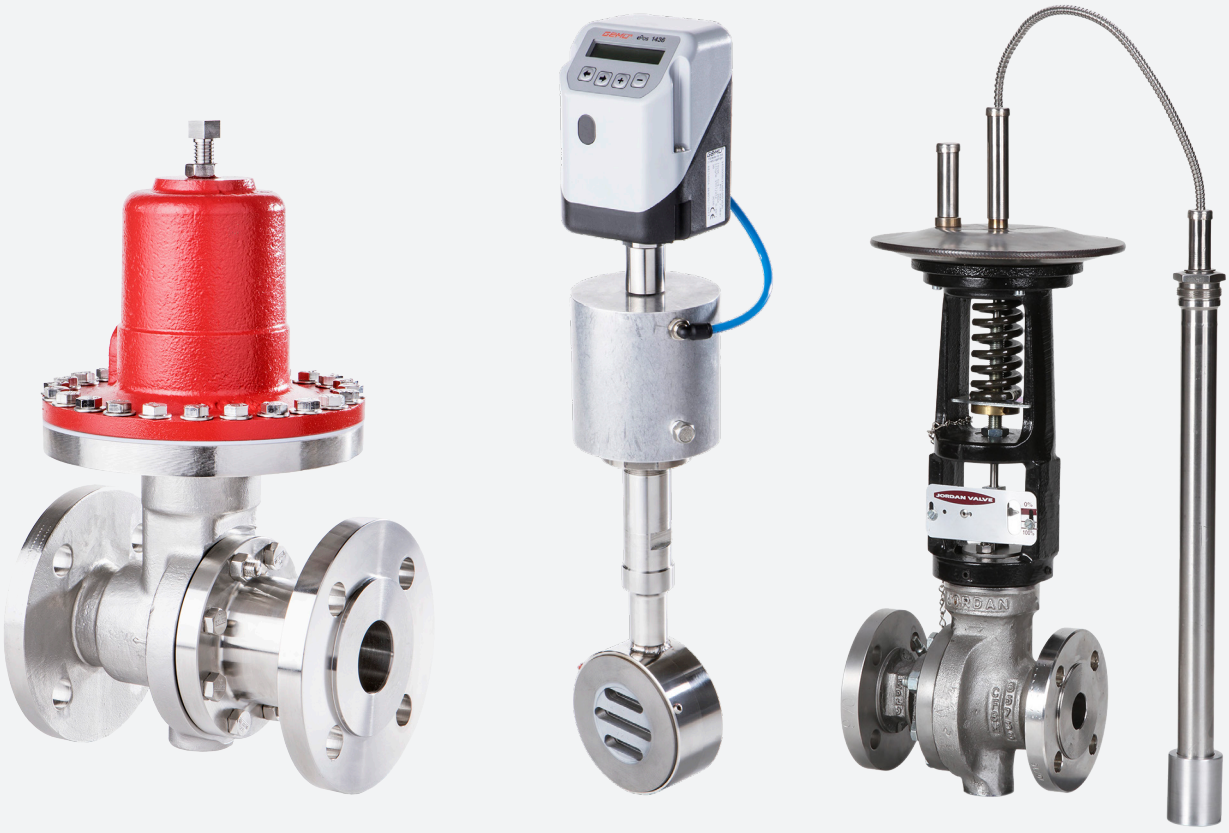
SLIDING GATE VALVES



UNPARALLELED PERFORMANCE
UNPARALLELED RELIABILITY

JORDANVALVE

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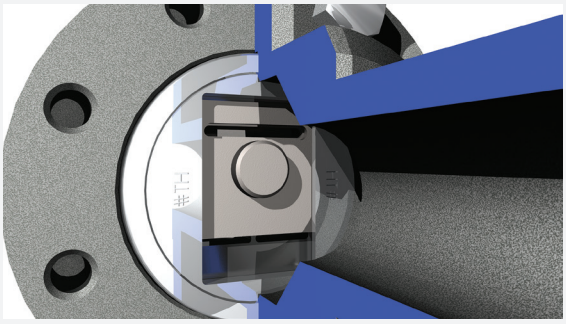
SIMPLE CONCEPT, SUPERIOR PERFORMANCE

You will notice something different in a Jordan valve . . . the sliding gate seat. A remarkably simple concept that offers superior performance and benefits not found in traditional rising stem and rotary valves.

The sliding gate seat is made up of two primary parts: a movable disc and stationary plate with multiple orifices. Together, this seat set achieves levels of performance, reliability and accuracy that are hard to find in other valve designs.

