

Ball valves

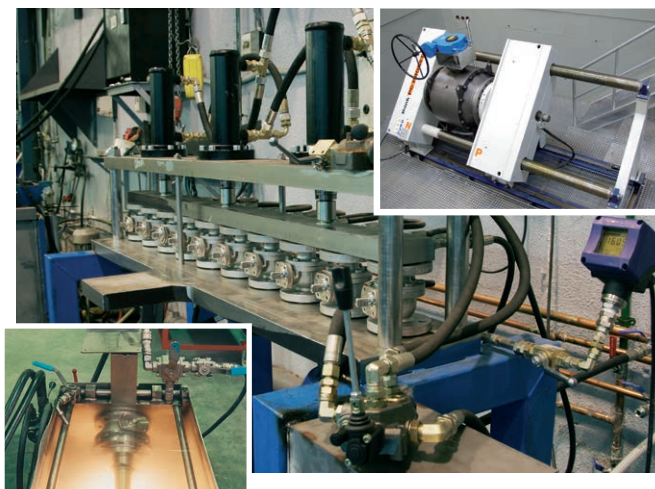


Certifications and tests



Cryogenic test

Firesafe test



Final inspection

Certificates of the company

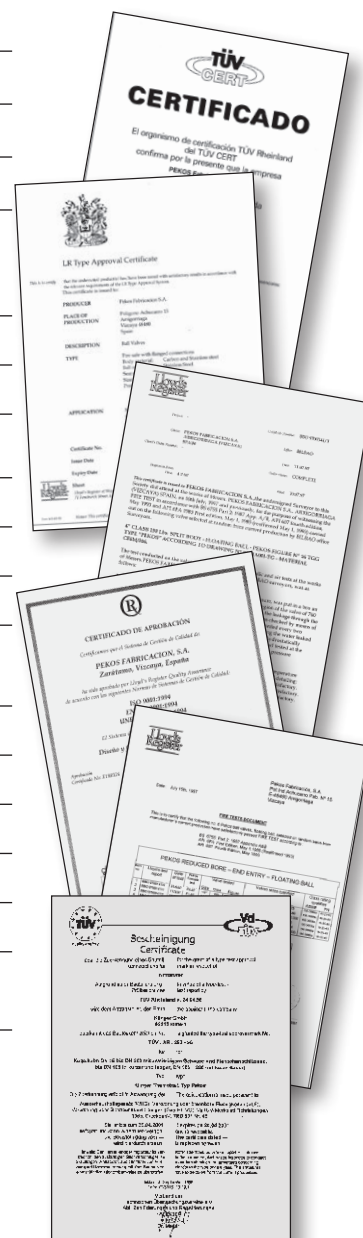
ISO 9001	Quality Assurance System
AD-Merkblatt WO/TRD 100	Manufacturing process and Quality System
API Monogram	Standard API 6D. certificate number: 6D-0363

Certificates of the product

Lloyd's Type Approval	Fire Safe & type approval
TUV A352.09	Design of the valves
TA-Luft ISO 15848	Stem tightness for gas emissions
CE	Pressure equipment CE marking (97/23/EC Directive)
ATEX 	Conformity with Directive 94/9/EC - (II)GD
BS 6364	Valves for cryogenic service
EN 161 / EN 264	Automatic shut-off valves for gas burners and gas equipment
Helium -40 °C	Leeds University test
EAC	TR CU 010 - TR CU 012 - TR CU 032
Sanitary approval (Russian)	Food processing and Pharmaceutical industry
IEC 61508	Safety Integral Level (SIL)
UKR SEPRO	Ukraine Certificate
DVGW-EN 13774	Valves for gas distribution with maximum operating pressure less than or equal to 16 bar

Some Company Approvals

- Repsol-YPF (Spain)
- Al Furat Petroleum (Syria)
- Sasol Technology (South Africa)
- EGPC (Egypt)
- China Petroleum (China)
- Qatar Petroleum (Qatar)
- Petroleum Development Oman (PDO)
- KUWAIT Oil Co. (KOC)
- Zadco (UAE)

