

Затворы дисковые поворотные серии Tri Lok

Технические характеристики



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Единый адрес для всех регионов: bya@nt-rt.ru | www.bray.nt-rt.ru

Затворы дисковые поворотные серии Tri Lok



Front



Side

TriLok

A Division of Bray International, Inc.

BODIES AVAILABLE:

WAFER

LUG

FLANGED

GATE

BUTTWELD

ASME CLASS & SIZES:

150 3" - 48" (80mm - 1200mm)

300 3" - 48" (80mm - 1200mm)

600 6" - 24" (150mm - 600mm)

900 8" - 24" (200mm - 600mm)

TEMPERATURE RANGE:

-320°F to 842°F (-196°C to 450°C)



30" ASME 150 Double Flanged Body - Carbon Steel

REPLACEABLE SEAT/SEAL SYSTEM

Tri Lok Series valves feature independent field replacement of both the seat and the seal ring. Should service conditions change, seat and seal ring materials may be substituted, without replacing the entire valve. Maintenance, downtime and costs are substantially reduced extending the overall service life of the valve.

Tri Lok's non-rubbing metal-to-metal seal delivers zero leakage with a minimal amount of torque and is inherently firesafe. The standard seat and seal ring material is stainless steel with other materials including Stellite® overlays available. The resiliency of the seal ring ensures uniform peripheral sealing with the seat, achieving full shutoff regardless of flow direction. Tri Lok offers a solid metal seal ring for high temperature and severe service applications to ensure bi-directional shut-off throughout the full pressure/temperature range.



SPLINED DISC/STEM CONNECTION

Tri Lok's internal disc-to-stem connection eliminates external retention components, such as taper pins or keys. Potential issues associated with external connections, such as corrosion or vibration failure, are eliminated. Additionally, these external connections often require machining or grinding for removal. Disassembly of the Tri Lok disc and stem is as simple as sliding the shaft from the disc.

Tri Lok is the only valve in its class with a splined disc/stem connection. The Tri Lok connection allows axial movement of the disc independent of the stem. Therefore, the seal ring and seat remain in position, unaffected by temperature fluctuations and pressure effects on the stem. This design prevents the typical misalignment problems of rigidly attached discs and stems. The splined connection offers maximum strength. Close tolerance engagement between the disc and stem minimizes hysteresis.

METAL-TO-METAL SEALING PRINCIPLE

Torque Seated ▪ Non-Rubbing Thru Rotation ▪ Resilient Seal Ring



No contact prior to seating



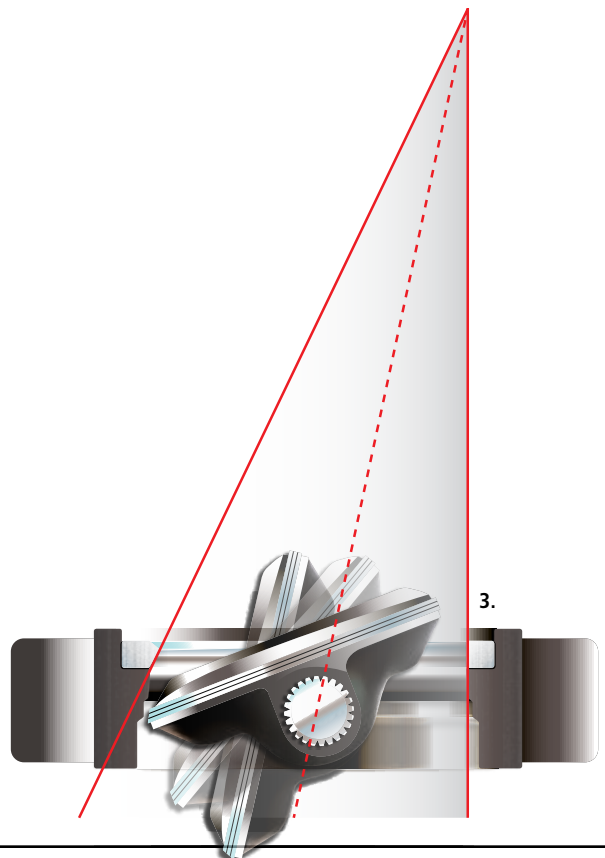
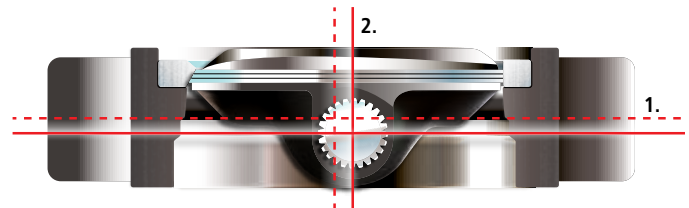
Contact only once seated

