Technical Specifications

Simple yet efficient design requires minimum maintenance. Heavy duty construction assures long valve life. Valves are temperature actuated, self-powered, fully balanced, and applicable to heating (D-150-G) or cooling (R-150-G) processes using water, oil, steam or other fluids.

Features

Standard Features

- **Self Contained, Completely Automatic** - Simply install and set temperature from a variety of ranges. No further adjustments or external power required.
- **Compact Design** - Requires minimum installation space with minimum piping requirements.
- **Versatile** - Designed for a wide variety of applications, both heating and cooling.

Minimal pressure drop across valve

- Fully adjustable within range of control
- Calibrating spring
- Stainless steel seal bellows - no packing
- Sturdy brass body, working pressures up to 125 PSI
- Single seated valve, seat and valve carefully finished for tight closing
- Stainless steel trim
- Double union - easy installation in any position
- Stainless steel thermostat bellows assures trouble-free operation
- Copper capillary tube protected by flexible brass armor

Optional Features

- Flanged bulb for duct mounting
- Calibrated adjusting screw with wheel handle for quick adjustment
- Plain brass bulb, less adaptor, for open tank or cabinet mounting
- Brass bulb with lock nut for bracket mounting
- Union fitting on capillary for closed tank
- 6 ft. plastic coated capillary and bulb for plating tanks (no tank adaptor)
- 6 ft. stainless steel capillary and bulb
- 1/16” weep hole on outlet side of valve for constant flow
- Brass and stainless steel bulb wells
- Other options available - consult factory

Free-flowing, modulating valve provides energy savings with continuous and accurate control
Heating - Steam Requirements
Use the chart to the right to find the amount of steam required to heat a given amount of water. The example shows that, if it is desired to heat 450 GPH of water from 60º to 160ºF (100º rise), the amount of steam required would be 350 lbs./hr. For fuel oil, about half as much steam is required. Using the same figures as to the right for example - 450 GPH of oil and 100ºF rise, the steam requirement would be 350/2 or 175 lbs./hr.

<table>
<thead>
<tr>
<th>Inlet &amp; Outlet Sizes</th>
<th>Cv</th>
<th>Weight, lbs.</th>
<th>For HEATING closes on rising temperature</th>
<th>For COOLING opens on rising temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Series No. Direct-acting</td>
<td>Series No. Reverse-acting</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>3.03</td>
<td>8</td>
<td>D-150-G</td>
<td>R-150-G</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>6.03</td>
<td>8</td>
<td>D-151-G</td>
<td>R-151-G</td>
</tr>
<tr>
<td>1&quot;</td>
<td>9.51</td>
<td>8</td>
<td>D-152-G</td>
<td>R-152-G</td>
</tr>
</tbody>
</table>

Pressure ratings - lbs.
- Inlet & outlet: Double union
- Valve body - straightway: Brass body
- Valve trim: Stainless steel seat and stainless steel & silicone valve disc
- Valve construction: Single-seated, balanced, with stainless steel seal bellows
- Standard capillary length: 6', longer or shorter lengths available.
- Standard temperature ranges available:
  - 55º-95ºF
  - 85º-125ºF
  - 105º-145ºF
  - 120º-160ºF
  - 130º-170ºF
  - 150º-190ºF
  - 175º-215ºF
  - 185º-225ºF
- Special:
  - temperature ranges: 80º-170ºF, 110º-190ºF, 165º-225ºF

NOTE: When ordering, specify size, model number, temperature range, capillary length, working pressure, shut-off temperature (controls are factory set at middle of range unless otherwise specified).

Valve Operates In Any Mounting Position
- Upright
- Upside Down
- Horizontal
- Any Angle

Bulb Wells - Available in stainless steel or brass

Dimensions D-150-G and R-150-G Controls

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**Specifications**

**Heating - Valve Size**
Use this chart to determine the correct size valve to deliver a given amount of steam. The example shows that, if 350 lbs./hr. of steam is required and the steam pressure drop available at the control is 50 lbs./sq. in., a 3/4" D-151-G control valve will be adequate.

**Cooling - Water**
Use this chart to find the correct size reverse-acting or cooling valve to deliver the required water flow. In the example shown, a requirement of 52 G.P.M. at 100 lbs./sq. in. supply pressure indicates that a 3/4" R-151-G control valve will be needed.

**Typical Applications**

**D-150-G Heating - Storage Water Heater**

**R-150-G Cooling - Heat Exchanger**