

Trunnion Valves – Nextech[®] & Truntech[®]

Trunnion Mounted Metal Seated Ball Valves



ValvTechnologies'
focus is to provide
ZERO-LEAKAGE
VALVE SOLUTIONS

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.



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 power, oil and gas, mining, hydrocarbon, pulp and paper and various specialty industries. ValvTechnologies spans across 217,000 square feet (20,160 square meters) of office space and manufacturing 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.

Nextech®

The Next Generation in Trunnion Technology

The Nextech® valve was designed as a high-end, severe service solution for the process and specialty markets. Nextech® also serves specialty applications to meet specific customer requirements. Utilizing the same coating and live-loading technology that built the V1 product line, but in a lower-torque, truly bi-directional package, Nextech® is a super solution for tough, high-cycling applications.

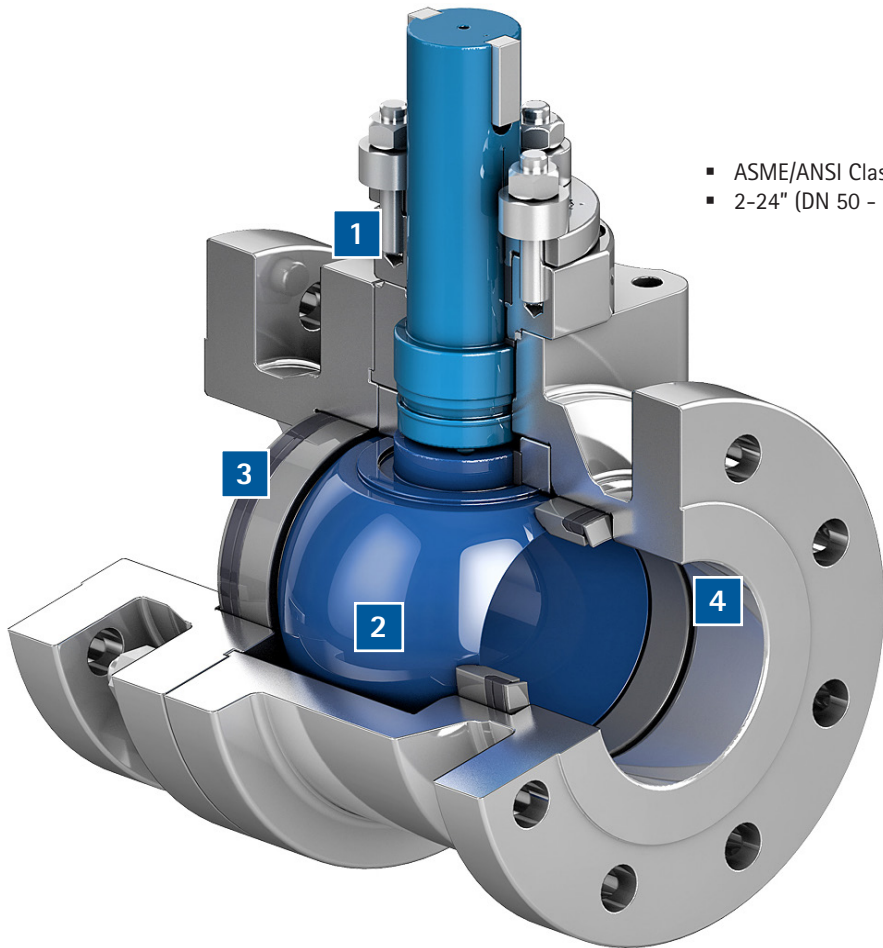
Applications:

- Refining: Continuous catalyst regeneration (CCR) reforming (UOP and Axens), pressure swing adsorption (PSA) skids, cumene production, low pressure catalyst handling in hydrotreaters and hydrocrackers, gas drier (molecular sieve) applications, hydrogen or oxygen service
- Chemical: Unipol polyethylene (when metal seated), dow polypropylene, PSA skids, silicon processing, high-cycle lock-hopper valves
- Gasification: Lock-hoppers, black water, syngas isolation
- Power: Bi-directional, low-pressure applications such as soot-blowers and chemical handling
- Specialty: Corrosive applications where seat material should be different than body material, high cycle applications, polysilicon corrosive applications, bi-directional, double block and bleed

The Nextech® trunnion product features graphite and metal to metal sealing technology including the live loading on the stem seal. The maximum design temperature of this product is 1100°F.