TRIPLE OFFSET GEOMETRY

The stem is offset on both the X (1) and Y (2) axis of the valve's centerline. This produces a cam-like motion. The third offset (3) consists of an inclined conical profile machined into the valve sealing surface. This allows rotary engagement and disengagement of the seat and seal ring without interference. All rubbing between seat and seal ring is thereby eliminated.

Once the seat and seal ring are fully engaged, torque is applied in order to create a bi-directional, zero leak, metal-to-metal seal. For this reason, triple offset valves are often defined as "torque" seated rather than "position" seated as in the case of resilient or high performance products.

Tri Lok's geometry immediately disengages the entire seal ring from the seat upon opening rotation, which eliminates rubbing between these materials.



DESIGN SPECIFICATIONS

Tri Lok Valves Meet The Following Standards / Specifications:

**VALVE DESIGN
& PRESSURE/TEMPERATURE
RATINGS:**

ASME B16.34
ASME VIII
API 609
DIN 3840

FIRE TESTED:

API 607, 6TH EDITION
ISO 10497

CRYOGENIC:

BS 6364

**FUGITIVE EMISSION
TESTING:**

TA LUFT
ISO 15848

ACTUATOR MOUNTING:

ISO 5211

FACE TO FACE DIMENSIONS:

API 609
ASME B16.10
ISO 5752
EN558-2

SEAT TESTING:

API 598
API 6D
ISO 5208
DIN 3230
BS 6755

FLANGE DRILLING:

ASME B16.5
ASME B16.47
ISO 7005
DIN 2501

VALVE MARKINGS:

MSS-SP-25
ASME B16.34

MANUFACTURING QUALITY:

ISO 9001
CE/PED



12" ASME 600 ISO
Double Flanged Body
Stainless Steel

Contained in this brochure is an overview of the Tri Lok's primary features.
For complete technical data please contact the Bray factory or authorized distributor.

BODIES AVAILABLE:

WAFER, LUG, FLANGED, GATE, BUTTWELD

SIZES AVAILABLE:

3" - 48" (80mm - 1200mm)

SEAT & SEAL RING

Fully replaceable seat and seal ring system extends the overall life of every Tri Lok valve minimizing downtime, without the need for costly offsite repairs or total replacement.

STEM

Tri Lok's unique splined disc-to-stem connection minimizes hysteresis, eliminates external connections (and associated hardware) and allows for easy assembly/disassembly.

Tri Lok features a one piece stem with a blow out prevention ring located above the packing box, outside the pressure boundary, in accordance with international standards.

In accordance with API 609, every stem is indexed providing positive local indication of disc/seal ring location once installed in the piping system.



ASME CLASS:

150, 300, 600, 900

TEMPERATURE RANGE:

-320°F to 842°F (-196°C to 450°C)

BEARINGS

Bearing seals minimize ingress of media into the journal and are furnished as standard.

Stem bearings are elongated to provide maximum support of the stem.

PACKING

Fully adjustable stem seal system (packing gland) eliminates fugitive emissions and is also field replaceable.



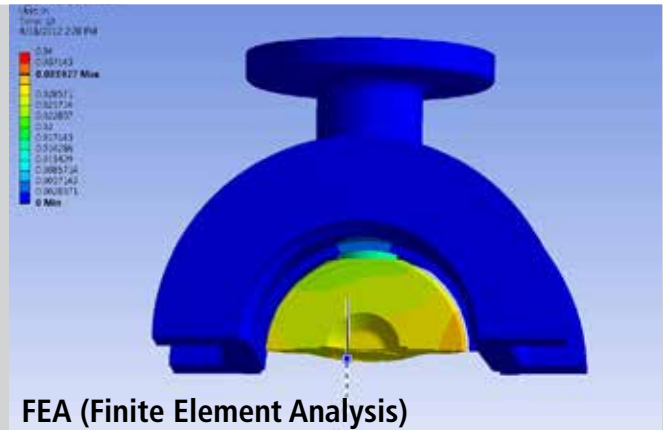
TriLok[®]

A Division of Bray International, Inc.

