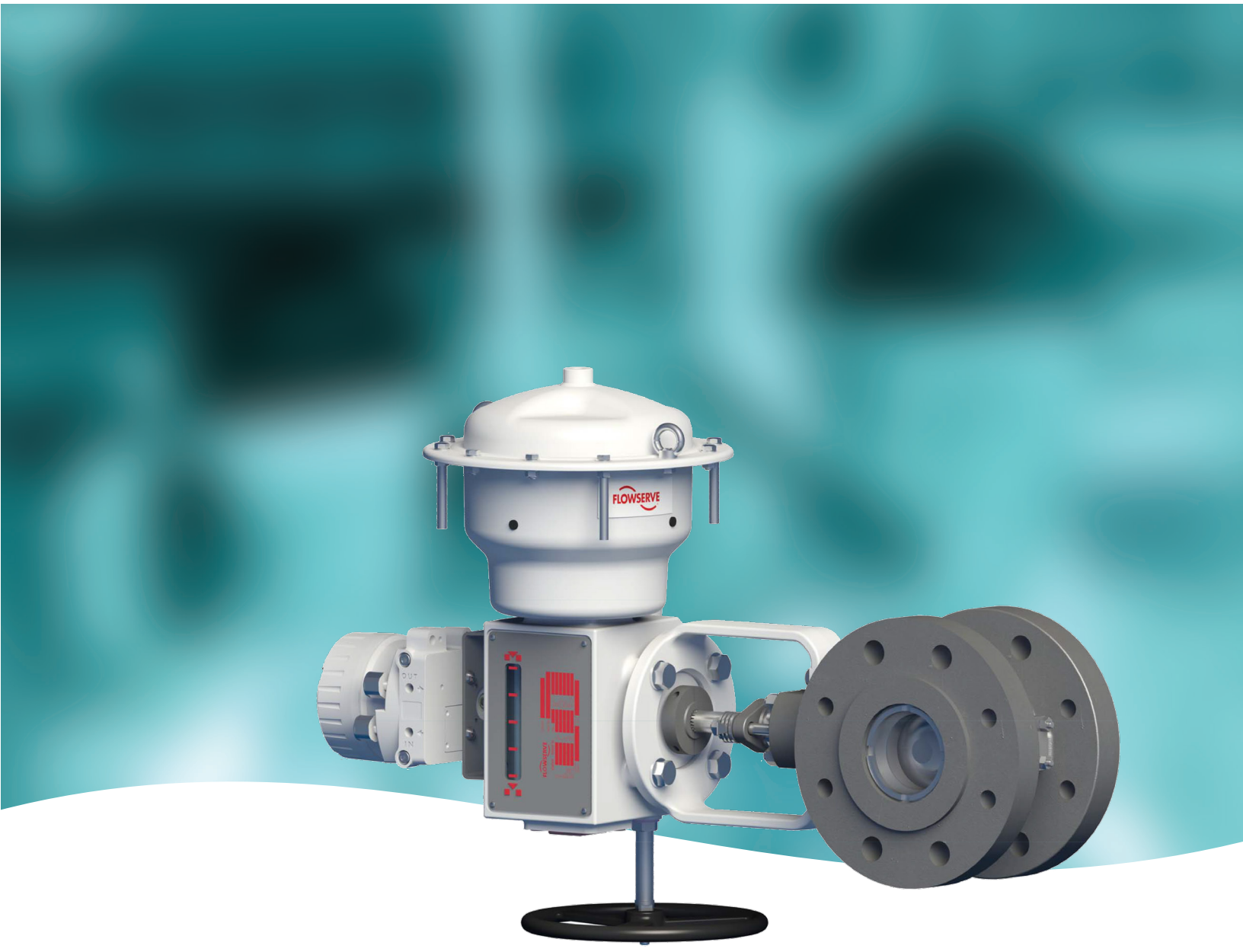
FLOWSERVE

Valtek MaxFlo 4

Rotary Plug Control Valve



Experience In Motion

Flowserve® – Solutions to keep you flowing

Flowserve is one of the world's leading providers of control valves. Our engineers work with customers to understand even the most challenging applications. This way, Flowserve partners with customers to develop industry leading technical solutions that help customers keep their process flowing.

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.

