MaxFlo 4 Eccentric Rotary Plug Control Valve

The Flowserve Valtek MaxFlo 4 control valve is a high performance eccentric rotary plug valve designed for the process industry. It features a large capacity, standard hardened trim and superior shaft blow-out protection. This valve is available in sizes 1 through 12 inches, ASME Class 150, 300 and 600 as well as DIN PN 10, PN16, PN 25, PN40 and PN63.

An optional ISA 75.08.01 or DIN EN 558 series 1 long-pattern body makes this valve an easy drop-in replacement for a globe control valve.

The MaxFlo 4 is suitable for most applications; its control valve features include:

- Highest Rated Cv
- Precise Control
- Reliable Shut-off
- Most Current Safety Standards
- Fugitive Emissions Elimination
- Integral Noise Reduction Plates

MaxFlo 4 Valve Specifications

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DIN</th>
<th>ASME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sizes</td>
<td>DN 25, 40, 50, 80, 100, 150, 200, 250 and 300</td>
<td>NPS 1, 1.5, 2, 3, 4, 6, 8, 10 and 12</td>
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<tr>
<td>Pressure Classes</td>
<td>PN 10, 16, 25, 40 and 63</td>
<td>Class 150, 300 and 600</td>
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<tr>
<td>End Connection</td>
<td>EN 1092-1 (Form B1, D, F, B2)—Flanged &amp; Wafer</td>
<td>B16.5 (Raised Face, RTJ)—Flanged &amp; Wafer</td>
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<tr>
<td>Face to Face</td>
<td>EN 558: 2012-03 series 36 (short) EN 558: 2012-03 series 1 (globe)</td>
<td>ISA 75.08.02 (short) ISA 75.08.01 (globe)</td>
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<tr>
<td>Packing</td>
<td>PTFE V-Ring, Braided PTFE, Graphite, Sureguard XT, Garlock SVS, LATTYflon 3265 LM and LATTYgraf 6995 NG (meeting requirements for TA-Luft, ISO 15848-1 and EPA)</td>
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<tr>
<td>Packing Type</td>
<td>Single, Twin, Vacuum, Live Loaded, Fire Safe and O-Ring</td>
<td></td>
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<tr>
<td>Temperature</td>
<td>-100°C to 400 °C (-148°F to 750°F)</td>
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<tr>
<td>Plug and Seat</td>
<td>Standard, Hardened and Soft Seat</td>
<td></td>
</tr>
<tr>
<td>Shut-Off</td>
<td>ANSI/FCI 70-2-2006: Class IV (metal seat) and VI (soft seat)</td>
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<tr>
<td>Rangeability</td>
<td>Up to 160:1</td>
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<tr>
<td>Trim</td>
<td>100%, 40% (NPS sizes 1 – 6, DN 25 – 150), 75% (NPS sizes 8 - 12, DN 200 – 300)</td>
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<tr>
<td>Actuator</td>
<td>NR Diaphragm, VR Piston and SuperNova Rack &amp; Pinion (optional: manual, electric)</td>
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<tr>
<td>Positioner</td>
<td>Logix 420 (optional: Logix 3000, Logix 500, XL-90)</td>
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Highest Rated Cv
The unique design of the MaxFlo 4 shaft and plug provide as much as 70% more Cv compared to the competition. This allows customers to get more flow when needed and sometimes allows for a smaller, more economical valve to be used.

Precise Control
The MaxFlo 4 polygon connection between the shaft and plug is a proven superior method for making demanding mechanical connections that are stronger, more precise and have a substantially longer service life. This reduces backlash and the high strength of the polygon connections makes them capable of withstanding greater shock loads under extreme torque reversal conditions.

Reliable Shut-off
The MaxFlo 4 double-offset eccentric plug rotates into the seat at an angle that eliminates sliding over the seat surface. This design reduces seat wear, and thereby decreases maintenance requirements and costs. At the same time, a tight ANSI Class VI shutoff is easily obtainable using the soft seat design.

