The AMES Models 900GD and 900AD are full port, dual chamber basic valves that incorporate a one-piece disc and diaphragm assembly. This assembly is the only moving part within the valve, allowing it to open or close as commanded by the pilot control system.

When pressure is applied to the upper diaphragm chamber and released from the lower diaphragm chamber, the valve travels to a closed position. When pressure is applied to the lower diaphragm chamber and released from the upper diaphragm chamber the valve travels to a full open position. When pressure is balanced between the upper and lower diaphragm chambers, the valve will hold an intermediate position until commanded to modulate open or closed by the pilot control system.

Model 900GD: Globe Pattern Dual Chamber Basic Valve
Model 900AD: Angle Pattern Dual Chamber Basic Valve

**Operating Pressure**
Threaded = 400 psi / 150 Flanged = 250 psi / 300 Flanged = 400 psi

**Operating Temperature**
Buna-N: 160°F Maximum
EPDM: 300°F Maximum
Viton: 250°F Maximum
Flow Rate - Gallons per minute (Water)

Pressure Drop (p.s.i.)

Angle

Globe

<table>
<thead>
<tr>
<th>Valve Size - Inches</th>
<th>2</th>
<th>2-1/2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Continuous Flow Rate Gpm (Water)</td>
<td>210</td>
<td>300</td>
<td>485</td>
<td>800</td>
<td>1850</td>
<td>3100</td>
<td>5000</td>
<td>7000</td>
<td>8500</td>
<td>11100</td>
</tr>
<tr>
<td>Maximum Intermittent Flow Rate Gpm (Water)</td>
<td>265</td>
<td>390</td>
<td>590</td>
<td>1000</td>
<td>2300</td>
<td>4000</td>
<td>6250</td>
<td>8900</td>
<td>10800</td>
<td>14100</td>
</tr>
<tr>
<td>C_v Factor GPM (Globe)</td>
<td>45</td>
<td>75</td>
<td>100</td>
<td>175</td>
<td>490</td>
<td>770</td>
<td>1200</td>
<td>1750</td>
<td>2125</td>
<td>2890</td>
</tr>
<tr>
<td>C_v Factor GPM (Angle)</td>
<td>57</td>
<td>91</td>
<td>125</td>
<td>215</td>
<td>571</td>
<td>990</td>
<td>1530</td>
<td>2525</td>
<td>2885</td>
<td>3575</td>
</tr>
</tbody>
</table>

Maximum continuous flow based on velocity of 20 ft. per second.
Maximum intermittent flow based on velocity of 25 ft. per second.
The C_v Factor of a value is the flow rate in US GPM at 60° F that will cause a 1 psi drop in pressure.
The factors stated are based upon a fully open valve.
Cv factor can be used in the following equations to determine Flow (Q) and Pressure Drop (ΔP):

\[ Q (\text{Flow}) = C_v \sqrt{\Delta P} \]
\[ \Delta P (\text{Pressure Drop}) = \left( \frac{Q}{C_v} \right)^2 \]

Headloss

Valve Cover Chamber Capacity

<table>
<thead>
<tr>
<th>Valve Size (in)</th>
<th>2</th>
<th>2-1/2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>fl.oz.</td>
<td>4</td>
<td>10</td>
<td>10</td>
<td>22</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Gal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-1/4</td>
<td>2-1/2</td>
</tr>
</tbody>
</table>

Valve Travel

<table>
<thead>
<tr>
<th>Valve Size (in)</th>
<th>2</th>
<th>2-1/2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel (in)</td>
<td>1/2</td>
<td>5/8</td>
<td>3/4</td>
<td>1</td>
<td>1-1/2</td>
<td>2</td>
<td>2-1/2</td>
<td>3</td>
<td>3-1/2</td>
<td>4</td>
</tr>
</tbody>
</table>

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