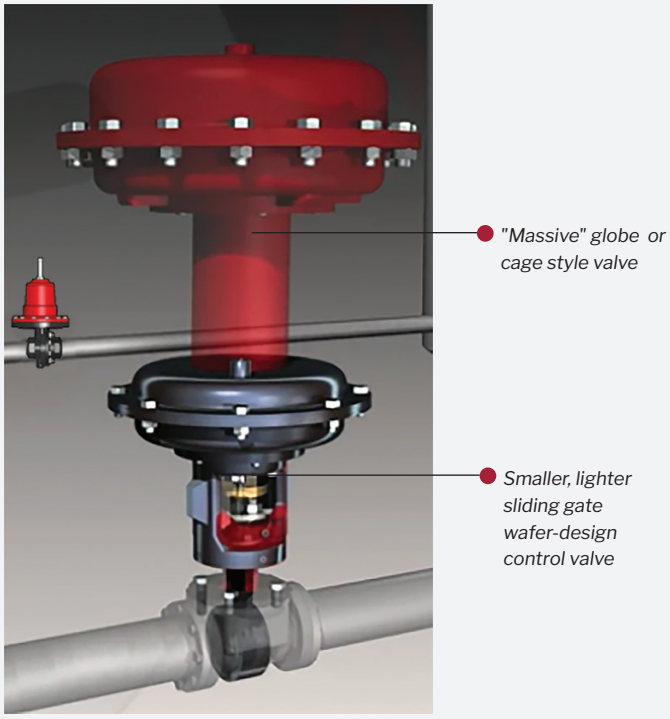


ADVANTAGES

Quiet Operation

Compared to conventional globe and cage designs, the sliding gate seat generates between 5-10dB less noise. You won't find a premium price adder for "low-noise trim!" The sliding gate valve is inherently quieter than other types of valves because:

- The disc and plate remain in constant contact, eliminating the chatter found in globe-style designs
- The straight-through flow passage minimizes turbulence found in globe and rotary designs, a prime cause of valve noise
- The multiple orifices in the plate and disc divide the flow into smaller flow streams resulting in less noise.



Size and Weight

As the line size increases, so too does the size and weight of the valve. Because of the short stroke length, a sliding gate valve is typically smaller and lighter weight than a globe/cage style valve.

For the Mark 75 Series control valve, the shipping size, weight, packing waste and costs decrease dramatically due to the wafer style design.

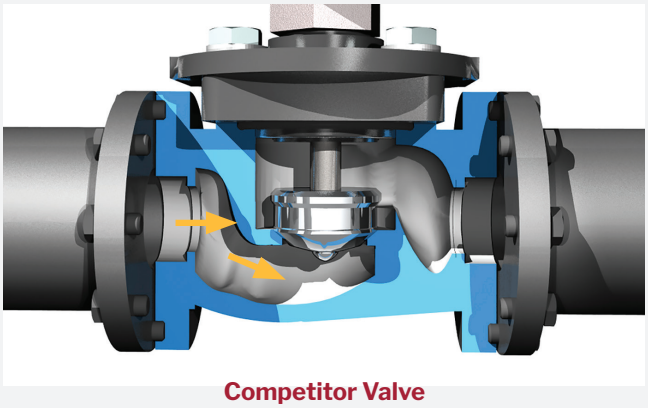
Reduced Turbulence

When throttling, the control member of a rotary control valve will direct the flow to the sealing area of the seat, causing premature seat leakage.

The tortuous flow path of a globe style design creates greater turbulence, noise and wear - reducing seat life and compromising control. In flashing or cavitating service, damage to the valve body is common, mitigated only through expensive material upgrades or elaborate trim configurations.

The multi-orifice straight through flow path of the sliding gate reduces turbulence and leads to quieter operation, reduced wear, longer seat life and better control.

For example, when combined with the ultra-compact wafer body design of the Mark 75 Series, erosion of the seats and valve body is virtually eliminated. Dramatic cost savings can be realized.



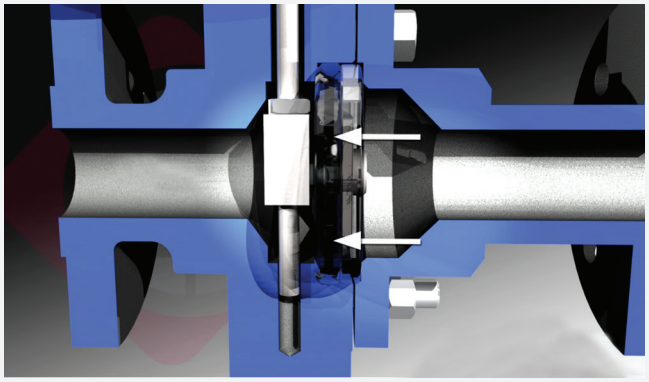
Competitor Valve

The tortuous flow of a traditional globe style valve.

Straight-Through Flow

The seat set is perpendicular to the flow, unlike the traditional globe style design. With straight through flow, the turbulence is reduced and superior trim life is achieved.

The sliding gate design provides exceptional low flow control since the flow works with the seat and not against it. In a typical globe style design, the flow goes underneath the plug, working against the plug. With the sliding gate, the flow pushes the disc against the plate, helping to hold the desired setpoint. This also enables the disc and plate to lap and clean themselves as the valve modulates. The sliding gate design "wears in" instead of wearing out!



Jordan Valve

The straight-through flow of the sliding gate

Short Stroke, Fast Response

The total stroke length is just a fraction of the equivalent globe valve. In pressure regulators, the stroke length is typically 1/3 that of a globe valve, reducing the amount of droop (deviation from setpoint) in the regulator.

