

VALVTECHNOLOGIES



IsoTech®

Parallel Slide Gate Valves

High-pressure • High-temperature • High-performance • Zero-leakage

IsoTech®, ValvTechnologies' parallel slide gate (PSG) valve, addresses advanced design features and benefits and the need for true in-line valve reparability in large diameter, high-energy piping systems resulting from those enhancements. Specifically designed for steam and feedwater applications, IsoTech® valves provide bi-directional, zero-leakage using our exclusive HVOF RiTech® hardcoating processes.



Applications.

IsoTech® valves are built to withstand the most severe applications. High-pressure, high-temperature, high-cycle, abrasive, corrosive and caustic media have all been considered in the design of our product line.

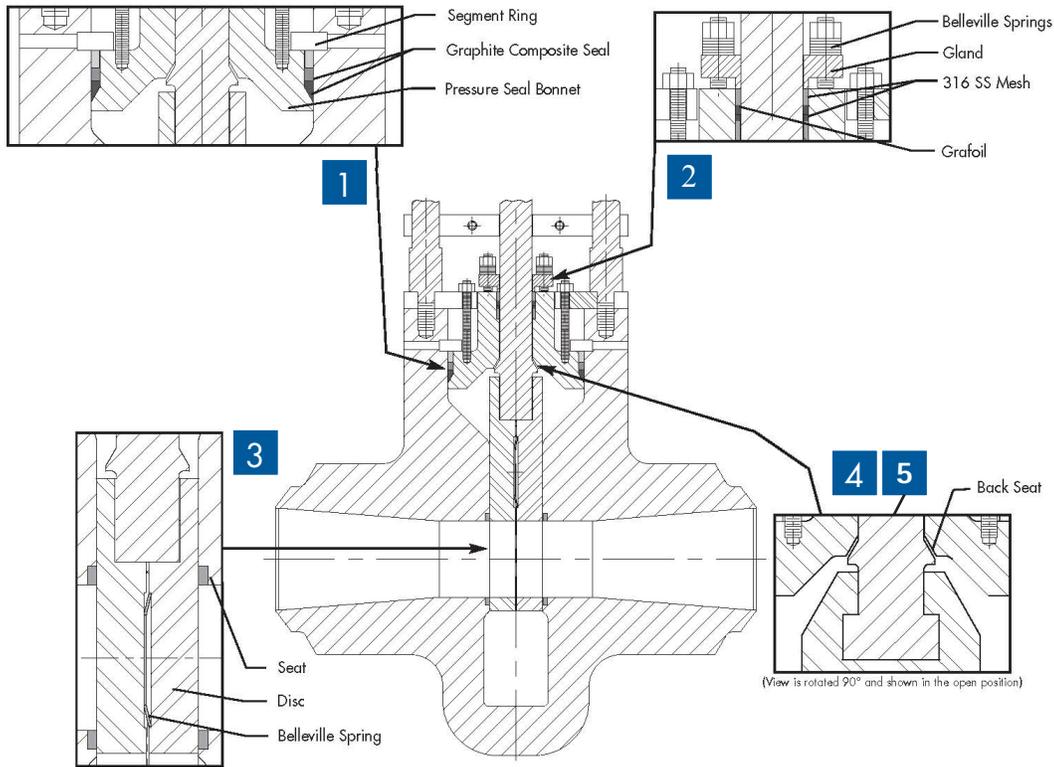
- Main steam isolation
- Cold reheat isolation
- LP heater isolation
- HP heater isolation
- Feedwater isolation

- 6 - 36"
- ANSI/ASME Class 600 - 4500
- Four-year, zero-leakage guarantee

ValvTechnologies provides field proven solutions for severe service applications.



Integral Seat, Four-Year Zero-Leakage Guarantee



- Chrome carbide overlay of stem, discs and guides
- Position seating
- Internal travel position stops
- External position indicator
- Zero-leakage
- Live loaded stuffing box
- Reliable repeatable shut off
- Protected seats

1 Bonnet Area

The pressure seal bonnet has been designed with a graphite composite seal. The bonnet has sufficient mechanical bolting to ensure the seal does not relax during periods when the system is not pressurized. In addition to the high reliability of the seal, the bonnet area has been designed to minimize the problems associated with maintenance on large gate valves by oversizing the segment rings. The valve has been designed so that the bonnet does not have to be forced in to the valve bonnet throat to allow for the segment rings to be removed. The large bolting used to ensure that the pressure seal is always loaded has also been utilized to enable simple disassembly of the bonnet once the easy to extract segment rings have been removed.

2 Gland Area

The gland design is similar to the standard design employed throughout the ValvTechnologies' valve product line. It features additional graphite due to the sliding stem. The stem and gland are hardcoated ground and polished. The packing is secured by our standard four-bolt minimum live loaded packing system which has 316SS woven wire mesh anti-extrusion rings compressing a Grafoil® center ring to ensure a dependable seal.

3 Discs and Seat Area

The valve discs and seats have been hardcoated with the same chrome carbide coating (68-72 RC) as its counterpart ValvTechnologies' metal seated ball valves. These seats are magnitudes harder than Stellite 6, (typically 34-38 RC), and are lapped to achieve zero-leakage under full differential pressure conditions, including vacuum. The large Inconel Bellville spring load ensures a high initial seal with the line pressure increases assisting the sealing. The chrome carbide hardcoated web guide ensures the discs are kept parallel through the entire valve stroke, whether the valve is in the open or closed position, overcoming a common gate valve problem. As the valve is cycled under differential pressure, the extremely hard surfaces continually burnish and polish each other rather than scratching and galling.

4 Back Seat Area

The back seat is hardcoated with chrome carbide (typical hardness 68-72 RC) and polished to achieve zero-leakage.

5 T-slot and Oversized Diameter Stem

Lends to the durability and robust design

IsoTech®

Features	Benefits
The sealing surfaces are coated with chrome-carbide hardcoating to RC 72 hardness, then diamond lapped for a precision fit	The exceptional hardness and temperature ratings to 1800°F make our valves extremely resistant to attack of abrasives and fluids, particularly steam and flashing water.
Designed for ease of maintenance	The only requirement is for the disc to be flat against the seat. This is easily accomplished as there are no precise angles to maintain. Pressure seal bonnet has been designed to facilitate easy removal when necessary.
Protected seats	In the full open position, the flow through "conduit" is positioned precisely between the seats, eliminating turbulence and flow impingements on the seats. There is no gap between our conduit and the valve seat. Small gaps in our competitors' valves cause extreme turbulence and in some cases cavitation.
Self-cleaning	Frequent valve usage polishes the surface for less torque and improved sealing. The high spring load insures contact throughout the stroke of the valve and prevents particulates migrating between the disc and seat also helps assist in the honing action.
Various flow control options, including a v-port orifice	This is ideal for warm-up and some bypass requirements
Stem extensions	Because of the low break-away and running torque, various stem extensions are available so that handwheels and actuators can be located remote from the valve.
Tight shut-off	As a standard, ValvTechnologies meets zero-leakage requirements on low-pressure air and high-pressure water.
High spring load	ValvTechnologies' very high spring load not only assures contact between the gate and seat, but at all positions from open to close. This allows zero-leakage on hydrogen or vacuum.
Parallel discs	Unlike conventional designs where the discs are only parallel in the closed position, IsoTech® valves are designed to maintain its parallel discs from both the fully-open to the fully-closed position.
Oversized stem diameter in comparison to other PSG designs along with or in combination with the tee-slot as opposed to a threaded and pinned hanger.	Increased reliability with this durable, robust design.

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