The Ultimate Critical Service **TRIPLE OFFSET VALVE**



Design & Model



FEA (Finite Element Analysis)



Coordinate Measuring Machine

12" ASME 150 Double Flanged Body - Carbon Steel

DESIGN

Bray's research and development team utilizes the latest technology to design every component for optimal performance through its full pressure/temperature range.

ANALYZE

Electronic prototypes are subjected to dimension verification as well as pressure and temperature simulations (FEA) in an effort to confirm the design and expose potential weakness in a "virtual" environment. This process ensures the actual product is "fit for purpose" prior to manufacture.

VALIDATE

Individual materials and assemblies are subjected to a rigorous testing protocol prior to production release and during manufacturing. After assembly each valve is actuated and tested prior to shipment.

CERTIFY

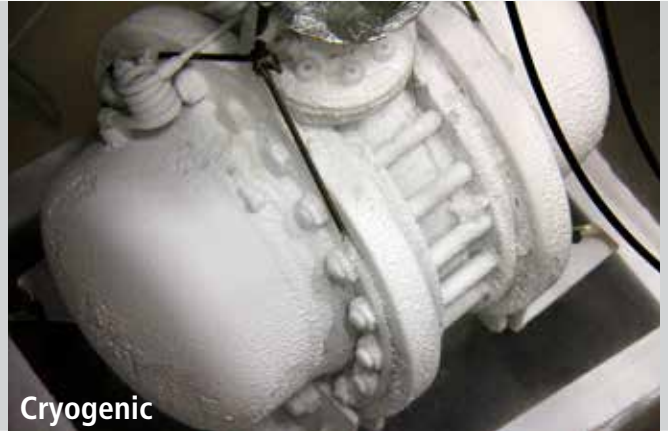
Tri Lok products are also performance tested for certification of capabilities such as fire safe, fugitive emissions, flow capacity, shock/vibration resistance and safety integrity (SIL) among others.

TESTED

ZERO LEAKAGE



Firesafe



Cryogenic



Shock & Vibe



Steam Cycle

TRIPLE OFFSET TECHNOLOGY APPLICATIONS

Compared to gate, globe or ball valves of the same size and pressure class, Tri Lok provides space and weight savings while minimizing installation and maintenance costs.

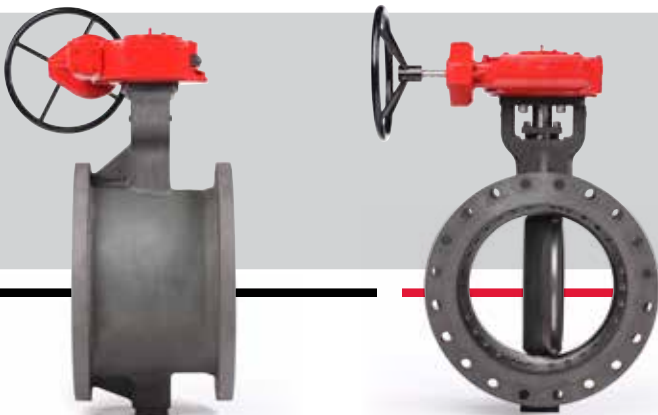
Tri Lok is a premier isolation valve, well suited for operation in vacuum to high pressure as well as cryogenic to high temperature applications. The standard, non-rubbing, metal-to-metal sealing system is inherently firesafe. Applications requiring absolute zero leakage are ideally suited for triple offset technology.



20" ASME 150
Gate Body - B16.10 face to face
Carbon Steel



24" Cryogenic ASME 150
ISO Flanged- Stainless Steel



Side

Front

MATERIALS OF CONSTRUCTION

Valve bodies and discs are available in WCB Carbon Steel and CF8M Stainless Steel as standard. Low temperature Carbon Steel, Duplex Stainless Steel, Monel, Hastelloy® and NiAB are also available. The discs primary function is to "carry" the seal ring. As such, the disc material is commonly the same material as the body to allow full pressure/temperature rating and maintain uniform thermal expansion at elevated temperature. Standard stem materials are 17-4PH, 410 Stainless Steel and XM-19 (Nitronic®). Seat, seal ring and remaining trim are selected to meet the required mechanical properties while providing sufficient corrosion resistance. While the previously mentioned materials are defined as standard, custom engineered configurations are also available.



8" ASME 600
Buttweld Body - Carbon Steel



4", 8", 12" ASME 150
Nickel Aluminum Bronze

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