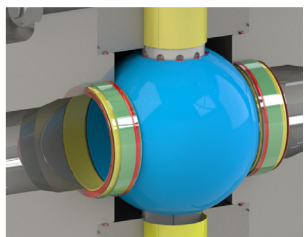
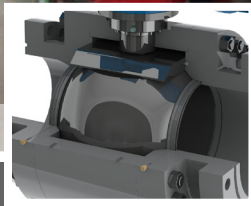
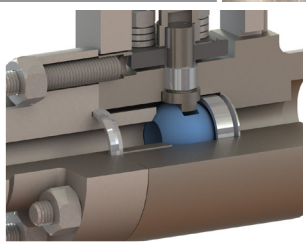


VALVTECHNOLOGIES®



Engineered Products for Severe Service Applications™

ValvTechnologies' Products and Capabilities Overview



ValvTechnologies' mission is to provide zero-leakage isolation valves and process solutions for severe service applications.

Solutions.

As a global leader in the design and manufacturing of severe service valves, ValvTechnologies has established a worldwide reputation for superior quality and dependability with customers in every industry.

From standard applications to the most sophisticated, ValvTechnologies is committed to providing solutions for customers to manage their processes safely and efficiently. Our approach at ValvTechnologies is based on customer satisfaction, safety, people, process and performance. By equipping highly trained people with the latest technology, ValvTechnologies has created an atmosphere where quality and reliability are built into its products from start to finish. All of ValvTechnologies' valves are designed with customers' requirements in mind and offer proven reliability, superior engineered performance and unique safety features. By focusing on these principles, ValvTechnologies has become an integral part of its customers' asset management strategy.

We work directly with customers to develop solutions that meet their unique process requirements and specialty applications.



Corporate Capabilities



Company.

ValvTechnologies is a committed partner in providing solutions to manage your process - saving time, money and improving overall system efficiency.

Since 1987, ValvTechnologies has maintained a culture of innovation by continuously expanding its design, production and technology capabilities. ValvTechnologies provides an unsurpassed level of reliability to customers in the fossil power, nuclear generation, oil and gas, mining, hydrocarbon, pulp and paper and various specialty industries. ValvTechnologies globally spans across 217,000 square feet (20,160 square meters) of manufacturing and office space which includes research and development, production, a complete machining facility, certified welding department and testing. These resources, together with a large inventory of parts and stock valves, allow ValvTechnologies to have complete control of all aspects of the manufacturing process, even for the most demanding projects.

The background of the entire page is a photograph of an offshore oil rig at sunset. The sky is a mix of deep blue and vibrant orange/pink, with scattered white clouds. The rig itself is silhouetted against the bright sky, with some lights visible on its structure. The water in the foreground is dark and calm.

People.

From engineering and design to manufacturing, our employees make the difference.

At ValvTechnologies, our employees are our most valuable assets. Made up of functional teams that focus on customer service, safety, product development, quality management, assembly and testing, our staff is committed to continually developing innovative designs, production and technology capabilities. With a full staff of professional engineers, a technical sales team and certified service technicians, ValvTechnologies is more than a manufacturer - we are a partner for providing superior solutions to your process needs.

Process.

At ValvTechnologies, our processes and procedures ensure that our valves exceed our customers' needs.

From raw material to the finished product, we are constantly looking for methods to apply innovative technologies to our process. While many valve manufacturers are focused on cutting corners to save costs, we remain true to our core design principles, relentlessly pursuing product and process improvements that in the long term provide measurable benefits for our customers.

Performance.

ValvTechnologies sets the standard for zero-leakage valve solutions.

At ValvTechnologies, we are totally committed to quality. We measure our performance against the standards set in our Integrated Quality Program. Our Quality Assurance department diligently pursues opportunities for improvement, while the entire organization takes ownership of the quality program. In this way, we can improve our processes while increasing manufacturing efficiency.

For a complete list of ValvTechnologies' certifications, please visit www.valv.com.

The background of the entire page is a photograph of an offshore oil rig. The rig's complex metal structure, including its derrick and various platforms, is silhouetted against a vibrant sunset sky. The sky is a mix of deep blues, purples, and pinks, with scattered white clouds. The rig's lights are on, creating a warm glow that contrasts with the cool tones of the twilight. The overall scene conveys a sense of industrial scale and operational readiness in a remote environment.

Customer Focus.

ValvTechnologies is an integral part of its customers' asset management strategy: customer satisfaction, safety, proven reliability, superior engineered performance. ValvTechnologies is a committed partner in providing solutions to manage your process - saving time, money and improving overall system efficiency.

Safety.

ValvTechnologies is committed to providing our customer with solutions so they can improve safety for their most important assets: their people.

Research and Development.

ValvTechnologies' Research and Development facility is located in Houston, Texas and includes over 10,000 sq/ft of dedicated space. The facility is equipped with the latest equipment resources available, including finite element analysis (FEA) and computational fluid dynamics (CFD). In addition, capabilities include running high-cycle valve tests at ambient and high-temperatures and the ability to collect real-time test data utilizing the latest LabVIEW™ software. ValvTechnologies' in-house research and design capabilities include:

- High-temperature testing
- High-pressure testing
- Load/force testing
- Torque testing
- Cycle testing
- Fugitive emissions testing
- Data acquisition

We work directly with customers to develop solutions that meet their unique process requirements and specialty applications.



At Your Service.