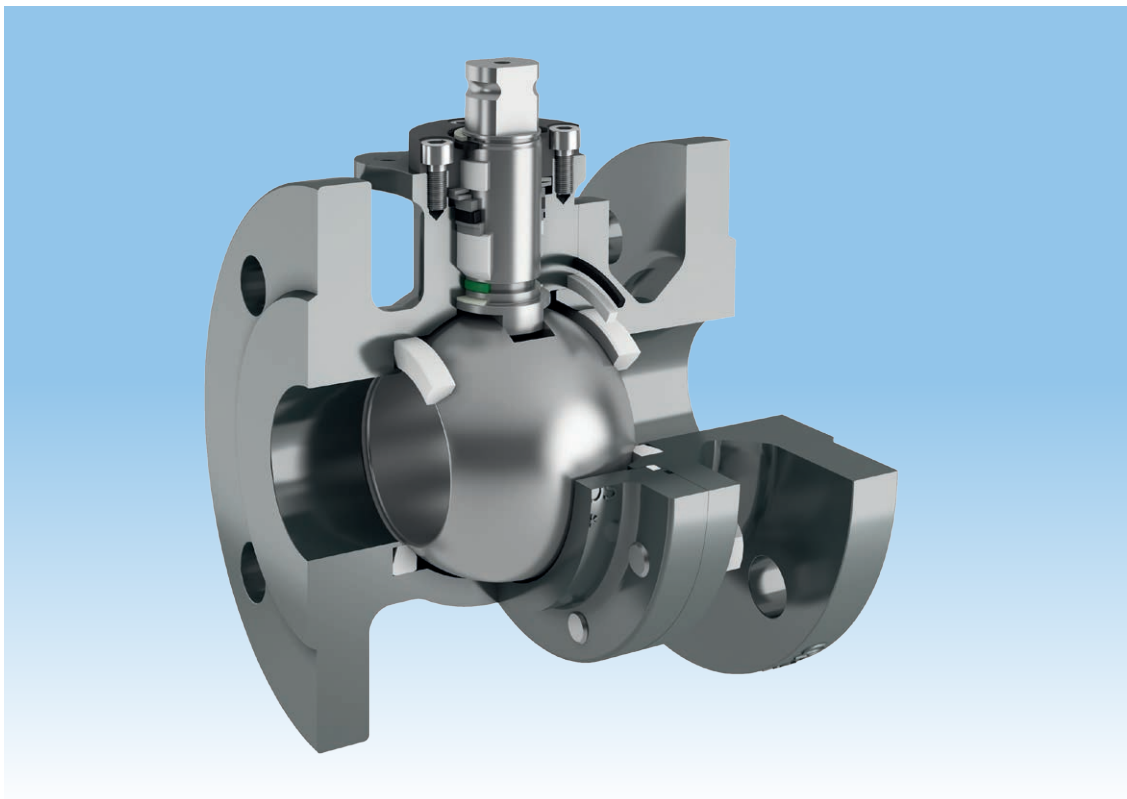


General features

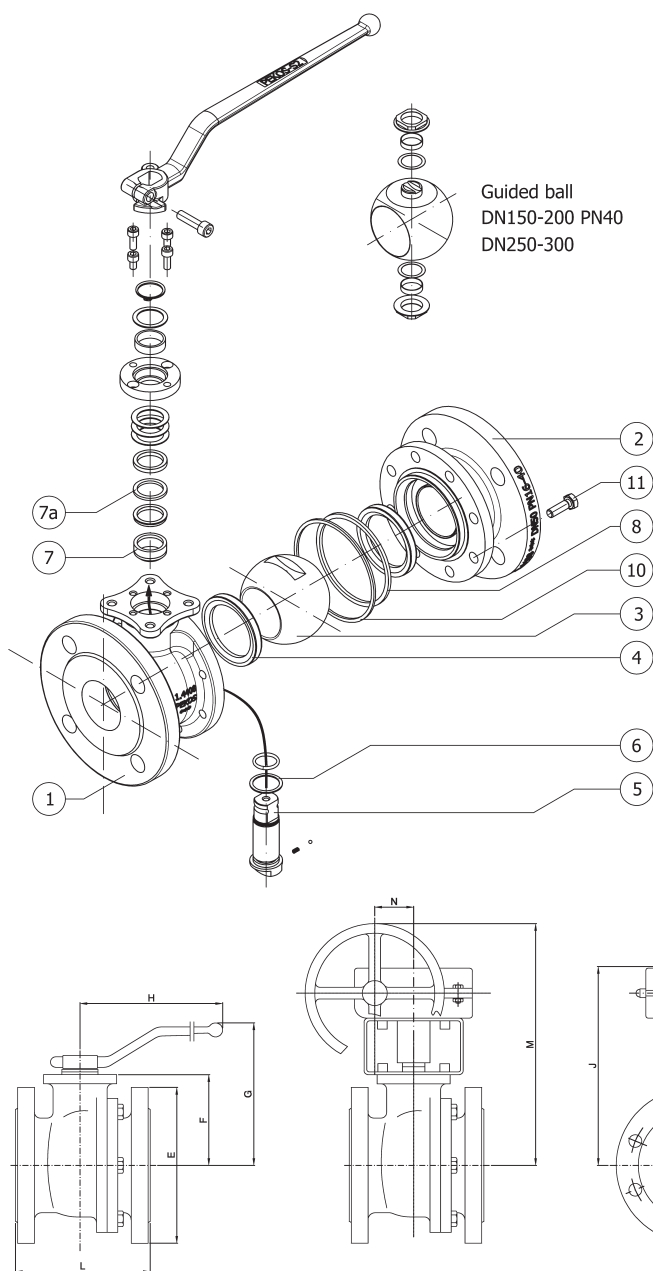
- ▼ Design as per EN-12516 , ISO 17292
- ▼ Construction DIN3357 PN10 up to PN40
- ▼ Face to Face as per EN558
- ▼ Flanged drilled as per EN-1092-1 (PN10-40) and ISO7005-1 (PN10-49)

Body constructions and desing advantages

- ▼ Floating ball
- ▼ Guided ball
- ▼ Full Trunnion
- ▼ Split body 2-3 pieces or 1 piece (side-entry)
- ▼ Full and Reduced bore
- ▼ Bidirectional
- ▼ ISO 5211 Top Flange
- ▼ Anti-blow out stem
- ▼ Antistatic stem
- ▼ Autoadjustable packing / Maintenance free
- ▼ Standard contruction Fire Safe
- ▼ Self cavity pressure relief
- ▼ Low emission design
- ▼ Double Block and Bleed



FLOATING & GUIDED



Standard materials

Item	Description	Figure	
		ZG04 TTTG Z04 TTTG Z24 TTTG	ZG06 TTTG Z06 TTTG Z26 TTTG
1-2	Body	1.0619	1.4408
3	Ball	1.4408	
4	Seat	PTFE (T) PTFE + FG (R) PTFE + CG (S)	
5	Stem	1.4401	
6	Stem seal	PTFE+FG (R)	
7	Packing 1	PTFE (T)	
7a	Packing 2	Graphite	
8	Body seal 1	PTFE (T)	
10	Body seal 2	Graphite	
11	Body bolt	A2-70	A4-70

Special alloys under request.

Weight (kg)

DN	Weight			
	F1 (1)	F4 (2)	F5 (3)	Gear Box
15	3,2	3	-	-
20	4,3	3,8	-	-
25	5,3	4,7	-	-
32	7,2	6,5	-	-
40	9,3	8,2	-	3
50	13	11,2	-	3
65	20	16,9	-	3
80	26	22,2	-	3
100	36,4	30	-	3
125	68,3*	-	56/62	15
150	94*	-	75/83	15
200	163,5*	-	134/147	21
250	-	-	228/254	21
300	-	-	321/372	31

When two values are indicated, the first correspond to PN16 and the second to PN40.

