

Ball Valves **CRYOGENIC** DIN ANSI



Making excellence
something personal



Certificates of the company

ISO 14001	Environmental Management System
ISO 9001	Quality Management system
API Monogram	API Q1 & API-6D
ISO 45001:2018	Design, assembly and management of manufacturing of ball valves

Certificates of the product

DNV	Type approval
Lloyd's Register	Fire Safe & Type Approval
TÜV A352.09 AD Merkblatt A4	Design of the valves
TA - Luft ISO15848-1 + VDI2440	Stem Tightness for gas emissions
Helium -40 °C	Leeds University test
Directive 2014/68/EU	Pressure equipment directive (CE marking)
Directive 2014/34/EU	ATEX - directive (II2GD c T-)
BS 6364	Valves for Cryogenic Service
EN 161 / EN 23553 / EN 16678	Automatic quick shut-off valves for Gas/Oil burners and equipment
EAC	TR CU 010 - TR CU 012 - TR CU 032
Sanitary approval (Russian)	Food processing and Pharmaceutical industry
IEC 61508	SIL3 CAPABLE
UKR SEPRO	Ukraine Certificate
DVGW-EN 13774	Valves for gas distribution with MOP 16 bar
API 6D Monogram	Certificate N° 6D-0363
NSF International	ANSI 372

Certifications and tests

- Fire Safe
- Cryogenic Test

Some Company Approvals

- Repsol-YPF (Spain)
- Al Furat Petroleum (Syria)
- Sasol Technology (South Africa)
- EGPC (Egypt)
- China Petroleum (China)
- OMV / Petrom
- Borealis
- Solvay
- Qatar Petroleum (Qatar)
- Petroleum Development Oman (PDO)
- KUWAIT Oil Co. (KOC)
- Zadco (UAE)
- ADNOC
- INOVYN / INEOS
- Neste Oil



General Features

- Floating / Full Trunnion
- Split Body / Top entry
- Full bore / Reduced bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self cavity pressure relief
- Degreased
- Security stem extension
- Auto adjustable packing

IN - HOUSE CRYOGENIC TEST

In-house Cryogenic Test to ensure our product performance in most extreme conditions.

Cryogenic test according to BS6364, or MESG 77/306.



-196°C

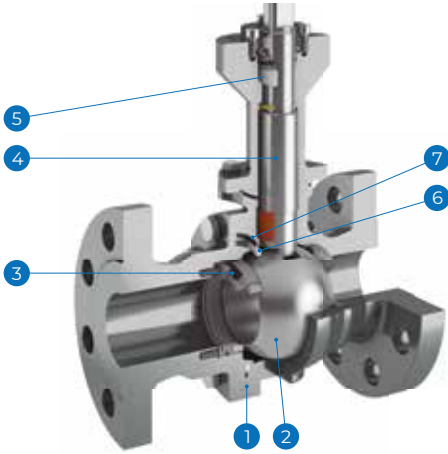


Standards

- Top flange ISO 5211
- Face to face ANSI B16.10 / EN 558
- Flanges ANSI B16.5, B16.11, B16.25, B1.20.1, EN 1092-1, ISO 228
- Design API 6D, B16.34 / EN 12516, ISO 17292
- Testing API 598, API 6D, BS 6755-1 / EN 12266, ISO 5208
- Materials according to NACE MR0175

FLOATING 2 PCS

ZFOSU



Standard Materials

Item	Description	Materials	
		ANSI	DIN
1	Body	A351 CF8M/A182 F316	S.S 1.4408
2	Ball	A351 CF8M	S.S 1.4408
3	Seat	PCTFE	PCTFE
4	Stem	XM-19	XM-19
5	Stem packing 2	PTFE + Graphite	PTFE + Graphite
6	Body Seal 1	PTFE(Modified)	PTFE(Modified)
7	Body Seal 2	Graphite	Graphite

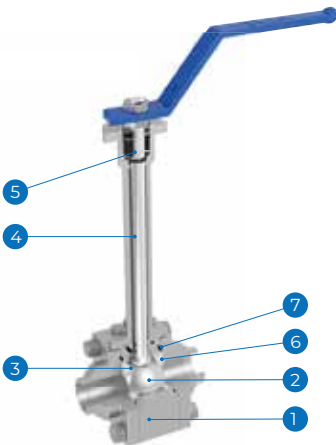
SIZE	RATING
1/2" - 8"	CLASS 150
1/2" - 4"	CLASS 300
1/2" - 2"	CLASS 600
DN 15-200	PN 10-16
DN 15-125	PN 25-40
DN 15-100	PN 63-100

General Features

- Floating
- Split Body
- Full bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self-cavity pressure relief
- Degreased
- Cryogenic stem extension
- Auto adjustable packing
- Spring loaded seat system