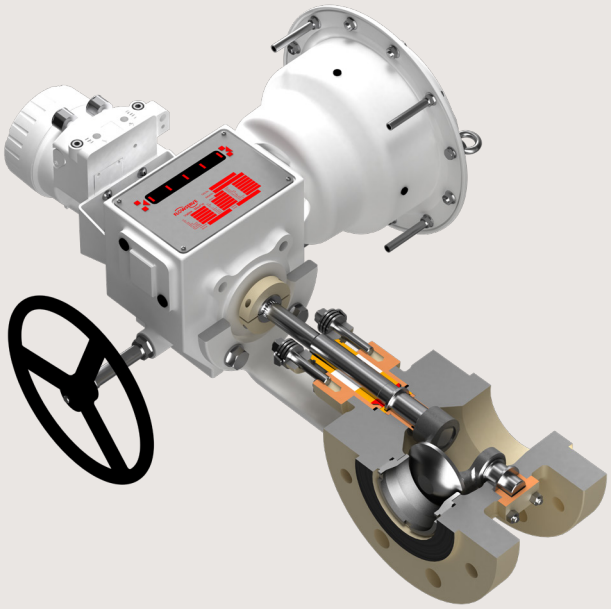
An optional ISA 75.08.01 or DIN EN 558 series 1 long-pattern body makes this valve an easy drop-in replacement for a globe control valve.

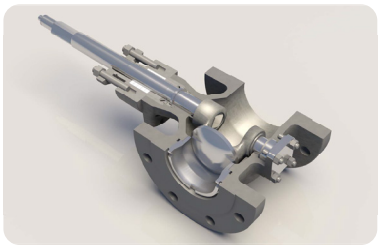
The MaxFlo 4 is suitable for most applications; its control valve features include:

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

MaxFlo 4 Valve Specifications

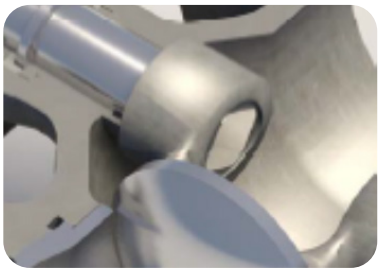
Options	DIN	ASME
Sizes	**DN 25, 40, 50, 80, 100, 150, 200, 250 and 300**	**NPS 1, 1.5, 2, 3, 4, 6, 8, 10 and 12**
Pressure Classes	PN 10, 16, 25, 40 and 63	Class 150, 300 and 600
End Connection	EN 1092-1 (Form B1, D, F, B2)—Flanged & Wafer	B16.5 (Raised Face, RTJ)—Flanged & Wafer
Body Materials	Carbon steel: 1.0619	Carbon Steel: A216-WCC
	Stainless Steel: 1.4408	Stainless steel: A351-CF8M
Face to Face	EN 558: 2012-03 series 36 (short) EN 558: 2012-03 series 1 (globe)	ISA 75.08.02 (short) ISA 75.08.01 (globe)
Packing	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)	
Packing Type	Single, Twin, Vacuum, Live Loaded, Fire Safe and O-Ring	
Temperature	-50°C to 400 °C (-148°F to 750°F)	
Plug and Seat	Standard, Hardened and Soft Seat	
Shut-Off	ANSI/FCI 70-2-2006: Class IV (metal seat) and VI (soft seat)	
Rangeability	Up to 160:1	
Trim	100%, 40% (NPS sizes 1 – 6, DN 25 – 150), 75% (NPS sizes 8 -12, DN 200 – 300)	
Actuator	NR Diaphragm, VR Piston and SuperNova Rack & Pinion (optional: manual, electric)	
Positioner	Logix 420 (optional: Logix 3000, Logix 500, XL-90)	





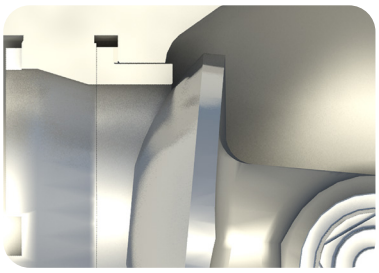
Highest Rated Cv

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.



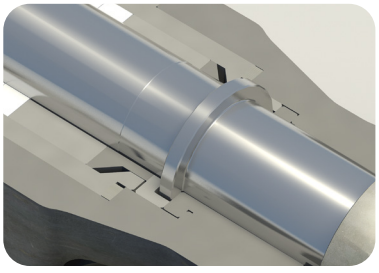
Precise Control

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.



