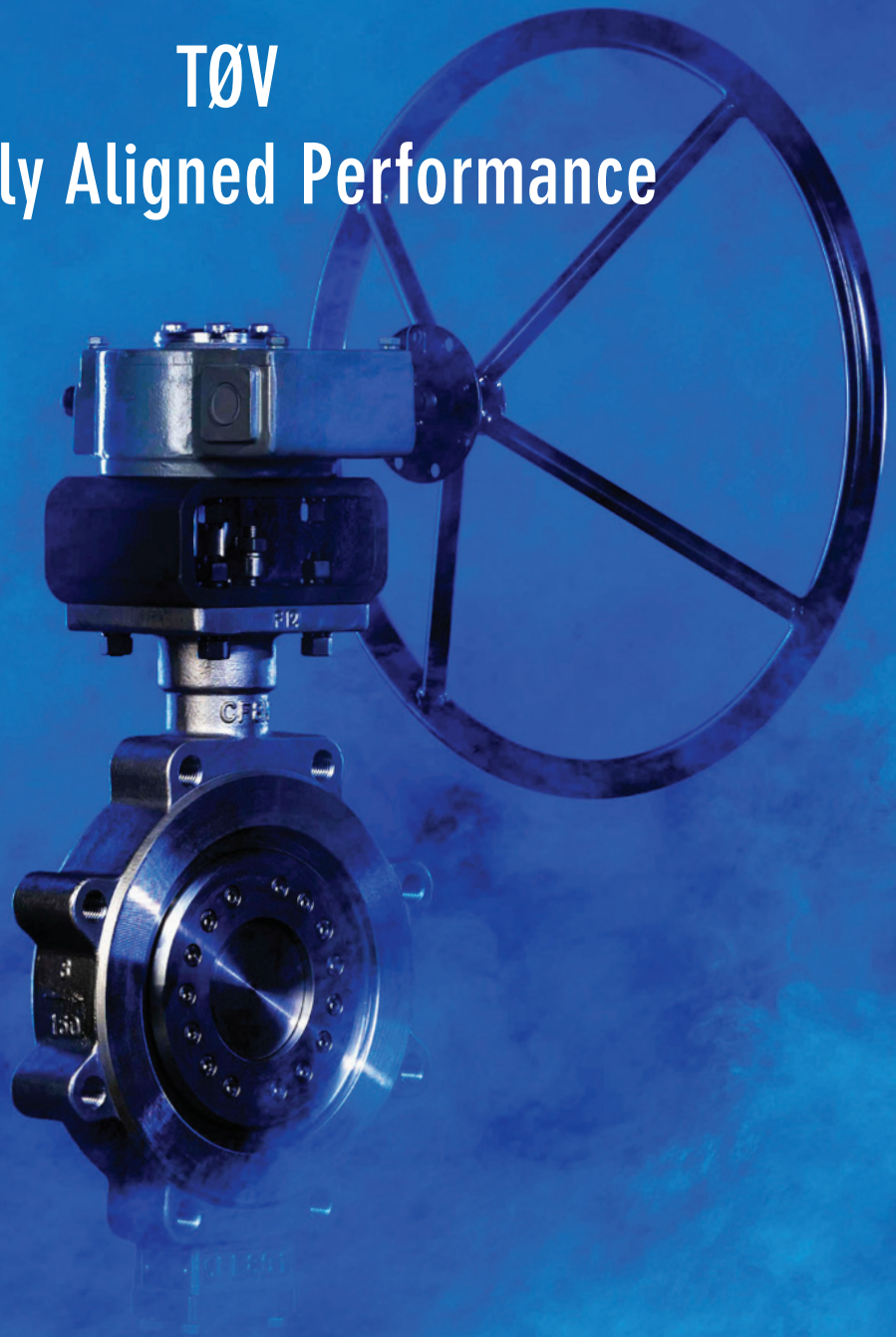


TØV Perfectly Aligned Performance



MILWAUKEE VALVE

NEW TRIPLE OFFSET VALVES FROM MILWAUKEE VALVE

TØV SERIES

Triple Offset Valves

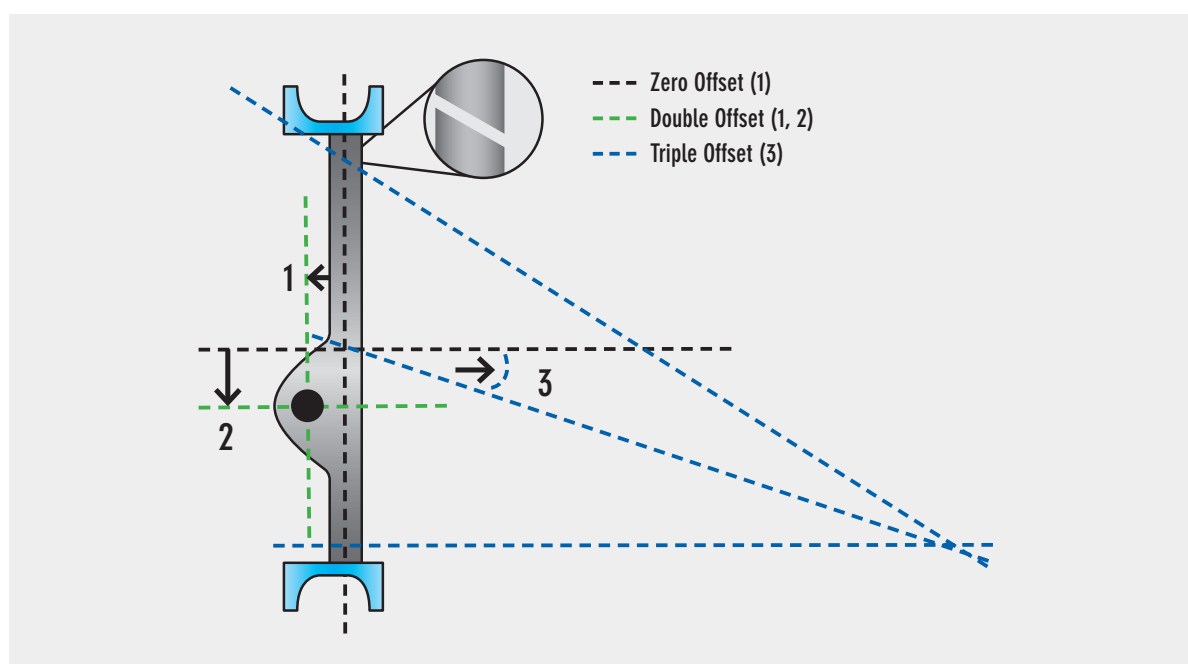
Milwaukee Valve's new TØV series takes precision performance to a higher level. Its triple offset geometry creates valves that deliver bidirectional, zero-leak sealing—even under higher pressures and temperatures. This same design makes TØV triple offset valves firesafe, corrosion resistant and maintenance free, too.

For demanding applications that require reliable leakproof shut-off, TØV triple offset valves are here.



What is Triple-Offset Geometry?

Triple Offset is a design feature in butterfly valves where the valve stem, disc and sealing surface are all positioned at different off-center angles. Combining these three offsets produces a highly precise, bubble-tight seal with minimal operating friction—even at high pressures. TØV triple offset valves pass API Standard 598 for no-leak, bidirectional shutoff you can trust.



Offset 1

The stem is offset behind the seat axis, to provide complete sealing contact around the entire seat.

Offset 2

The stem centerline is offset from the pipe and valve, allowing interference-free opening/closing.