ValvTechnologies is committed to helping our global network of customers maintain peak valve performance. With authorized repair centers around the world, ValvTechnologies can address virtually any service or repair challenge that may arise, 24 hours a day, seven days a week.

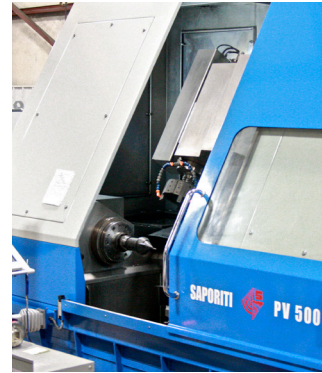
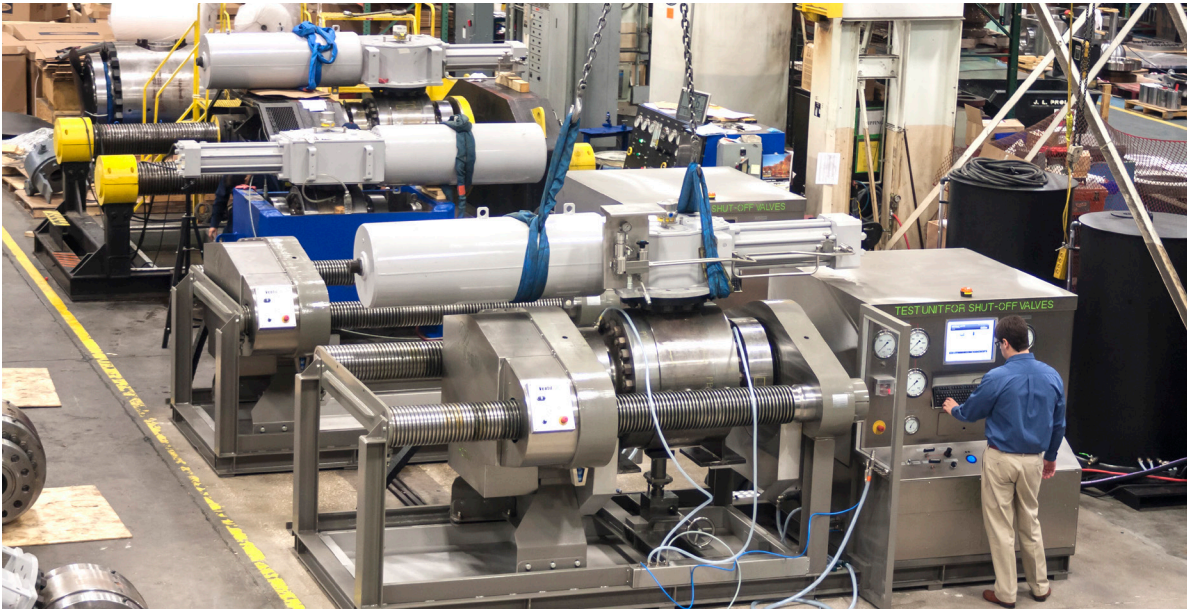
While the ValvTechnologies' service department is headquartered in Houston, Texas, its capabilities extend globally. ValvTechnologies' experienced, factory-trained field service engineers and technicians can troubleshoot, diagnose and repair valve and actuator-related problems not only in ValvTechnologies' products, but other manufactures' as well.

With nearly 30 years experience, ValvTechnologies has not only designed the world's best high-performance valves, they also developed a system of service that maintains the performance and value of your investment, reducing total cost of ownership. Our range of services includes complete factory repairs, in-house or on-site, as well as maintaining an extensive stock of spare parts. In addition, our proprietary in-house ball and seat coating repairs allows the ValvTechnologies' service team to respond quickly to our customer's needs and ensure the performance and value of their severe service valve investment.

To locate a authorized
repair center near you,
visit www.valv.com.



Manufacturing Capabilities



Grinding.

State-of-the-art ball grinders are used to precision-grind balls to OEM specifications. Grinding capabilities range from 2 - 43".

Testing.

Valves manufactured and repaired in our facility are fully tested per industry requirements and, in most cases, exceed industry standards. Testing capabilities range from 3/8 - 36" nominal pipe size up to and exceeding ANSI/ASME 4500 special class.

Welding.

ValvTechnologies leads the industry with our unparalleled in-house welding capabilities. Our extensive capabilities include six new state-of-the-art machines, an Arc-5 cladding machine and five Fronius cladders. ValvTechnologies employs more than 20 welders, has provided hundreds of hours of training and developed leading edge procedures that have been proven to work exceptionally well.

ValvTechnologies' quality policy is to provide superior, defect-free products and services to our customers that meet or exceed all legal and regulatory requirements.



Applications.

ValvTechnologies' 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.