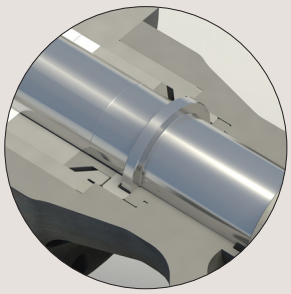
Reliable Shut-off

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.



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.

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

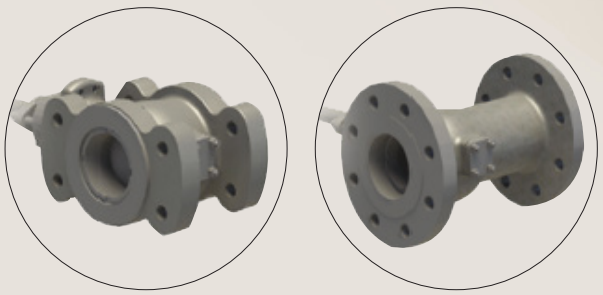
Separate bonnet ensures positive anti-blowout, accommodates multiple packing options, and offers flexibility in material selection for demanding applications.

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.

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

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).

Flanged end post allows for easy maintenance.



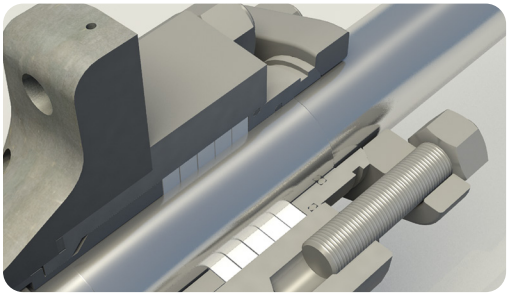
Shimless seat offers simplified assembly and easy maintenance

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.

Driving Innovation for Continuous Process Industries

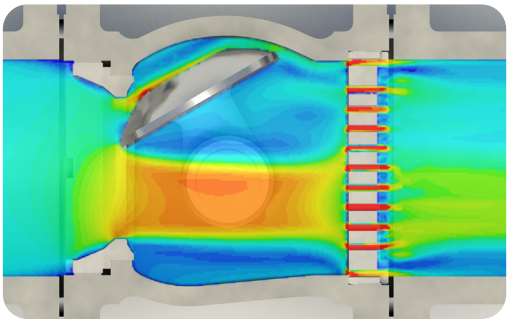
Eliminate Fugitive Emissions

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.



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. 6

Valtek MaxFlo 4
Rotary Plug Control Valve

Unparalleled Service: Day or Night, Worldwide

Flowserve Quick Response Centers (QRCs) are equipped with thousands of parts, including OEM and Flowserve custom-built products. Each has the manpower and equipment to expedite time-sensitive repairs of any size.

VR Spring Cylinder Rotary Actuator

The Flowserve VR spring cylinder rotary actuator combines high torque and pneumatic stiffness with excellent throttling capabilities. These characteristics are designed into a lightweight, rugged and compact assembly, making the Flowserve spring cylinder rotary actuator an excellent choice for quarter-turn applications.

SuperNova Rack & Pinion Rotary Actuator

The Flowserve SuperNova rack & pinion rotary actuator is designed for reliability, versatility and safety. Rugged, yet compact construction combined with technical solutions make this product extremely reliable in the severest of operating conditions.

Logix 420 Digital Positioner

The Logix 420 is the latest addition to the digital positioner family from Flowserve. When mounted to the MaxFlo 4 eccentric rotary plug control valve, Logix 420 provides the user with a cost competitive solution for the general service, explosion proof market.

For more information see document number LGENIM0106 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.

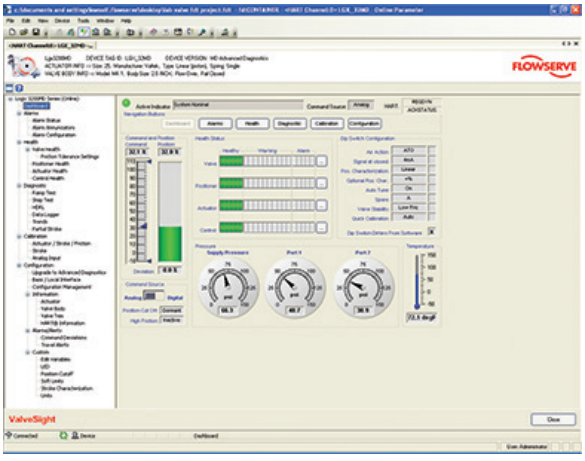
Logix 3000MD+ Digital Positioner

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.

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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