FLOWSERVE

Durco TX3
Triple Offset Butterfly Valve

Experience In Motion

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Flowserve® – Solutions to Keep You Flowing

Flowserve is one of the world's leading providers of valves and valve automation to the process industries. Our engineers work with customers to understand even the most challenging applications. This way, Flowserve partners with customers to develop industry leading technical solutions that help customers keep their process flowing.

Flowserve TX3 Triple Offset Butterfly Valve

The TX3 is a high performance triple offset butterfly valve capable of closing with zero leakage. The precision seat and seal are machined at an offset angle creating even seat loading around the entire seat ring and eliminating rubbing between the seat and seal during opening and throttling. This design provides repeatable long-lasting zero leakage shut-off.

The Valdisk TX3 high performance design includes the following features:

- API 598 Zero Leakage
- Robust Sealing Options
- Variety of Body Styles
- Industry Certifications

TX3 Specifications

Sizes	NPS: 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24
Pressure Class	ANSI Class 150 300, 600, 900, 1500
Temperature Rating	-320 to 1500°F (-196 to 820°C)
Body Style	Wafer, lug, double flange, top entry cryo
Valve Material	Carbon steel, stainless steel, duplex stainless steel, Inconel 625, Monel, Hastelloy C, Alloy 20
Seal Ring	Laminated metal-graphite Solid metal
Shut-off Rating	API 598, MSS SP-68 ISO 5208 (EN 12266): Rate A ANSI/FCI 70-2: Class IV, V, VI
Actuator	Limitorque LPS, Automax RG-Series, Supernova
Industry Standards	ASME B16.34, ANSI FCI 70-2, API 609, API 607, API 598

Wide Range of Industries

The TX3 is designed for applications in a wide range of industries including oil and gas, chemical, power generation, and various general industries.

Solving Applications

API 598 Zero Leakage

TX3 valves have been tested to the industries most stringent seat leak test requirements demonstrating the ability to shut-off with zero leakage. Test standards include:

- API 598: Valve Inspection and Testing
- MSS SP-68: High Pressure Butterfly Valves with Offset Design
- ISO 5208 (EN 12266): Industrial valves – Pressure testing of metallic valves
- ANSI/FCI 70-2: Control Valve Seat Leakage

Robust Sealing Options

The TX3 laminated seal ring provides bubble tight shut-off even in gas applications. Each individual layer performs an independent sealing a function and is unaffected by the damage to other layers. Additionally, for high temperature applications a solid metal seal ring is available, and for low temperature applications the solid metal seal can be replaced with a PTFE seal ring.

Variety of Body Styles

TX3 is suited for a range of applications and is available with several different body styles to suit the needs of each application. The valve body can be configured in wafer, lug, double flanged short or long, buttweld, cryogenic, and offset top entry.

Industry Certifications

TX3 valves have obtained numerous industry certifications so that the valve can be used around the world. Certifications include:

- API 609: Butterfly Valves: Double-flanged, Lug and Wafer-type
- PED: Pressure Equipment Directive
- TRCU: Technical Regulation Conformity
- IEC 61508 (SIL3): Functional Safety of Electronic Safety-related Systems
- API 607: Fire Test for Quarter-turn Valves and Valves Equipped with Nonmetallic Seats

Note: Not all model configurations meet every certification listed. Contact factory for certification documentation for specific valve models.

