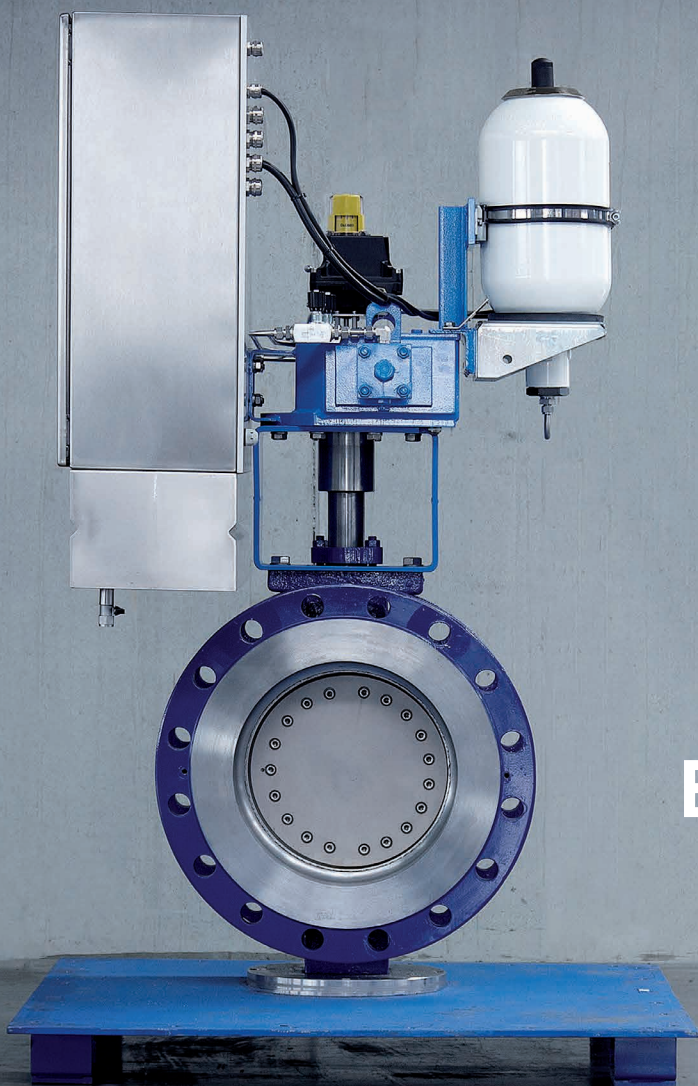




TRI-CON

**BALL & GATE VALVE
REPLACEMENT**

HIGH STANDARD VALVES FOR NON-STANDARD CONDITIONS.

TRI-CON Features & Benefits

Features

Unique triple-offset, conical seating

Metal-to-metal seating

Unique, self-centering disc design

Emission-control technology

Superior bearing/bushing design

Laminated seal ring

Benefits

Zero leakage in demanding services

Inherently firesafe

Low torque required

Elimination of jamming due to thermal expansion

Bi-directional shutoff capabilities

TRI-CON

- DN 50 - 2200 / 2" - 82"
- PN 6 - 250 / ANSI 150 - 1500
- Materials (CS, SS, Alloys, etc)
- -196°C ... +815°C
- Metal to metal
- Zero Leakage
- TA Luft II
- Fire Safe
- Automatization, ESD, HIPPS, SIL 3 Solutions
- Fast closing, high cycle, etc



VALVE SIZE		ZWICK TRI-CON API 598 RESILIENT		GATE VALVE API 598 METAL		H.P. BUTTERFLY VALVE ANSI CLASS VI		ZWICK TRI-CON API 6D	
INCH	DN	Liquid	Air	Liquid	Air	Liquid	Air	Liquid	Air
3"	80	0	0	12	72	N/A	3	0	0
4"	100	0	0	12	72	N/A	11	0	0
6"	150	0	0	12	72	N/A	27	0	0
8"	200	0	0	20	120	N/A	45	0	0
10"	250	0	0	20	120	N/A	70	0	0
12"	300	0	0	20	120	N/A	100	0	0
14"	350	0	0	28	168	N/A	136	0	0
16"	400	0	0	28	168	N/A	178	0	0
18"	450	0	0	28	168	N/A	225	0	0
20"	500	0	0	28	168	N/A	278	0	0
24"	600	0	0	28	168	N/A	400	0	0
30"	750	0	0	28	168	N/A	620	0	0
36"	900	0	0	28	168	N/A	900	0	0
40"	1000	0	0	28	168	N/A	1111	0	0

Notes: Allowable gate valve leakage per API 598 6th Ed. 1990 - Leakage comparisons are measured in drops/minute for liquid and in bubbles/minute for air. - 1 drop = 0.0625 cm - 1 bubble = 0.15 cm³