Nextech® Features and Benefits

Features	Benefits
Guaranteed tight shut-off	Enhanced process safety and repeatable sealing allows operation under process excursions
True metal-to-metal sealing without using secondary elastomeric seals	Inherent fire safety
Solid-proofed by design	Process reliability
RAM® coating technology	Extended life
Grafoil seals	Reduced maintenance costs
Double block and bleed capability	Enhanced process safety
High cycling capability	Process reliability
Bi-directional sealing by design	Enhanced process safety, lower maintenance, less downtime
Single-piece anti blow-out stem design	Enhanced process safety
Impervious to high thermal cycling	Enhanced process safety
Certified to use in SIL-3 loop in single-valve and SIL-4 loop in two-valve with minimum MTBF 1,280 years	Enhanced process safety
Live-load stem packing (four bolts design)	Lower emissions
Stem fugitive emissions per ISO 15848-1 Class B	Lower emissions and enhanced process safety
Fire safe certification: API-607	Enhanced process safety



- ASME/ANSI Class 300-900#
- 2-24" (DN 50 - 500)

The standard seat design for all Nextech™ valves is single piston effect (SPE), or so called "self-relieving seat." When pressure builds up inside the body cavity and DP between body cavity and valve downstream is approximately 50-100 psi, the seat moves away from the ball, relieving the pressure.

1 Live Loaded Gland Area

The Nextech® gland packing design features a four stud, live-loaded assembly designed for heavy industrial applications. The packing material is high purity Grafoil® surrounded by carbon fiber / Inconel anti-extrusion rings. The six bellville springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high cycle service. This state-of-the-art system allows the Nextech® to achieve a class "B" designation in ISO 15848 testing, a distinction usually reserved for low-temperature elastomer sealing systems.

2 Carbide Sealing Surfaces

The sealing surfaces are coated with tungsten carbide using the HVOF process. These surfaces have a hardness of 70-72Rc to allow long periods of operation in the most severe conditions. Other ceramet coatings are available depending on application. The ball and seats are "mate" lapped using diamond compound to achieve tight shut-off.

3 High Integrity Seat Surfaces

To prevent leaks around the seats, ValvTechnologies has developed an innovative double seal design for high temperature operation and/or high cycling applications. In low temperature, high cycling service, a secondary elastomer seal is installed on the seat perimeter. The seating system along with the diamond-lapped carbide seat surface provides sealing to tight shut-off standards using ANSI/ASME B16.34, FCI 70.2 and API 598 testing procedures.

4 Solids Resistance

In addition to the carbide coatings which will allow the valve to function in highly abrasive applications, the individual valve parts have additional seals to prevent interference from solids in the system. This provides for outstanding performance in catalyst systems, streams with solids contamination and polymers.