* Weight only for PN16

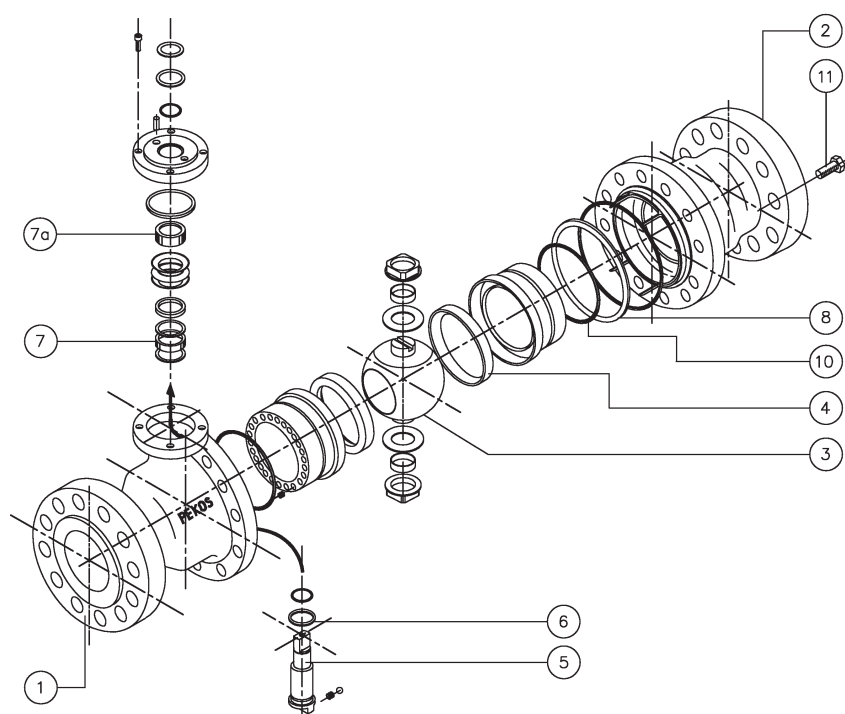
Dimensions (mm)

DN	D	L			E		F	G	H	I	J	K	M	N
		F1 (1)	F4 (2)	F5 (3)	PN16	PN40								
15	15	130	115	-	95	95	52	100	185	-	-	-	-	-
20	20	150	120	-	105	105	54	102	185	-	-	-	-	-
25	25	160	125	-	115	115	60	110	185	-	-	-	-	-
32	32	180	130	-	140	140	65	115	185	-	-	-	-	-
40	40	200	140	-	150	150	75	129	293	170	203	300	313	50
50	50	230	150	-	165	165	83	137	293	170	210	300	321	50
65	65	290	170	-	185	185	96	150	293	170	223	300	334	50
80	80	310	180	-	200	200	114	187	350	170	261	300	372	50
100	100	350	190	-	220	235	128	201	350	170	275	300	386	50
125	125	425*	-	325	250	270	158	247	680	210	326	400	479	71
150	150	480*	-	350	285	300	175	285	740	210	343	400	496	71
200	200	600*	-	400	340	375	245	354	750	272	418	500	566	86
250	250	-	-	450	405	450	285	-	-	272	458	500	682	86
300	300	-	-	500	460	515	329	-	-	272	518	600	732	105

(1) EN 558 serie 1 - (2) EN 558 serie 14 or 27 - (3) EN 558 serie 15 or 27.

Dimensions with gear box correspond only to PN16, gear box for PN40 under request.