Fossil Fuel

- Above and below seat drains
- Ash handling
- Attemporator spray control
- Boiler drains
- Boiler feed pump isolation
- Continuous boiler blowdown
- Electronic relief
- Feedwater heater drains
- Feedwater isolation
- Instrument isolation
- Main steam stop
- Recirculation
- Seal steam regulators
- Sight/gauge glass drains
- Soot blower regulators
- Startup vents
- Steam dump
- Turbine bypass systems
- Turbine drain

Nuclear Generation

- Boiler feedwater
- Circulating water system
- Component cooling
- Condensate extraction
- Condensate cooling water
- Emergency feedwater
- Fire protection system
- HP safety injection
- HP and LP heater drains
- Heat exchanger vent and drains
- Main steam system isolation, drain and vent
- Power operated relief valve (PORV)
- Pressurizer drain and vent
- Rad waste system
- Reactor coolant pump drain and vent
- Reactor head vents
- Reactor water cooling vents and drains
- Safety injection system
- Secondary system isolation, drain and vent
- Service water system isolation
- Steam generator system
- Turbine by-pass
- Turbine drain and vent
- Fukushima tie ins
- Reliable hardened vents

Upstream Oil and Gas

- Wellhead choke isolation
- HIPPS
- Emergency shutdown
- Compressor recycle and isolation
- Sour gas isolation and control
- Steam, water and gas injection
- Steam chokes
- SAG-D isolation
- Pig launcher and receiver
- Mud drilling isolation and check
- Lean and rich amine isolation
- Molecular sieve regeneration isolation
- Molecular sieve absorber isolation
- First and second stage separator isolation





Applications

Downstream and Chemical Processing

Coking (delayed and flexi)

- Switching
- Feed isolation
- Overhead vapor line
- Cutting water isolation

Fluidized catalytic cracking

- Catalyst handling
- Slurry isolation and control steam

Ethylene

- Steam decoke isolation
- Furnace isolation
- Steam vent
- Quench oil isolation and control

Polyethylene

- Isolation
- High cycle (PTO)
- Reactor block

Heavy oil upgrading and hydrocracking (H-oil and LC fining)

- Catalyst addition and withdrawal
- Filter and pump isolation
- Overhead vapor isolation and control
- High ΔP isolation and control

Reforming (CCR)

- Lockhopper
- Isolation

Mining and Minerals Processing

High-pressure slurry

Transportation systems

- Pump discharge isolation
- Pipeline isolation stations
- Pipeline choke stations
- Rupture disk isolation
- Instrument isolation

Autoclaves

- Vessel feed and discharge
- Acid injection
- Gas injection
- Steam injection

Mineral concentrators

- Thickener underflow
- Discharge isolation
- Filter press manifold isolation
- Slurry transfer systems
- PRV isolation

Waste disposal

- Tailings pipelines
- Paste backfill

Pulp and Paper

- Boiler vent and drain
- Liquor isolation and control
- Rapid drain
- Steam isolation
- Sky vents
- Dryer pressure control
- Digester steam control
- Lime mud isolation and control

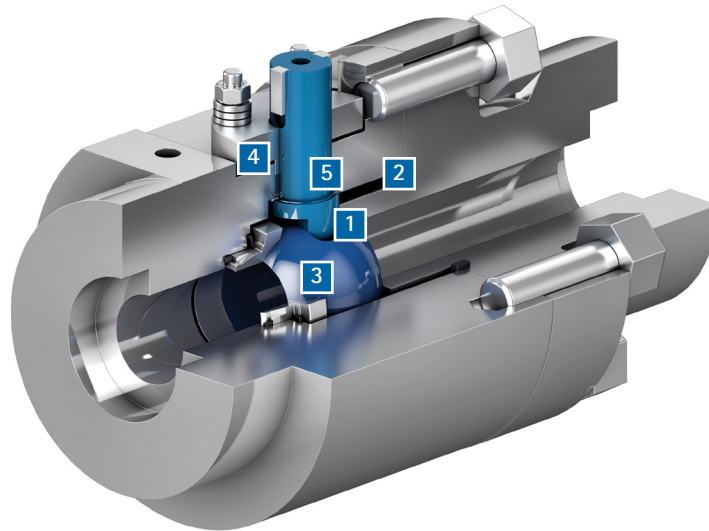
ValvTechnologies provides field proven solutions for severe service applications.



V Series Metal Seated Ball Valves.

The flagship of the ValvTechnologies' product line

ValvTechnologies' design features are the implementation of extensive industry experience.



1 Integral metal seat.

With our patented HVOF RiTech® coating technology, the integral seat in ValvTechnologies' valves is resistant to the attack of abrasive magnetite and ferrous oxides that may be seen in the steam flow.

2 Body seal ring.

ValvTechnologies employs a field proven seal ring technology to ensure sealing under all operating conditions, up to 1400°F. The body seal ring is loaded at a pressure higher than 20,000 psi. In addition, valves sized 3" and above contain a secondary Grafoil® seal to further guarantee reliability.

3 Patented coating process.

The sealing surfaces are overlaid with tungsten or chromium carbide using our HVOF RiTech® coating process. These surfaces have a hardness of 68 - 72 Rc to provide uninterrupted operation in the most severe conditions.

4 Live-loaded gland area.

The V Series' sealing design features a four stud, live-loaded assembly designed for heavy industrial applications. The sealing material is high purity Grafoil® surrounded by stainless steel wire mesh anti-extrusion rings. The six Belleville® springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high-cycle service.

5 Blow-out proof stem.

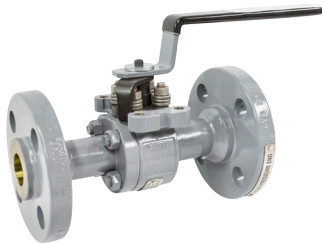
ValvTechnologies' design utilizes a one-piece, hard-coated, blow-out proof stem that is inserted through the inside of the body cavity eliminating the possibility of blow-out through the gland area. There are no pins, collars or other devices used to retain the stem in the valve body.