Truntech®

Severe Service Trunnion, Metal Seated Ball Valve

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

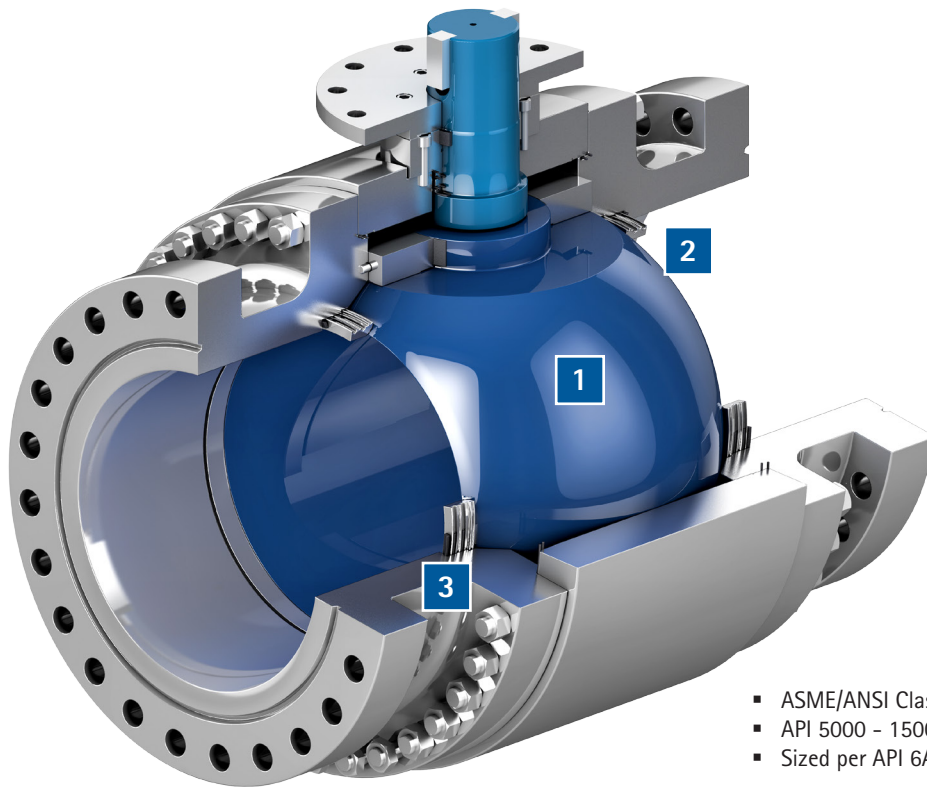
The next generation in trunnion technology ValvTechnologies' Truntech® is designed to address the severe service demands of the upstream and midstream in temperatures from -50°F to +400°F.

Applications:

- HIPPS
- ESD
- Manual isolation
- Injection
- Gas storage (withdrawal)
- Gas transmission
- Other gas treatment processes

Truntech® Key Performance Features and Benefits

Features	Benefits
Guaranteed tight shut-off	Enhanced process safety and repeatable sealing allows operation under process excursions
True metal-to-metal sealing without using secondary elastomeric seals	Inherent fire safety
Solid-proofed by design	Process reliability
Exclusive coating technology	Extended life
Grafoil® fire-safe seals	Reduced maintenance costs
Double block and bleed capability	Enhanced process safety
High cycling capability	Process reliability
Bi-directional sealing by design	Enhanced process safety, lower maintenance, less downtime
Single-piece anti blow-out stem design	Enhanced process safety
Impervious to high thermal cycling	Enhanced process safety
Certified to use in SIL-3 loop in single-valve and SIL-4 loop in two-valve with minimum MTBF 1,280 years	Enhanced process safety
Fire safe certification: API-607 / API 6FA	Enhanced process safety
Stem fugitive emissions per ISO 15848-1 Class B & TA-Luft	Lower emissions and enhanced process safety



The Truntech® design from ValvTechnologies meets stringent emission requirements and provide long life in abrasive and erosive conditions.

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

1 Carbide Sealing Surfaces

The sealing surfaces are overlaid with tungsten or chromium carbide using the ValvTechnologies-exclusive coating process. These surfaces have a hardness of 68 - 72 Rc to allow long periods of operation in the most severe conditions.

2 High Integrity Seals

To prevent leaks around the seats, ValvTechnologies has developed an innovative double seal design for erosive services operation in high cycling applications. A secondary graphite seal is installed toward the body cavity.

3 Solids Resistance

In addition to the carbide coatings which will allow the valve to function in highly abrasive applications, the individual valve parts have additional seals to prevent interference from solids in the system. This provides for outstanding service in severe-service isolation applications with high particle content from sand, elemental sulfur, hydrate, perforation shrapnel and pipe corrosion products.

Trunnion Valves – Nextech® and Truntech®



ValvTechnologies, Inc. is a global leader in the design and manufacturing of flow control devices. Founded in 1987 and headquartered in Houston, Texas, ValvTechnologies remains focused on helping customers meet their daily production and process challenges safely and efficiently.

Having built a global reputation for superior quality and dependability across every industry served with products designed to fulfill the requirements of standard applications to the most sophisticated, severe-service processes, ValvTechnologies meets the demands for total flow control solutions, whether one valve at a time, or system-wide.

Bringing together the best people and the latest in technological design and manufacturing processes, ValvTechnologies has created an atmosphere where quality and dependability are built into every product, start to finish.

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