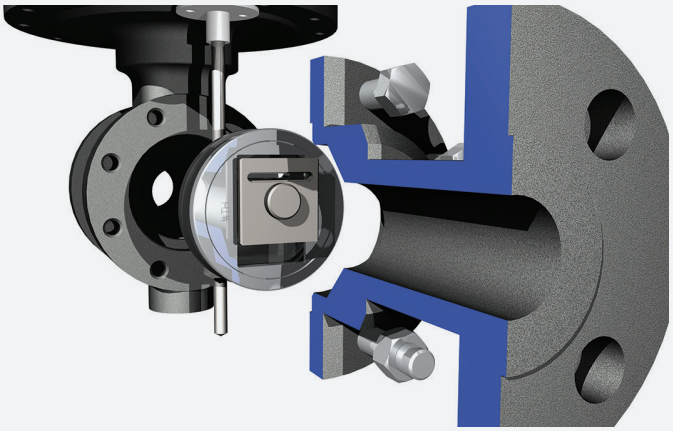
In control valves, the sliding gate allows the use of reduced air consumption and weight minimization. The short stroke reduces packing wear and lengthens the diaphragm life.

Seat Coatings

Jordan Valve offers coatings and seat materials to meet almost any application need. Jorcote, our standard seat material, is a proprietary composite coating on Stainless Steel. This material is extremely hard and delivers outstanding performance. Other coatings include Teflon and chrome plating.

Tight Shutoff

The sliding gate design provides an area of closure, not a line of closure. When the valve is closed, the disc and plate are overlapped by 1/32". This area of closure helps reduce the effects of wire draw which is one of the most common causes of seat leakage. What does this mean for you? Less maintenance, downtime and more opportunity to increase yields and profits.



Easy to Maintain

The simple design of the sliding gate valve makes maintenance easy to perform. Disassembly of the valve is very simple, and since the seats are not pressed or screwed into the valve body, they conveniently lift out. Should your flow requirements change, interchangeable Cv's (Kv's) are available in coefficients as low as 0.0008 (0,0007) and as high as 600 (519) (depending on body size).

Durability

- **Self-Cleaning:** the movement of the sliding gate seats generates a self-cleaning action, with any leak-producing deposits being cleaned off by the sharp shearing action of the disc moving across the plate.
- **Materials:** our proprietary Jorcote seat material is extremely hard (@RC85) and delivers outstanding wear resistance.
- **Multi-orifice:** The multi-orifice design separates erosive flow into smaller, less damaging streams. The erosive forces are dissipated over the numerous slots eliminating the single wear points associated with other valve types and quieter operation.
- **Eliminates Damaging Chatter:** The upstream pressure holds the disc in constant contact with the plate. This prevents the sudden, damaging (and noisy) contact which occurs in some globe designs. The constant contact between the disc and plate actually generate a self-lapping effect which results in less friction and tighter shutoff than when the valve leaves the factory.
- **Engineer tested:** Jordan Valve engineers conducted a steam test using 250 psig (17,2 barg) saturated steam. The test was designed so that the valve would fully stroke open and closed each time it was actuated. The pressure drop across the valve was the full 250 psig (17,23 barg). The results were impressive. Our standard Jorcote/Chrome seat combination had less friction after 70,000 cycles than when it was new and the seat leakage was well below ANSI Class IV limits. Jordan Valve engineers are constantly testing and improving our products to ensure optimal high performance in the field.

JORLON DIAPHRAGM

The Jorlon diaphragm extends the life of your regulators and reduces the overall cost of ownership. This diaphragm was developed as an alternative to the standard SST diaphragm.

Jorlon is a proprietary modified PTFE material that positively impacts regulator reliability, performance and service life. It is the standard and preferred diaphragm in most regulator applications and provides many benefits.

- **Chemical Compatibility:** since Jorlon is PTFE based, it is compatible with the same media as Teflon™
- **Temperature Range:** Jorlon can operate up to up to 450°F (232°C) and down as low as -40°F (-40°C)
- **High Pressure Limits:** Jorlon has been tested in excess of our regulators maximum allowable pressures. In some cases, Jorlon can be rated as high as 700 psi at 100°F (48,3 bar at 38°C)
- **Improved Performance:** SST diaphragms, by nature, are rigid and have decreased sensitivity. Jorlon approaches the droop/offset performance seen in true elastomer diaphragms resulting in greater set point accuracy as flow rates change
- **Long Life:** Jorlon has been extensively tested for durability. The diaphragm was tested on both 300 psi (20,6 bar) air and 450°F (232°C) steam with no failures. Jorlon has been cycle-tested over 1,000,000 full stroke cycles with no failures
- **Lower Ownership Costs:** less droop means better accuracy, and better accuracy means better overall performance and productivity. Its long life means less down time to replace a failed diaphragm which translates into higher profits

DISC AND PLATE

OPEN

The disc and plate are shown in the full open position. Note, the straight-through flow. This minimizes flow turbulence, a major cause of poor control, noise and wear in other valve designs.

CLOSED

The disc and plate are shown in the full closed position. The 1/32" overlap assures tight shut-off. The overlap also provides a buffer of extra metal to defeat any fringe erosion of wire drawing.