V1-1

Forged, high-pressure valves
Four-year, zero-leakage guarantee*

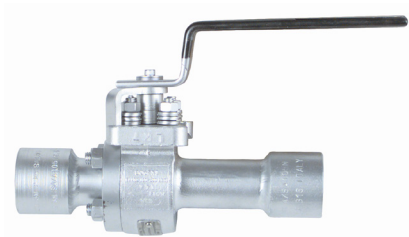
- 3/8 - 4"
- ANSI/ASME Class 900 - 4500



V1-2

Flanged, low-pressure valves

- 1/2 - 36"
- ANSI/ASME Class 150 - 600



V1-3

Small bore, low and intermediate pressure
investment cast valves

Four-year, zero-leakage guarantee*

- 1/2 - 2"
- ANSI/ASME 150 - 600



V1-4

Large bore, high-pressure valves

- 4 - 36"
- ANSI/ASME Class 900 - 4500

*Four-year warranty in steam and water applications



IsoTech®

Parallel slide gate valve Bi-directional, zero-leakage isolation

The IsoTech® addresses the need for true in-line repairability in large diameter, high-energy piping systems. Specifically designed for steam and feedwater applications, the IsoTech® provides bi-directional, zero-leakage shutoff using our HVOF RiTech® coating process.

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



ERV

Electronic relief valve

Protection of conventional and nuclear main steam safety relief systems

ValvTechnologies' ERV fulfills the need for a zero-leakage, pilot-operated relief valve. The ERV package combines ValvTechnologies' zero-leakage isolation valve with electronic controls to monitor and regulate system pressure. Whether in a capacity relieving function requiring the ASME V-Stamp or simply an overpressure protection application, the ERV provides reliable protection for standard safety valves in many industries.

- 1/2 - 12"
- ANSI/ASME Class 150 - 4500
- ANSI/ASME Section I Capacity Certified
- Integral isolation valve available
- Easily adapted to existing controls
- Four-year, zero-leakage guarantee

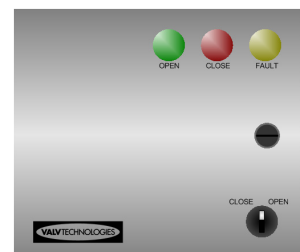


ERV Control Box

Control box for ValvTechnologies' ERV

ValvTechnologies' ERV control box delivers reliable automation in light-weight, compact packages, optimizing overall productivity in the distribution of power to flow control devices. With state-of-the-art improvements, the new ERV control boxes integrates better environmental performance, simplified wiring and control, set point programmability and fault indication.

- Enclosure: NEMA 4X, stainless steel
- Auto/manual function: Automatic + DCS auto
- DCS function: Dry contact
- Fault indication: Yellow LED
- Pressure transmitter: 4-20mA
- Calibrated by PLC interface





Products



Xactrol®

Characterized and stacked disc trim
Leak-free isolation and control in one

- 1/2 – 36"
- ANSI/ASME Class 150 - 2500
- Integral, characterized downstream seat
- Upstream disc inserts for modulation

The Xactrol® product group couples ValvTechnologies' zero-leakage technology with special designs that allow rotary modulating control. From the Mark I's design that features a characterized upstream seat to the Mark III's precision engineered stacked disks, the Xactrol® allows the customer to combine precise flow control with tight shut-off. The Xactrol® is typically used in applications where minimum flow and relatively high differential pressures are required.



Turbine Bypass System

Combined cycle plant solution
Facilitates fast start-up

ValvTechnologies' turbine bypass system (TBS) is designed for the new generation of combined cycle power plants. It combines the Xactrol® control valve design with a state-of-the-art desuperheating control system. The system allows the plant operator to keep the gas turbine and the HRSG online in the event of a steam turbine trip. The TBS also facilitates fast CT and HRSG start-ups in peaking power plants and allows these plants to operate at turn-down conditions, far below the levels that can be achieved with standard governor systems.

Trunnion Metal Seated Ball Valves.

The next generation in trunnion technology™

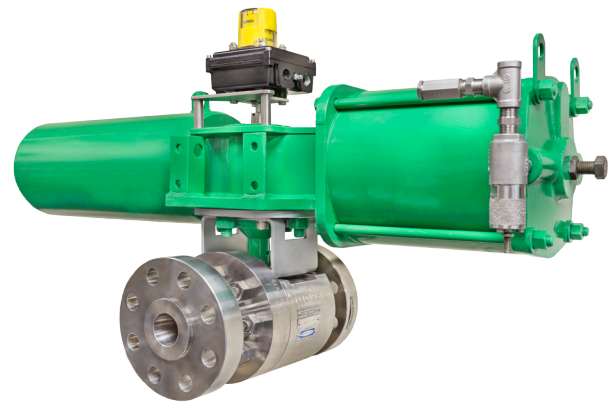
NexTech®

Severe service trunnion
Low torque, bi-directional shut-off

The NexTech® valve is a true, engineered-to-spec specialty valve with materials selected to meet the needs of the most demanding applications.

Utilizing the same coating and live-loading technology that built the V Series product line, but in a lower-torque, inherently bi-directional package, NexTech® valves are designed and configured to handle corrosive, high-temperature, high-cycle, high-solid applications requiring tight shut-off. This valve represents the state-of-the-art in severe service metal seated ball valve technology.