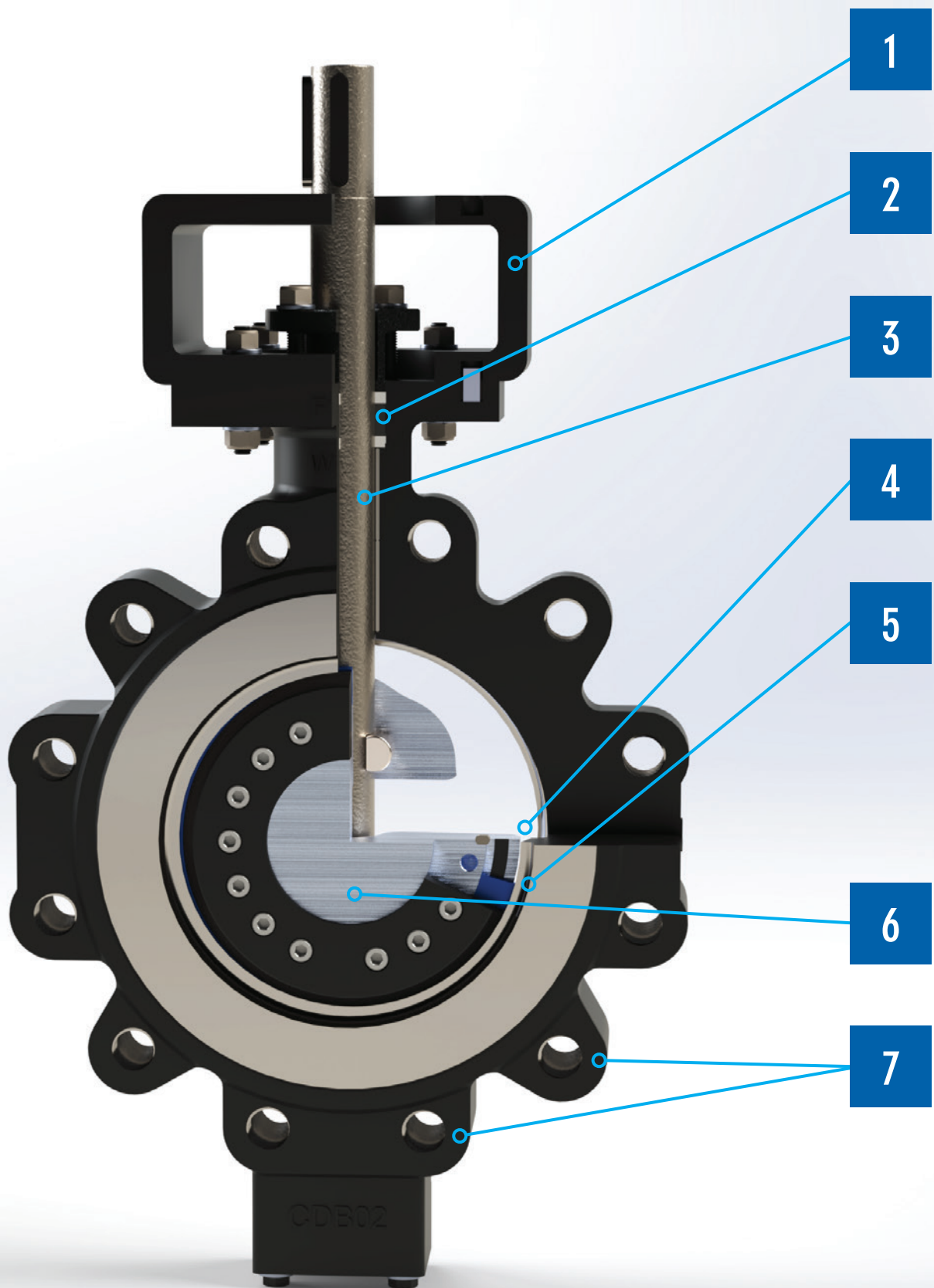
Offset 3

The seat cone axis is offset from the stem centerline to eliminate friction during opening/closing, and achieve uniform compression and sealing around the entire seat.

TØV Specifications

- Pressure/Temperature: API 609 / ASME B16.34
- Body Materials: ASTM A216 WCB (Carbon Steel), ASTM A351 CF8M (Stainless Steel)
- Face-To-Face Dimensions: API 609 / ASME B16.10
- Fire Testing: API 607
- Seat Testing: API 598
- Flange Drilling: ASME B16.5
- Valve Markings: MSS-SP-25 / ASME B16.34
- Actuator Mounting: ISO 5211

TØV Features & Benefits



1 ISO 5211 Topworks

Conforms to ISO 5211 standards for easy incorporation of gear operator or electric or pneumatic actuation.

2 Application Shaft Packing

Shaft packing type is suitable for a variety of application environments as High Temperature, Pressure & Vacuum.

3 Blowout-Proof Stem

Prevents injury and product loss.

Triple-Offset Design

- Provides tight sealing in high temperatures up to 800-1,000° F (material dependent). Refer to Pressure/Temperature Chart in Technical Bulletin.
- Design ensures minimal contact between seat and disc during operation, to reduce wear and maintenance costs.

4 Extended Service Life

Conical sealing design ensures no contact of metal sealing components until the final degree of closing. This allows repeatable sealing and extended valve life.

5 Metal-to-Metal Seals

- Provides tight shut-off even in high-pressure and high-temperature environments.
- Seal Ring in Disc can be serviced and replaced without replacing the entire valve.

6 Disc

The disc is machined and streamlined to maximize flow, minimize turbulence and provide optimal Cv values.

Fire Tested

Meets API 607; suitable for fire-safe applications and provides reliable operation in critical situations.

