Piston Valves
Sizes ½” to 8”, Class 150, 300 and 800

L&T Valves offers glandless Piston Valves for reliable long-term performance in steam, condensate as well as process lines.

The versatile valve can be used for both isolation and throttling applications, and is available with flanged, socket-weld and screwed ends.

Sealing is effected by the linear motion of the piston, between upper and lower valve rings - when the piston engages with the lower ring, the valve closes, and when the piston aligns with the upper ring, the valve opens. Further, the piston in conjunction with the upper ring prevents leakage to atmosphere.

Compliance Standards
- Valve Design: ASME B16.34, EN12516-2
- Wall Thickness: ANSI B16.34
- Face-to-Face: ASME B16.10, ASME B16.11
- Flange Dimensions: ANSI B16.5
- Pressure Testing: API 598

Features
- Large effective sealing area - Reliable shutoff (ANSI Leakage Class VI)
- Glandless design - No leakage to atmosphere
- Reinforced sealing rings and Belleville washers - Compensates for thermal expansions, Reliability
- Sealing not affected by presence of dirt or any other impurities in the media
- Online Serviceable - Sealing rings can be replaced without removing the valve from line
- Long service life
- Lower cost of ownership

Option
Balanced Piston Valves - To address high torque requirement due high inlet pressure, in sizes above DN65

Range

<table>
<thead>
<tr>
<th>Materials/ Class (End Connections)</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>40</th>
<th>50</th>
<th>65</th>
<th>80</th>
<th>100</th>
<th>150</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Steel/ Class 150 (Flanged End)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Cast Steel/ Class 300 (Flanged End)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
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<tr>
<td>Cast Steel/ Class 300 (Screwed/ Socket-weld)</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Forged Steel/ Class 800 (Screwed/ Socket-weld)</td>
<td>●</td>
<td>●</td>
<td>●</td>
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</tr>
</tbody>
</table>

Socket weld ends – as per ASME B16.11 Integral flanged ends - as per ASME B16.5 (#150, #300)
# Materials of Construction

<table>
<thead>
<tr>
<th>No.</th>
<th>Part</th>
<th>Cast Steel - #150 &amp; #300</th>
<th>Forged Steel - #800</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>A216 Gr. WCB</td>
<td>A105</td>
</tr>
<tr>
<td>2</td>
<td>Bonnet</td>
<td>A216 Gr. WCB</td>
<td>A105</td>
</tr>
<tr>
<td>3</td>
<td>Spindle</td>
<td>AISI 410</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Piston</td>
<td>AISI 304</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Split-Nut</td>
<td>Brass</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Lantern Bush</td>
<td>AISI 304/ A743 CA15</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Lower Valve Ring</td>
<td>Grafoil® with SS Reinforcement</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Upper Valve Ring</td>
<td>Grafoil® with SS Reinforcement</td>
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</tr>
<tr>
<td>9</td>
<td>Stud</td>
<td>A193 Gr. B7</td>
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</tr>
<tr>
<td>10</td>
<td>Nut</td>
<td>A194 Gr. 2H</td>
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</tr>
<tr>
<td>11</td>
<td>Belleville Washers</td>
<td>50 Cr V4</td>
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</tr>
<tr>
<td>12</td>
<td>Hand Wheel</td>
<td>Cast Iron</td>
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</tr>
</tbody>
</table>

## Industries
- Power Plants
- Refinery & Petrochemical Industry
- Chemical & Pharmaceutical Industry
- Fertilizer Industry
- Solvent Extraction Industry
- Paper & Pulp Industry
- Edible Oil Industry
- Dairy Industry
- Distilleries
- Sugar Plants

## Applications
- Steam Header
- Steam Manifolds
- Condensate Manifolds
- Thermic Fluid Lines
- Pressure Reducing Stations
- Desuperheating Stations
- Steam Trap Isolation Valves
- Process Steam & Utilities
- Chemicals
- Fatty Acids