Safety Standard
The shaft is designed to meet the safety requirements of industry standard ASME B16.34 to ensure that the shaft is retained even if the actuator is removed when the valve is still pressurized. This is standard on every MaxFlo 4 to provide our customers with confidence and safety.
Separate bonnet ensures positive anti-blowout, accommodates multiple packing options, and offers flexibility in material selection for demanding applications.

Blow out proof shaft required by ASME B16.34 2004 Sec 6.5 ensures safety. Standard on every MaxFlo 4.

Heavy-duty rigid metal seat, with hardfaced or soft-seat options, provides tighter shutoff, and easier maintenance. Available in full area and several reductions in every size to suit your process needs.

An economical flangeless configuration of the MaxFlo 4 is also available. The standard flanged body is the same length. To replace existing globe valves we offer the flanged body with the same face to face length as a globe valve (Per ISA 75.08.01).
Open Flow Path gives as much as 70% more Cv than competitive valves that have the shaft obstructing the flow. In many cases it is possible to use a smaller, more economical MaxFlo 4.

**Precision NC machined plug and shaft** significantly reduces maintenance costs by allowing replacement of only the necessary parts.

**Polygon shaft/plug** connection for precise robust control.

**Flanged end post** allows for easy maintenance.

**Hard stainless steel plug** requires no breakout torque and increases valve life as the plug lifts off the seat immediately when it begins rotating.

**Shimless seat** offers simplified assembly and easy maintenance.
Eliminate Fugitive Emissions

Special Flowserve packing sets, such as SureGuard XT live loaded packing, are available to control fugitive emissions. Packing options include: PTFE V-Ring, Braided PTFE, Graphite, Sureguard XT, Garlock SVS, LATTYflon 3265 LM and LATTYgraf 6995 NG (meeting requirements for TA-Luft, ISO 15848-1 class B and A, and EPA standards).

Integral Noise-Reduction Plate Option

Designed to reduce noise levels by 5 to 10 dBA, our integral plate fits into the valve body. It can be easily maintained using the same tools required for the seat retainer. It is perfectly suitable with all gases in the shaft-downstream direction, and the plate does not change the length of the valve.

Integrated Control Valve Solution

Operated by a diaphragm, piston, or rack-and-pinion actuator coupled with a Logix digital positioner, the MaxFlo 4 maintains high positioning accuracy, repeatability, controlled high speed and reliable response. With the advanced diagnostic solutions that can be seamlessly integrated into a host control and/or plant asset management system, along with state-of-the-art features and performance, the MaxFlo 4 is the most economical Eccentric Rotary Plug valve in the market.

NR Diaphragm Rotary Actuator

The Flowserve NR diaphragm rotary actuator is a rugged single-acting actuator designed to provide high performance, long life and reliability. The diaphragm actuator is very sensitive to small changes in air supply, which allows it to precisely move the valve plug without over shoot.
Logix 3000MD+ Digital Positioner
Easiest calibration and configuration of any positioner available. Single, push-button calibration and DIP switch configuration allow you to fully commission the positioner in a matter of minutes. Using ValveSight Software DTM brings the availability of 24/7 diagnostics. For more information see document number LGENIM0059 and LGENIM3404 at www.flowserve.com.

Logix 500MD+ Series Digital Positioner
To minimize your total cost of ownership and maximize productivity, Flowserve developed the Logix MD+ digital positioner. The Logix MD+ digital positioner allows for fast, simple commissioning, extremely accurate and reliable control, and diagnostic features that provide powerful and easy ways to determine when maintenance is required.

ValveSight™ Diagnostic Software – Prevention delivered
ValveSight is a diagnostic solution for control valves that can be seamlessly integrated into a host control and/or plant asset management system. The power of ValveSight is the intelligent diagnostic engine -- which detects an emerging condition in the valve, actuator, positioner, and control signal -- that may indicate a performance, safety, or environmental problem. ValveSight advises which corrective actions to take to prevent a failure.
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