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.

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.

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

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

Temperature control problems? Call us toll free: 1-877-379-8258
### PART NUMBERS AND ORDERING

#### 1/2” M/D

<table>
<thead>
<tr>
<th>Part Number1</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>353-00X000-XXX</td>
<td>1/2” M/D Valve - 316 SS Body, 300 Series SS Internals</td>
</tr>
<tr>
<td>353-02X000-XXX</td>
<td>1/2” M/D Valve - all 316 SS construction</td>
</tr>
<tr>
<td>353-01X000-XXX</td>
<td>1/2” M/D Valve - Bronze</td>
</tr>
</tbody>
</table>

#### 1” M/D

<table>
<thead>
<tr>
<th>Part Number1</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>356-00X000-XXX</td>
<td>1” M/D Valve - Bronze</td>
</tr>
<tr>
<td>356-01X000-XXX</td>
<td>1” M/D Valve - 303 SS</td>
</tr>
<tr>
<td>356-02X000-XXX</td>
<td>1” M/D Valve - 316 SS Special Order Only</td>
</tr>
</tbody>
</table>

#### 2” M/D

<table>
<thead>
<tr>
<th>Part Number1</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>359-0X4000-XXX</td>
<td>2” M/D Valve - SS</td>
</tr>
</tbody>
</table>

### DIMENSIONS & CAPACITIES

<table>
<thead>
<tr>
<th>Size NPT</th>
<th>Body Material</th>
<th>W</th>
<th>X</th>
<th>Y</th>
<th>Y1</th>
<th>Y2</th>
<th>Z</th>
<th>Weight</th>
<th>Cv</th>
<th>Maximum Operating Pressure</th>
<th>Maximum Operating Temperature</th>
<th>ANSI Body Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2”</td>
<td>SS</td>
<td>2.62</td>
<td>67</td>
<td>1.31</td>
<td>33</td>
<td>N/A</td>
<td>3.12</td>
<td>79</td>
<td>2.38</td>
<td>60</td>
<td>4.90</td>
<td>124</td>
</tr>
<tr>
<td>1/2”</td>
<td>Bronze</td>
<td>4.37</td>
<td>111</td>
<td>2.20</td>
<td>56</td>
<td>2.60</td>
<td>66</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6.70</td>
<td>170</td>
</tr>
<tr>
<td>1”</td>
<td>Bronze</td>
<td>6.00</td>
<td>152</td>
<td>3.00</td>
<td>76</td>
<td>3.00</td>
<td>76</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>8.80</td>
<td>173</td>
</tr>
</tbody>
</table>

### NOTES

1. Seal material compatibility “X” available (replace singular X of part number with corresponding number below)
   
   0 - Buna-N for air (to 250°F), water, fuel, oil, gas, and petroleum-based hydraulic oils.
   
   1 - Viton for air (to 450°F), fuel, oil, gas, and petroleum-based hydraulic oils
   
   2 - EPDM for air (to 300°F), water, steam, ketones, and synthetic hydraulic oils
   
   3 - Fluorosilicone for air (to 400°F), aerospace industry petroleum oils/fuels, and diester-based lubricants

4. For most applications, pressure difference between the hot and cold ports should not exceed 10 PSI.

5. 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, 115°F, 125°F, 130°F (+/- 8°F), 135°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.

6. 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.

353 Ivyland Road, Warminster, PA 18974

For sales and technical assistance:
Call: 1-877-379-8258
Email: valves@thermomegatech.com
Visit: www.ThermOmegaTech.com