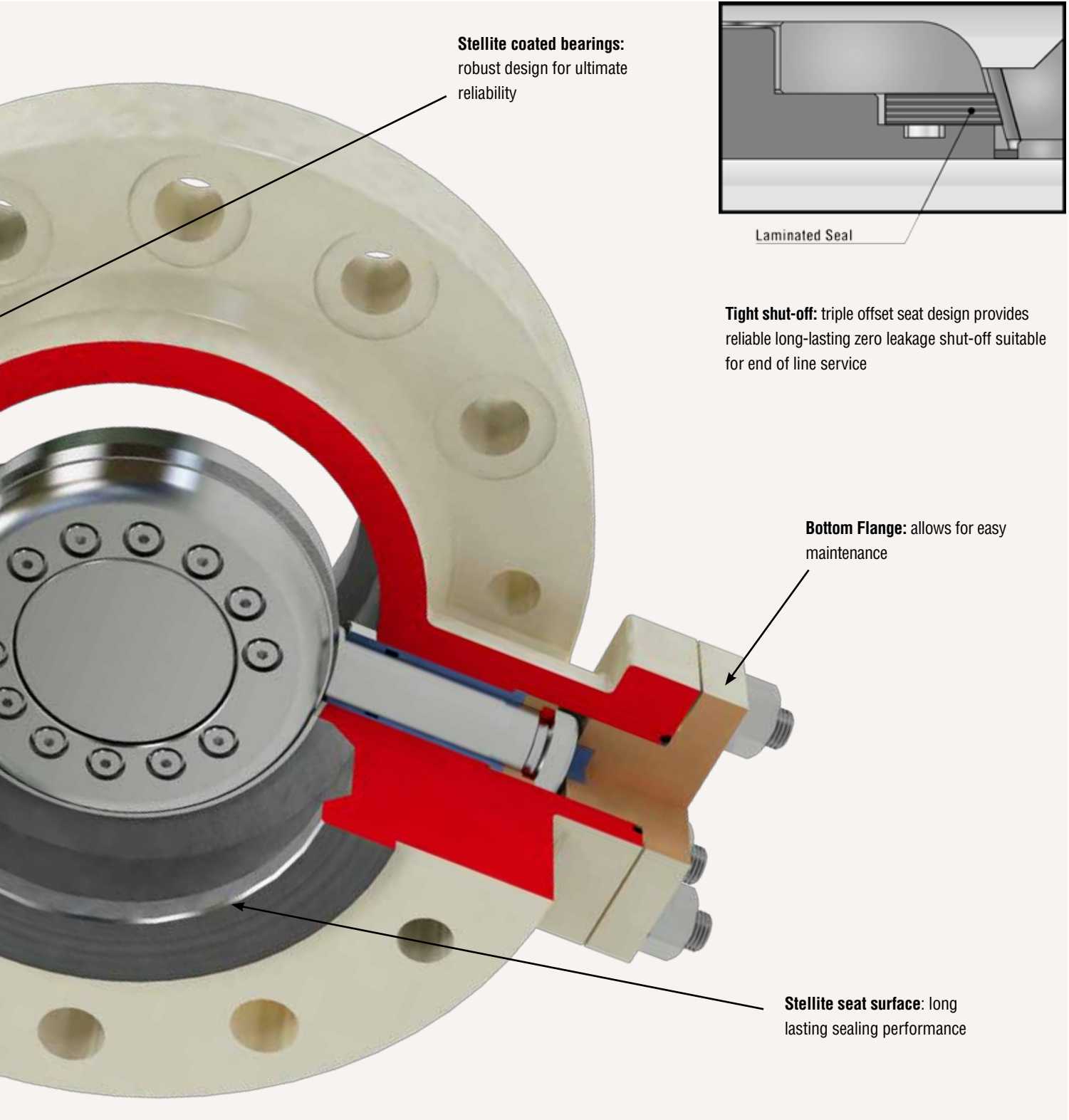# TX3 Triple Offset Butterfly Valve – Features

Fire-safe: tested to meet API 607 requirements

Low Emissions Packing: multiple packing options including PTFE, graphite to meet stringent Fugitive Emissions Requirements
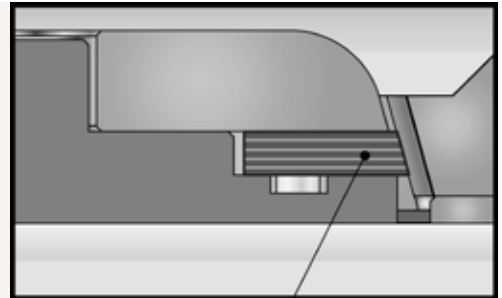
Anti-blowout shaft: required by API 609 and ASME B16.34, ensuring a safe work environment for technicians

Variety of body styles: allows the valve to work in many different applications and provides the option of a smaller lighter body or a longer body that can replace a ball or gate valve without requiring any piping changes.