FLOATING 3 PCS

ZFKOU / ZFKOURB



Standard Materials

Item	Description	Materials
		DIN
1	Body	A182 F316/316L
2	Ball	A182 F316/316L
3	Seat	PCTFE
4	Stem	XM-19
5	Stem packing 2	PTFE + Graphite
6	Body Seal 1	PTFE
7	Body Seal 2	Graphite

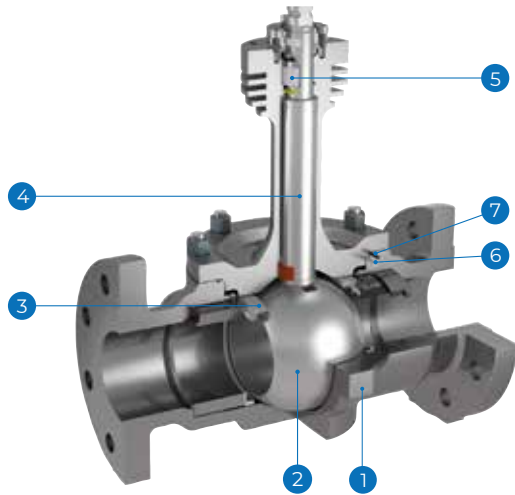
SIZE	RATING
2 1/2" - 3"	CL 400
2" - 2 1/2"	CL 600
1/4" - 1 1/2"	CL 800

General Features

- Floating
- Split Body
- Full bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self-cavity pressure relief
- Degreased
- Cryogenic stem extension
- Allows in-line maintenance
- Auto adjustable packing

FLOATING TOP ENTRY

ZETEFOSU



Standard Materials

Item	Description	Materials	
		ANSI	DIN
1	Body	A351 CF8M/A182 F316	1.4408/1.4401
2	Ball	A351 CF8M/A182 F316	1.4408/1.4401
3	Seat	PCTFE	PCTFE
4	Stem	XM-19	XM-19
5	Stem packing 2	PTFE + Graphite	PTFE + Graphite
6	Body Seal 1	PTFE	PTFE
7	Body Seal 2	Graphite	Graphite

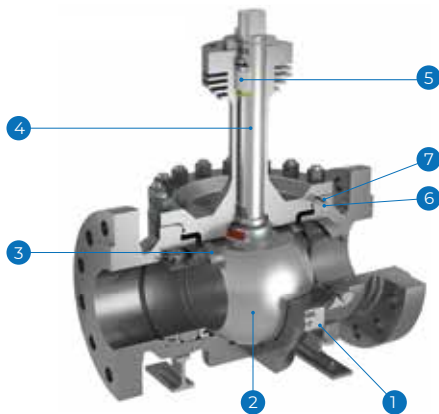
SIZE	RATING
½" - 4"	Class 150-300
½" - 2"	Class 600
DN 15-100	PN 10-40
DN 15-50	PN 63-40

General Features

- Floating
- Top entry
- Full bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Degreased
- Cryogenic stem extension
- Auto adjustable packing
- Self-cavity pressure relief
- Spring loaded seat system
- Allows in-line maintenance

TRUNNION TOP ENTRY

ZETFGOSU



Standard Materials

Item	Description	Materials	
		ANSI	DIN
1	Body	A351 CF8M	1.4408
2	Ball	A351 CF8M	1.4401
3	Seat	PCTFE	PCTFE
4	Stem	XM-19	XM-19
5	Stem packing 2	PTFE + Graphite	PTFE + Graphite
6	Body Seal 1	PTFE	PTFE
7	Body Seal 2	Graphite	Graphite

SIZE	RATING
3" - 42"	Class 150-600
3" - 20"	Class 900-1500
3" - 12"	Class 2500

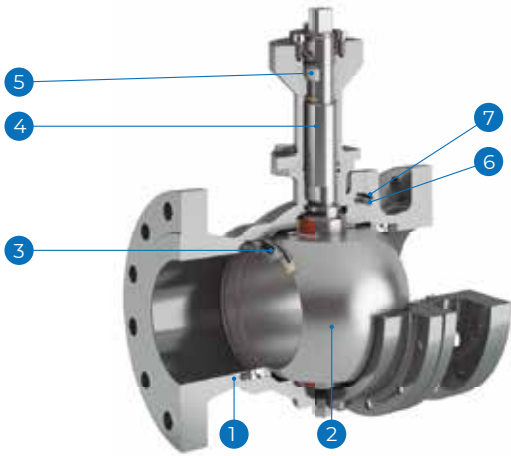
SIZE	RATING
DN 80-1050	PN 10-100
DN 80-500	PN 16-250
DN 80-300	PN 420

General Features

- Full Trunnion
- Top entry
- Full bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self-cavity pressure relief
- Degreased
- Auto adjustable packing
- Spring loaded seat system
- Allows in-line maintenance
- Cryogenic stem extension