- 2 - 42"
- ASME/ANSI Class 300 - 2500



TrunTech®

Designed to API-6D and API-6A

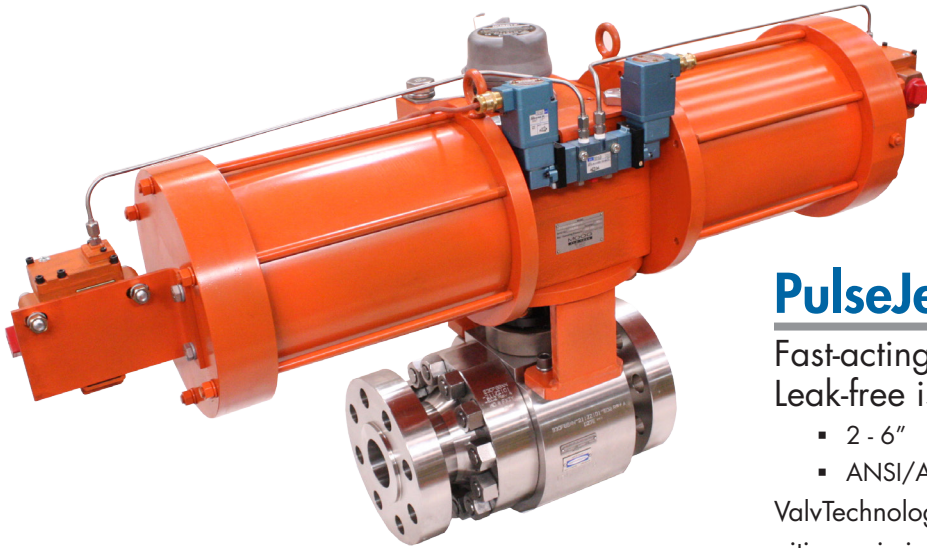
ValvTechnologies' TrunTech® is designed to address the severe service demands of the upstream and midstream oil and gas industries. Its protected seat seals design provides long life and tight shut-off in abrasive/erosive conditions and meets stringent fugitive emission requirements.

- ANSI/ASME Class 150 - 2500
- API 5000 - 15000
- Sized per API 6A and 6D



Low Emission, Metal Seated Ball Valves.

The next generation in emission reduction technology™



PulseJet

Fast-acting, high-cycle isolation
Leak-free isolation and control in one

- 2 - 6"
- ANSI/ASME Class 150 - 1500

ValvTechnologies' pulsejet valve is a fast-acting, high-cycle fugitive emissions valve designed to send a pulse of gas through a pipeline system. A trunnion-mounted ball valve, capable of 90° or 180° rotation in speeds as low as 0.5 seconds or faster, this fast actuation speed is what creates the gas "pulse" through the pipeline system. Pulsejet systems can be used to clean system filters, spray chemicals in an injection type system, or pulse debris/media through a pipeline to prevent clogging. This technology is unmatched in the industry.

EcoPack®

For the reduction of fugitive emissions

Reducing fugitive emissions is a leading concern in the fight against climate change. The EPA estimates that the production segment of the oil and natural gas industry is responsible for 45% of total methane emissions. In 2015, the first-ever plan to regulate emissions from this industry was launched: because valve leakage is responsible for more than 50% of total fugitive emissions, valves have been a considerable focus in the effort to reduce fugitive emissions.

ValvTechnologies' is leading the charge in the reduction of fugitive emissions with the development of the EcoPack®: a superior stem packing solution for high-cycle, fast acting valves that meets stringent fugitive emissions requirements.

- Meets ISO-15848-1 testing requirements for fugitive emissions*
- Packing requires zero adjustment or maintenance
- Capable of 500,000+ cycles
- Durable packing solution for extremely fast cycle speeds of less than 0.5 seconds

*Certification in progress

Isolation Valves for Coking Service.

The delayed coker process is one of the most hostile environments in the refinery due to the abrasive and erosive properties of the coke by-product and is crucial to a refinery's profitability. Valves are cycled frequently and failure can lead to the complete shutdown of a unit, resulting in large process and financial costs. Optimizing valve life-cycle is critical to operational efficiency.

Coking Valves

Avoid unscheduled downtime and lost production

The ValvTechnologies' isolation valve for coking services provides process improvements and reliability through turn-arounds. The simple, yet wear and erosion-resistant, design ensures reduced maintenance time and costs for customers in these severe service applications.

- 1 - 36"
- ANSI/ASME Class 300 - 1500



Switch Valves

Delayed coker service solution

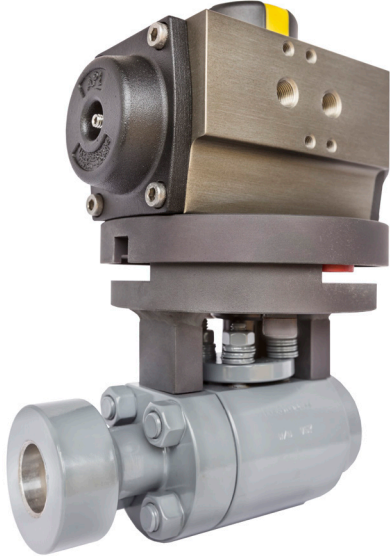
Mechanically-loaded design that eliminates steam bellows

Improve reliability, decrease unscheduled downtime and production losses with ValvTechnologies' switch valve. Enjoy a decade or more between major maintenance requirements and peace-of-mind through tight shut-off with preventative maintenance continuous purge systems.