Stellite coated bearings: robust design for ultimate reliability

Laminated Seal

Tight shut-off: triple offset seat design provides reliable long-lasting zero leakage shut-off suitable for end of line service

Bottom Flange: allows for easy maintenance

Stellite seat surface: long lasting sealing performance

Accurate, Easy to Use Process Control - Operated with a robust actuator and precise Logix digital positioner.

Automated Valve Solution

Flowserve offers a comprehensive range of Automax, Norbro, Worcester, and Limitorque actuators and instrumentation, capable of providing complete automated on-off or modulating packages to meet customer requirements. The TX3 is an ideal platform to provide automated valve solutions for a wide variety of application needs.

RG Actuator

The Flowserve RG scotch yoke actuator provides torque outputs to 2.2 million in-lbs, which can handle the full torque requirements of the TX3 range of valves. The RG actuators achieve superior performance by using a robust yoke support system that significantly reduces transverse loads. The RG actuators feature modular construction, offering a variety of options including fail direction, pneumatic or hydraulic pressure modules, and several manual override options.

SuperNova Rack & Pinion Actuator

The Flowserve SuperNova rack & pinion rotary actuator is designed for reliability, versatility, and safety. Rugged, yet compact construction, combined with technical solutions make this product extremely reliable in the severest of operating conditions.

Instrumentation and Accessories

A variety of Flowserve instrumentation components and accessories are available to meet most all automation applications. Instrumentation and accessories products have been developed to provide control to and feedback from actuated valve assemblies. Products include:

- Limit switch boxes
- Solenoid valves, flow controls, NAMUR accessories
- Gear Overrides
- Auto Brakit mounting kits and SureGrip couplings

Logix Digital Positioners

Flowserve Logix digital positioners offer the best in performance, ease of use, and calibration. Several models are available with a variety of features, such as a single push button calibration, LCD display, network communication, and diagnostic support through ValveSight software.

Flowserve - Solutions to keep you flowing

PNxt! Valve Sizing and Selection

PNxt! Valve Sizing and Selection is the right tool for the right product – first time, every time. This comprehensive set of next generation engineering tools allow you to size and select Flowserve control valve products best suited to your application and service conditions. In just seconds, you get the answers you need to ensure you make the right choice.

ValveSight™ Diagnostic Software – Prevention Delivered

ValveSight is a diagnostic solution for control valves that can be seamlessly integrated into a host control and/or plant asset management system. The power of ValveSight is the intelligent diagnostic engine -- which detects an emerging condition in the valve, actuator, positioner, and control signal -- that may indicate a performance, safety, or environmental problem. ValveSight advises which corrective actions to take to prevent a failure.

Flowserve is Everywhere You Are

Flowserve manufacturing sites and quick response service centers are located all around the world so customers have on-the-spot availability for technical support and experienced field service technicians. Wherever your operations are, Flowserve is there to help your operations be successful

United States
Flowserve
1350 N. Mt. Springs Parkway
Springville, UT 84663
USA
Phone: +1 801 489 8611
Fax: +1 801 489 3719

Austria
Flowserve (Austria) GmbH
Control Valves - Villach Operation
Kasernengasse 6
9500 Villach
Austria
Phone: +43 (0)4242 41181 0
Fax: +43 (0)4242 41181 50

India
Flowserve India Controls Pvt. Ltd
Plot # 4, 1A, E.P.I.P, Whitefield
Bangalore Kamataka
India 560 066
Phone: +91 80 284 10 289
Fax: +91 80 284 10 286

Singapore
Flowserve Pte. Ltd.
12 Tuas Avenue 20
Republic of Singapore 638824
Singapore
Phone: +65 6879 8900
Fax: +65 6862 4940

To find your local Flowserve representative:

For more information about Flowserve Corporation,
visit www.flowserve.com or call +1 937 890 5839.

flowserve.com