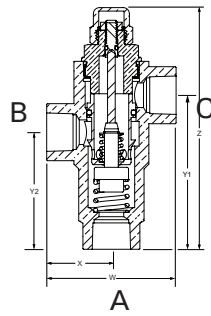
FOR DIVERTING APPLICATIONS:



*See note 4

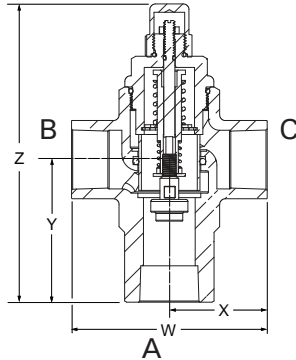
PART NUMBERS AND ORDERING

1/2" M/D



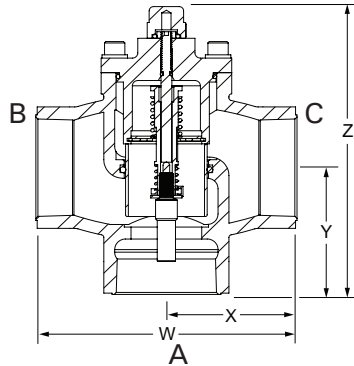
Part Number ¹	Description
353-00X000-XXX	1/2" M/D Valve - 316 SS Body, 300 Series SS Internals
353-02X000-XXX	1/2" M/D Valve - all 316 SS construction
353-01X000-XXX	1/2" M/D Valve - Bronze

1" M/D



Part Number ¹	Description
356-00X000-XXX	1" M/D Valve - Bronze
356-01X000-XXX	1" M/D Valve - 303 SS
356-02X000-XXX	1" M/D Valve - 316 SS Special Order Only

2" M/D



Part Number ¹	Description
359-0X4000-XXX	2" M/D Valve - SS

DIMENSIONS & CAPACITIES

Size NPT	Body Material	W		X		Y		Y1		Y2		Z		Weight		C _v	Maximum Operating Pressure	Maximum Operating Temperature	ANSI Body Compliance
		IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	Lb	Kg				
1/2"	SS	2.62	67	1.31	33	N/A		3.12	79	2.38	60	4.90	124	1.5	0.6	2.7	350 PSIG (24 BAR)	250°F (121°C)	300 Class
1/2"	Bronze					250 Class													
1"	Bronze	4.37	111	2.20	56	3.19	81	N/A	N/A	N/A	N/A	6.70	170	5.0	2.27	10.0	250 PSIG (17.2 BAR)		250 Class
1"	SS																		150 Class
2"	SS	6.00	152	3.00	76	3.00	76					6.80	173	11	5.0	18.0			

NOTES

- Seal material compatibility "X" available (replace singular X of part number with corresponding number below)
 - Buna-N for air (to 250°F), water, fuel, oil, gas, and petroleum-based hydraulic oils.
 - Viton for air (to 450°F), fuel, oil, gas, and petroleum-based hydraulic oils
 - EPDM for air (to 300°F), water, steam, ketones, and synthetic hydraulic oils
 - Fluorosilicone for air (to 400°F), aerospace industry petroleum oils/fuels, and diester-based lubricants
- For most applications, pressure difference between the hot and cold ports should not exceed 10 PSI.
- Set point temperatures "XXX" available: 035°F, 045°F, 050°F, 060°F, 070°F (+/- 8°F), 085°F, 090°F, 100°F, 105°F, 110°F, 125°F, 130°F (+/- 8°F), 135°F (+/- 8°F), 147°F (+/- 8°F), 152°F (+/- 8°F), 160°F, 170°F, 190°F, 200°F, 205°F, 210°F.
Note: Unless otherwise noted, during operation the valve will modulate the Cold side (C port) closed at 5°F below the set point, and the Hot side (B port) closed at 5°F above the set point.
- Customized temperature, materials, and port positions available upon request.

ThermOmegaTech[®], Inc. is an industry expert and leading manufacturer of self-actuated thermostatic technology including Thermostatic Valves, Actuators and Controls serving domestic and international markets for over 35 years.



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