- 8 - 18"
- ANSI/ASME Class 600 - 900



Specialty Valve and Actuator Solutions.



ValvXpress®

Quality and dependability in one package - guaranteed

ValvXpress® is perfect for customers who demand quick delivery of a zero-leakage automated valve solution for severe service steam and water applications. The package includes the superior quality of the V1-1 valve and ValvTechnologies' actuator, backed with the best four-year guarantee in the industry. ValvXpress® pre-engineered, automated packages are compact, robust and ready to ship.

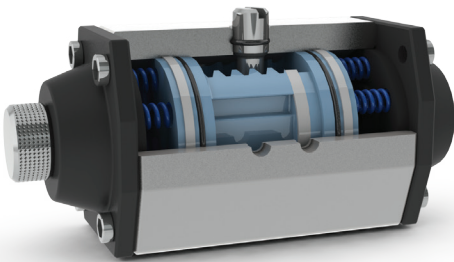
Pre-engineered package includes:

- 1/2 - 4" metal seated V1-1 ball valve
- Socket weld and butt weld end connections
- A105, F22, F91 body materials
- ANSI/ASME Class 900 - 4500 pressure classes
- Valve operating conditions to 1400°F (760°C)
- High-cycle pneumatic rack and pinion actuator
- High-cycle mounting hardware
- Limit switch with position indicator - 2-SPDT, quick set cam, IP67, NEMA 4/4X
- NAMUR solenoid - 110V/120V, 230V, 24VDC coils
- Filter/regulator with gauge
- Retainer prevents stem driving into ball

ValvXpress® Actuator

The actuators utilize a rack and pinion design which provides constant torque output in a compact package. The torque output is proportional to the air supply pressure. Twin horizontally opposed cylinders incorporate piston guides to ensure engagement between the rack and pinion.

- Hard anodized body with high-temperature Viton® seals
- Maximum working pressure 142 psi/10 bar
- Maximum working temperature 320°F/160°C



Specialty Valve Solutions.

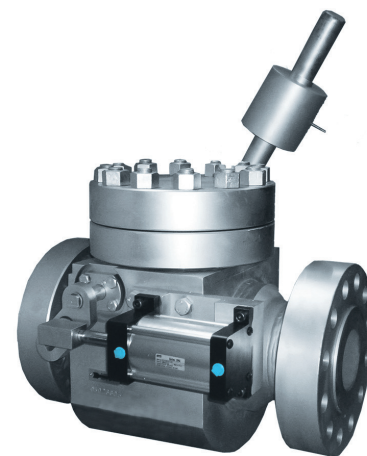
AbrasoCheck®

High-pressure positive displacement Pump slurry check valve

The AbrasoCheck® slurry swing type check valve is designed specifically for PD slurry pump discharge isolation and allows in-line maintenance. The valve was based upon the existing design as used for more than 30 years at an iron concentrate pumping station. The AbrasoCheck® slurry check valve will operate on pump shutdown and start-up. The purpose of the double acting pneumatic cylinder is to assist the disc into the closed position and to hold the disc in that position, during pump shutdown and also to hold the valve open during normal operations. The valve is supplied with a double acting pneumatic cylinder that is fixed to the valve body and connected to the valve stem. Once the valve is fully open then the cylinder can be energized to hold the flapper in the fully open position and out of the path of the slurry flow.

The combination of ValvTechnologies' AbrasoCheck® slurry check valve and AbrasoTech® slurry ball valve provides zero-leakage isolation for maintenance of positive displacement pumps.

- 4 - 24"
- ANSI/ASME Class 600 - 1500
- Zero-leakage isolation

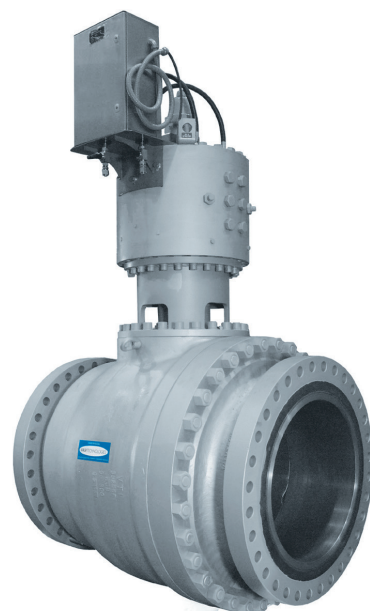


AbrasoTech®

Slurry transport solution Erosion and corrosion resistant

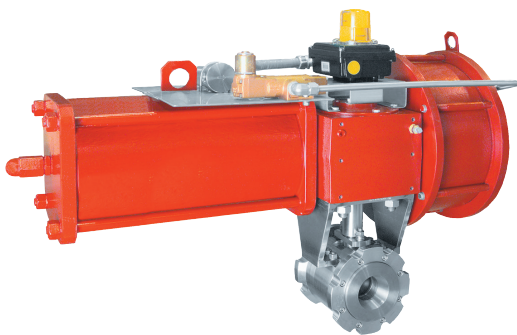
For the utmost dependability in moving slurries of all kinds in cross-country pipelines, specify our severe service AbrasoTech® valves, with the design and engineering that have been proven tough in more than two decades of use globally. Characterized by exceptional flexibility, these valves are available in a wide variety of sizes and pressure classes, and in carbon and stainless steel materials to assure exact fit-for-purpose. Internal components can be protected against erosion and corrosion with the use of our high-performance HVOF RiTech® coating process and metallic or urethane liners.