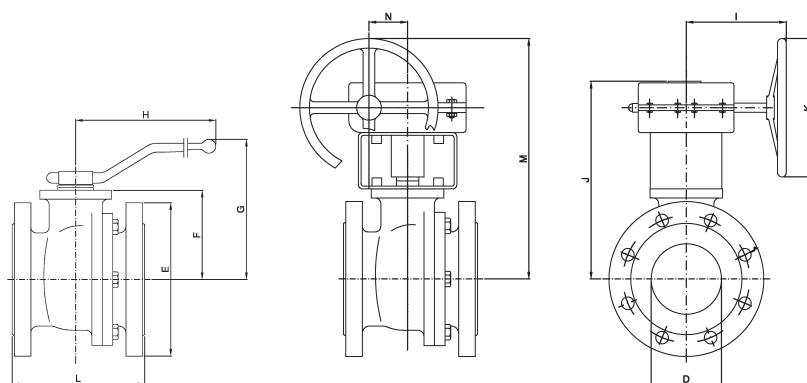
FULL TRUNNION 2 PIECES



Standard materials

Item	Description	Figure	
		ZGS04 TTTG ZGS24 TTTG	ZGS06 TTTG ZGS26 TTTG
1-2	Body	1.0619	1.4408
3	Ball	1.4408	
4	Seat	PTFE (T) PTFE + FG (R) PTFE + CG (S)	
5	Stem	1.4462	
6	Stem seal	PTFE + FG (R)	
7	Packing 1	PTFE (T)	
7a	Packing 2	Graphite	
8	Body seal 1	PTFE (T)	
10	Body seal 2	Graphite	
11	Body bolt	A2-70	A4-70

Special alloys under request.



Weight (kg)

DN	Weight		
	F1 (1)	F5 (3)	Gear Box
50	8	-	-
80	11,5	-	-
100	17,5	-	-
125	70	56	15
150	110	75/83	15
200	194	134/147	21
250	335	228/254	21
300	491	321/372	21

When two values are indicated, the first correspond to PN16 and the second to PN40.

Dimensions (mm)

DN	D	L		E		F	G	H	I	J	K	M	N
		F1 (1)	F5 (3)	PN16	PN40								
50	50	230	-	105	165	84	153	293	-	-	-	-	-
80	80	310	-	200	200	114	205	350	-	-	-	-	-
100	100	350	-	220	235	128	220	350	-	-	-	-	-
125	125	-	325	250	-	158	-	-	210	326	400	479	71
150	150	-	350	285	300	175	-	-	210	343	400	496	71
200	200	-	400	340	375	245	-	-	272	418	500	566	86
250	250	-	450	405	450	285	-	-	272	458	500	682	86
300	300	-	500	460	515	336	-	-	272	518	600	732	105

(1) EN 558 serie 1 - (3) EN 558 serie 15 or 27.

Dimensions with gear box correspond only to PN16, gear box for PN40 under request.

Technical features

Breakaway torques (Nm)

Floating & Guided

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
PN16	8	10	14	23	31	46	55	85	110	240	380	540	950	1200
PN40	12	14	17	30	40	65	85	130	190	350	470	975	1290	1450

Full Trunnion

DN	50	80	100	125	150	200	250	300
PN16	46	100	139	320	420	620	1075	1360
PN40	94	242	395		875	1364	1794	2187

Test are made with water and standar seats maximum ΔP according to body at seat rating. With S or R seats type and with clean fluids, the above torque values should be increased 30%.
Breakaway torque can be increased approximately 50% after long periods of inactivity during the first cycles.

Kv values

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv (m³ / h)	20	44	88	105	200	310	480	960	1700	2450	4100	8200	11500	18300

Leak tests

Test specifications according DIN 3230 part 3, EN 12266-1
Class A and ISO 5208.

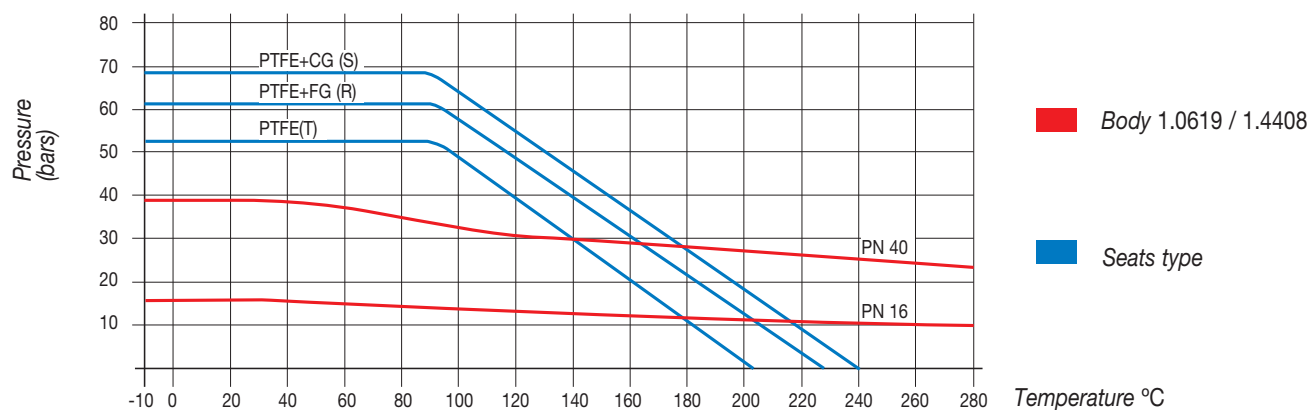
	Hydraulic shell test	Hydraulic seat test	Pneumatic seat test
PN 10	15 bar	11 bar	6 bar
PN 16	24 bar	18 bar	6 bar
PN 40	60 bar	44 bar	6 bar