Bi-Directional

Provides bubble-tight seal at full rated pressure regardless of flow direction.

Lower Torque

The friction-free stroking throughout the valve allows for lower torque, extending valve life and allowing a lower torque-actuator to be fitted.

7 End Connection

Connection designed to ASME standards. Lug, wafer and double flanged styles available.



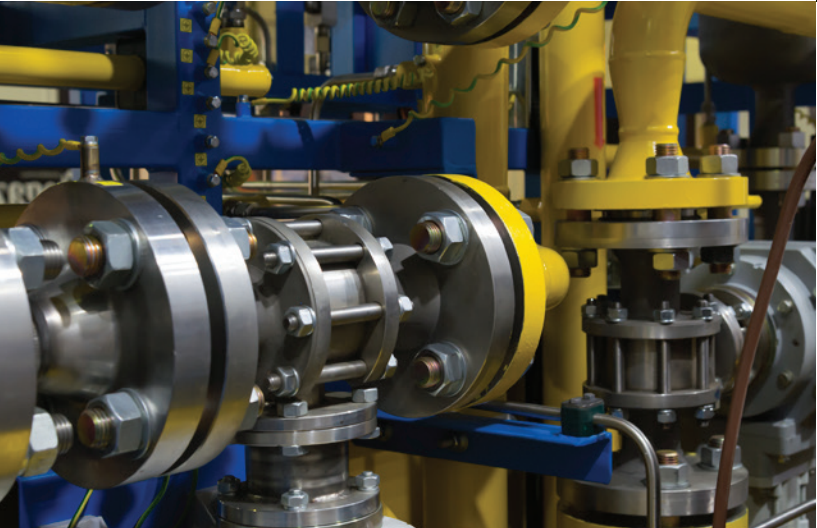
TØV PERFECTLY ALIGNED PERFORMANCE

Application Ideas



Power And District Heating

- Steam Piping & Condensate
- Steam Isolation
- Geothermal Steam



Critical Isolation

- Tank Switching & Isolation
- Manifold System Isolation
- Metering Systems
- SCADA Systems

Temperature Control Systems

- Hot Water Control Systems
- Cooling Water Systems
- Seawater
- Thermal Fluids



Refining And Petrochemical Processing

- Hydrocarbon Processing
- Hot Gases / Sulfur / Tail Gas / Flare Gas

Chemical Processing

- Hydrogen
- Oxygen
- Chemical Solvents
- Chlorinated Solvents

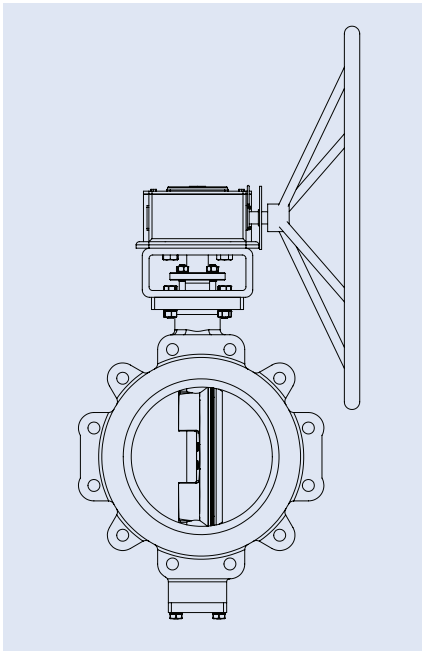


Liquefied Natural Gas

- LNG Production
- LNG Storage

Triple Offset Valve Ordering Information

How to order Milwaukee Valve TØV Series Triple Offset Butterfly Valve



Series	ANSI Class	Body Style	Body Material	Disc Material	Stem Material	Body Seat Material	Stem Packing	Disc Seal Ring	Operator	Size
TØ	1 – 150	L – LUG	C – WCB	S – CF8M	4 – 17-4 SS	8 – Stellite	G – Graphite	3 – 304/Graphite	XX – Gear Operated	030 – 3"
	3 – 300	W – Wafer	S – CF8M							040 – 4"
										060 – 6"
										080 – 8"
										100 – 10"
										120 – 12"

Part Number Example

TØ1LCS48G3XXØ3Ø

3" TØV, CL150, Lug, WCB Body, CF8M Disc, 17-4 Stem, Stellite Body Seat, Graphite Packing, 316/Graphite Disc Seal Ring, Gear Operated



Rev. 6/25