- 1/2- 36"
- ANSI/ASME Class 150 - 2500





Specialty Solutions



Acid Injection Isolation

Designed for HPAL service
Emergency shutdown valve

- 1/2 - 4"
- ANSI/ASME Class 600
- Field proven design

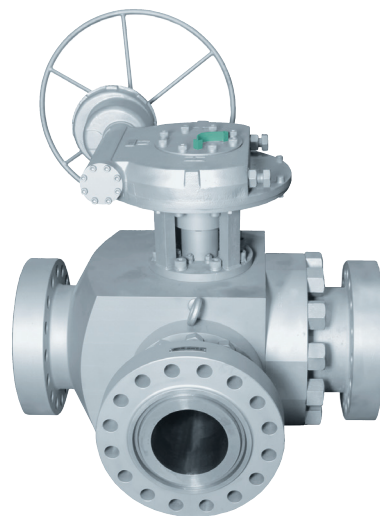
The ValvTechnologies' acid injection isolation valve is a unique product created and designed for the isolation and emergency shutdown of HPAL autoclave acid injection systems. This valve uses ceramic seats, plasma coatings and exotic metals to provide plant security in the harshest of process conditions.

Three and Four-way Valves

Flow diversion and isolation
Repeatable tight shut-off

- ANSI/ASME Class 150 - 4500
- Temperatures up to 1400°F / 760°C
- Tight shut-off

ValvTechnologies' metal seated three and four-way valves are designed for the most severe applications where flow diversion is combined with the need for repeatable tight shut-off. Both three and four-way valves are available in 'T' and 'L' configurations and in multiple combinations of body materials, trims and end connections.



Cryogenic Valves

Fire tested to API 607

ValvTechnologies' cryogenic valves are built to withstand the most severe applications. This solution represents an important step forward in cryogenic technology by providing absolute zero-leakage thanks to the RiTech® coated integral seat, live-loaded fugitive emissions and fire safe tested design. ValvTechnologies' metal seated cryogenic valves are available in a variety of materials suited for extremely low temperatures.

- 1/4 - 36"
- ANSI/ASME Class 150 - 4500



Specialty Solutions

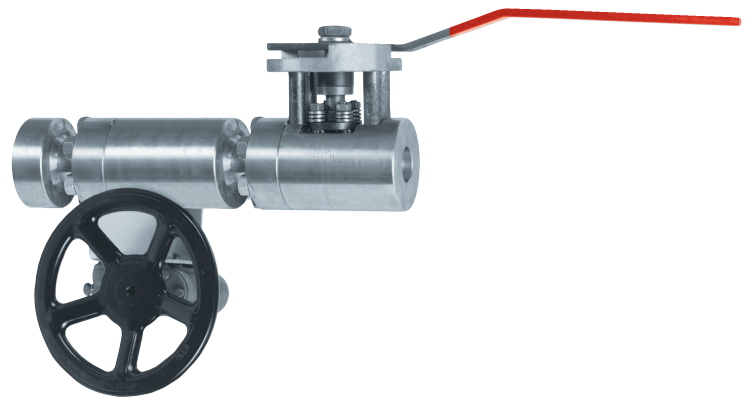
Double Ball Valves

Bi-directional isolation

Back pressure protection

Double ball valves fulfill the demanding needs for industrial applications where zero-leakage isolation is required in bi-directional or double block-and-bleed valves. This valve is particularly useful when solids and High-temperatures are present and can also be used in cases where space is limited. Two sealing units are required and one actuation device is preferred. The bi-directional version has the added advantage of back pressure protection. Even in very high-pressure applications, this design prevents the sealing surfaces from separating.

- ANSI/ASME Class 150 - 4500
- Temperatures up to 1600°F / 870°C
- One actuation device



Integral Block-and-bleed

Two isolation points

ValvTechnologies' integral double block-and-bleed valves are designed to provide uni-directional zero-leakage shut-off, with two isolation points in a single valve body. Tight shut-off is confirmed by opening the bleed valve, guaranteeing a safe working environment downstream. Designed for and tested in steam service, integral double block-and-bleed valves are available in a wide range of sizes, materials and end connections. They are easily automated with pneumatic, electric or hydraulic actuators - according to the customer's control specifications.

- 2 - 36"
- ANSI/ASME Class 150 - 1500
- Designed and tested for steam service





Specialty Solutions



Rhinoite® Hardfacing

Provides bottom-line cost savings
Wears five to seven times longer than bare metal in process applications

The Rhinoite® process uses a specially formulated tungsten carbide pellet made to a predetermined chemistry. It is applied by a patented metal inert gas (MIG) welding process onto a large variety of base metals using various types of weld wires. The process is a two layer application.

The process can be adapted to all service environments, in any wear application: erosion, corrosion, adhesion and high-temperature applications (2200°F). Rhinoite® hardfacing has been a proven leader of hard metal overlay on elbows, t-sections and choke tubes in chemical plants and refineries for a decade with zero failures. The Rhinoite® hardfacing weld process focuses on minimizing loss of production time by wearing five to seven times longer than bare metal. Rhinoite® hardfacing overlays can be completely refurbished after years of service, reducing overall material and maintenance costs.



Innovative Cycle Isolation Measurement



Most plants will see a thermal efficiency (heat rate) system improvement of 1-4%.