BALL VALVES	GATE VALVES	ZWICK VALVES	ZWICK TRI-CON VS. OTHERS Comparative Features to Gate and Ball Valves
●		●	Zero Leakage Bi-directional testing (API 598, API 6D) confirms the power of TRI-CON valves to prevent leakage.
		●	Resilient Metal Seat Even in the most severe applications, metal seating provides long-term zero leakage.
●		●	Quarter-Turn Operation Stress on pipe is reduced while automation is simplified. Compared with other designs, fugitive emissions are substantially reduced.
●	●	●	All-Metal Construction Rely on all-metal construction for greater resistance to higher temperatures.
	●	●	Inherently Firesafe Zero leakage and all-metal construction make TRI-CON valves inherently firesafe.
		●	Patented Seal Bearing TRI-CON offers zero- to low-ppm performance out of the stem packing.
		●	Zero-PPM Performance A superior bearing and bushing design combats the migration of particulates.
●	●	●	Bi-Directional Design TRI-CON valves are bi-directional and can provide zero-leakage shutoff on request.
		●	Nonrubbing Design Thanks to triple-offset conical seating, rubbing and wear are eliminated for the entire quarter turn.
		●	Double-Flange Body The compact design makes installation and maintenance easier.
●	●	●	Available ANSI B16.10 Face-to-Face Allows direct replacement of most gate, ball and globe valves.
		●	Available API 609, Face-to-Face The Zwick TRI-CON design allows operators to easily upgrade from high-performance butterfly valves.
		●	Lightweight Reduce piping stress and maintenance while also lowering construction costs.
●	●	●	ANSI 150, 300, 600, 900, 1500 / PN 6 - 160 Zwick TRI-CON valves are available in familiar gate and ball valve pressure standards.
		●	2" to 82" Sizes Zwick has the right sized valve for nearly all applications.
●	●	●	Cryogenic to -215°C Get the low-temperature performance you need.
●	●	●	High Temperature to 815°C Get better shutoff performance than with soft-seated valves.
●		●	Ease of Automation Quarter-turn valves require less time and cost to automate.
●		●	Fast Operation Get closing times as fast as 0.15 seconds.

HIGH STANDARD VALVES FOR NON-STANDARD CONDITIONS.



TECHNICAL QUALIFICATIONS

Quality Assurance	ISO 9001
Testing	API 598 Zero Leakage EN 12266 Rate A API 6D Zero Leakage
Flange Drilling	ANSI B16.5 (Sizes 3"-24") ANSI 16.47 Series A & B
Fire Test	API 607 5th Edition
Design	ANSI 16.34, etc
TA Luft II	Emission Control up to 450°C
PED CE Mark Qualified	

CERTIFICATIONS

BAM-Approval for Oxygen
TA-Luft II acc. to VDI 2440
DIN EN ISO 9001
Fire Safe acc. to API 607
Fire Safe acc. to British Standard B.S. 6755
Fire Safe acc. to EN
CE-Certificate acc. to 97/23/EG

APPLICATIONS

Zwick TRI-CON valves are used in demanding industries. From applications with oxygen up to exhausted gases, cryogenic and superheated steam and also in widely used chemical processes, TRI-CON valves are proven throughout a wide range of industries.

Refining

Desulphurization Systems and Tail Gas Treaters
Steam
Oil & Refined Product Storage, ESD-Solutions
Hot Cracking Gases
Flare Gas
Light Ends Isolation, Pump Isolation

Petrochemical Plants

Propylene Plant Equipment Isolation
Oxygen & Hydrogen Services
Ethylene Cracking Plants
PSA & Molecular Sieves Switching Valves
Flare Isolation
CO₂
Butadiene & Styrene Plants

Offshore

Fixed Equipment Isolation
Fire Water Systems
CO₂ Switching Valves
Crude Oil Isolation

Power

Steam Isolation
Condenser Cooling
Pump Isolation
Fuel Gas Isolation

Pulp & Paper

Lime & Slurries
Steam Isolation, Boiler Feed Water
Green, Red & Black Liquors
Oxygen Isolation

Commercial Buildings & Energy Centers

Hot Water Isolation
Steam Isolation
Fuel Gas Isolation

Chemical

Syngas
Nitrogen
Acids

ZWICK
ARMATUREN GMBH

Egerstr. 1 & 25
D-58256 Ennepetal
TEL +49 (0) 23 33 / 98 56 5
FAX +49 (0) 23 33 / 98 56 6
MAIL info@zwick-gmbh.de

WWW.ZWICK-VALVES.COM