TRUNNION 2 PCS ZFGOSU

 -196°C



Standard Materials

Item	Description	Materials	
		ANSI	DIN
1	Body	A351 CF8M	1.4408
2	Ball	A351 CF8M	1.4408
3	Seat	PCTFE	PCTFE
4	Stem	XM-19	XM-19
5	Stem packing 2	PTFE + Graphite	PTFE + Graphite
6	Body Seal 1	PTFE	PTFE
7	Body Seal 2	Graphite	Graphite

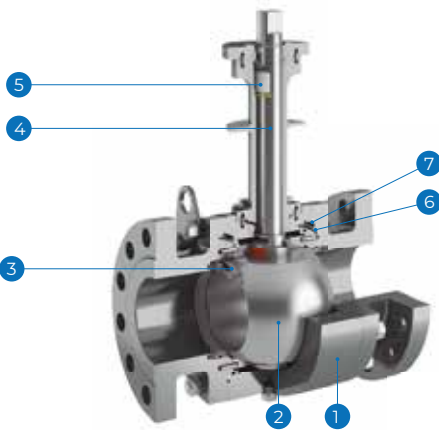
SIZE	RATING
2" - 12"	CL 150
2" - 12"	CL 300
DN 50-300	PN 10-16
DN 50-300	PN 25-40

General Features

- Trunnion
- Split Body
- Full bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self-cavity pressure relief
- Degreased
- Cryogenic stem extension
- Auto adjustable packing
- Spring loaded seat system

TRUNNION 3 PCS ZFGKOSU / ZFGKOSURB

 -196°C



Standard Materials

Item	Description	Materials	
		ANSI	DIN
1	Body	A182 F316	1.4401
2	Ball	A182 F316	1.4401
3	Seat	PCTFE	PCTFE
4	Stem	XM-19	XM-19
5	Stem packing 2	PTFE + Graphite	PTFE + Graphite
6	Body Seal 1	PTFE	PTFE
7	Body Seal 2	Graphite	Graphite

SIZE	RATING
½" - 42"	CL 600
½" - 20"	CL 900
½" - 16"	CL 1500
½" - 8"	CL 2500

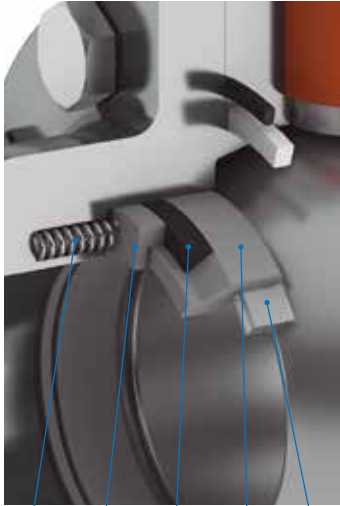
SIZE	RATING
DN15-1050	PN10-100
DN15-500	PN160
DN15-400	PN250
DN15-300	PN420

General Features

- Full Trunnion
- Split Body
- Full bore / Reduced bore
- Soft seat / Metal seat
- Unidirectional / Bidirectional
- Anti blow out proof stem
- Anti static device
- Self-cavity pressure relief
- Degreased
- Cryogenic stem extension
- Auto adjustable packing
- Spring loaded seat system

SEATS DESIGN

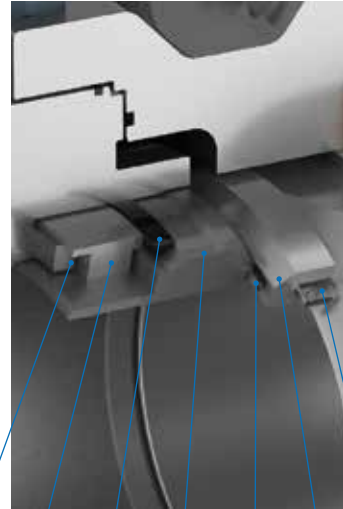
Floating / Trunnion



Item	Description
04	Seat
44a	Ring Seat 1
44b	Ring Seat 2
45	Spring
46	Seat Seal



Top Entry



Item	Description
04	Seat
43a	Seat Seal
44a	Seat Ring 1
44b	Seat Ring 2
44c	Loaded Ring
45	Spring
46	Seat Seal



CRYOGENIC STEM EXTENSION

Cryogenic stem extension with packing on top, avoiding direct contact with flow medium

- Length \geq 250 mm
- With ISO 5211 allows to assemble it on any type of manual (lever, gearbox) and actuated valve
- Gasket between valve
- BS6364

Floating



Trunnion



Top Entry





Cryogenic Ball Valves



FLOATING 2 PCS
ZFOSU



TRUNNION 2 PCS
ZFGOSU



FLOATING TOP ENTRY
ZETEFOSU



FLOATING 3 PCS
ZFKOU



TRUNNION 3 PCS
ZFGKOSU



TRUNNION TOP ENTRY
ZETEFKOSU