ValvPerformance Testing™

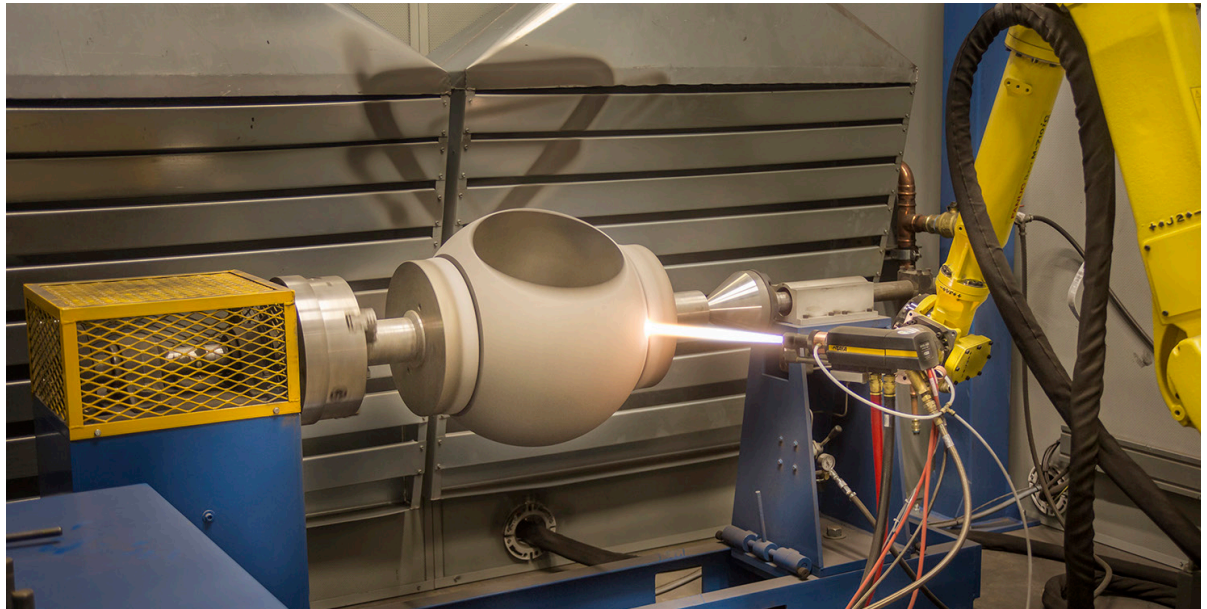
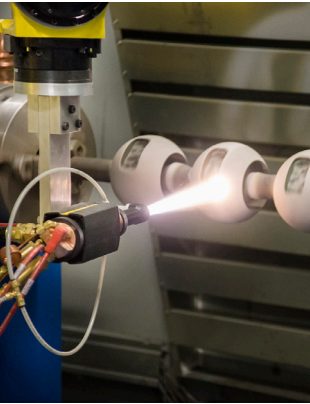
Cycle isolation eliminates energy losses attributable to poorly performing or leaking steam, water cycle isolation valves

ValvTechnologies encourages end users to apply the principles of asset management to their installed valve population. The ValvPerformance Testing™ program, or cycle isolation measurement, utilizes next generation acoustic monitoring instruments to help customers monitor valve performance. These tools allow predictive and preventative maintenance programs to be fine tuned for very large or very small valve populations. Providing cycle isolation services can be as simple as performing a valve survey, or as comprehensive as the management of all valve work during your next outage - from erecting scaffolds to repairing, installing, welding and stress relieving.

Program highlights:

- 1-4% in plant system efficiency increase
- Verifiable and quantifiable leakage results.
- Best-in-class valve leakage diagnostics
- Predictive maintenance savings vs. scheduled maintenance activities
- Overall reduction in maintenance costs
- Target only high-value, fast-payback repairs and replacements
- Ease of execution
- Fast results with minimum effort
- Non-intrusive to plant operations

Specialty Solutions



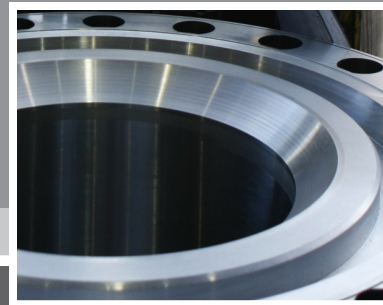
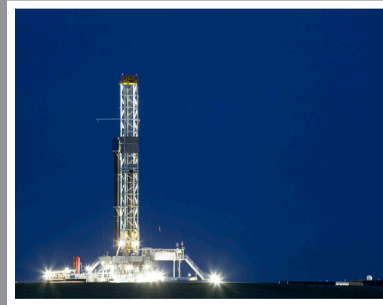
HVOF RiTech®

Robotically integrated technology for high-performance valves

ValvTechnologies has long been focused on providing the best metal seated isolation valves to ensure our customers receive the highest level of safety, reliability and performance. The expansion of our existing in-house coating capabilities, specifically the purchasing of two additional state-of-the-art robotically integrated high velocity oxygen fuel (HVOF) spray booths, allows us the ability to continue this trend and positions the organization to optimize product flow and quality and meet high production demands.

Our leading-edge HVOF team has developed a proprietary compressive spray technique resulting in higher bond strengths. This proprietary process is called RiTech®, or robotically integrated technology. RiTech® allows for exceptional quality control and shortened lead times so customers enjoy quick turn-around and an even longer-lasting product.

Zero-leakage Valve Solutions.



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