Test Duration

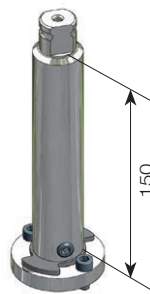
DN	BODY	SEAT
50	0.25 min	1 min
65	1 min	
80		
100		
125		
150		
200	2 min	2 minn
250		
300		

Pressure-Temperature limitations

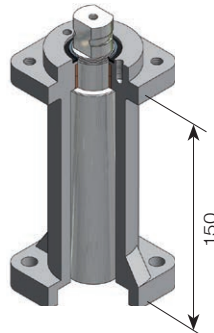
Pressure - Temperature graph



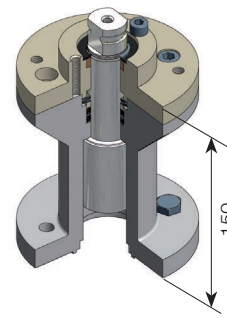
Stem extensions



Simple stem extension

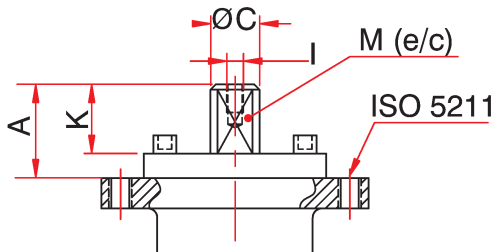


Standard extension



Security and fugitive emission detector

Top flange ISO 5211

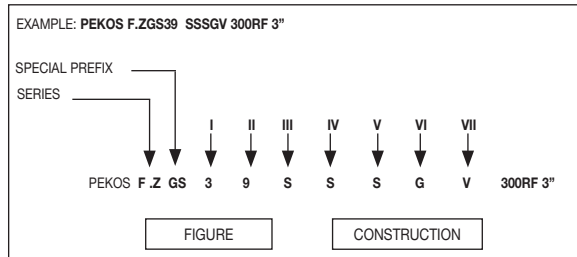


DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
ISO 5211	F05-1	F05-2	F07	F10	F12	F14								
M	11	11	14	14	17	17	17	22	22	27	27	36	36	36
C	14	14	18	18	22	22	22	28	28	36	36	48	48	48
A	13.5	13.5	19.5	19.5	30	30	30	40	40	50	50	63	63	73
K	11	11	17	17	20	20	20	22	22	35	35	40	40	60
I	M4	M4	M4	M4	M6	M6	M6	M8	M8	M8	M8	M8	M8	M8

How to order PEKOS ball valves

SERIES	SPECIAL PREFIX	FIGURE				COMPONENT OTHER THAN BALL & BODY
		I	B	B		
		CLASS	BODY	BALL		
Z-Updated packing system	B-Sampling valve	0 - F4/F5	0	Special	Special	+ NON STANDARD MATERIAL
	C-Cavity filler	1 - CL-150	1	Cast Iron	CF8M	
	D-Seat and stem Sealant fitting	2 - F1/F2			1.4408	
	D4-Seat Sealant fitting	3 - CL-300			CF8M	
	D5-Stem Sealant fitting	4 - CL-400			1.4408	
	DBB-3 pieces, 2 balls	5 - Tank bottom			CF8	
	F-Security stem extension	6 - CL-600	2	Cast Iron	1.4027	
	G-Guided ball	7 - 4 ways			CA15	
	H-Heating jacket (semi)	8 - 3 ways			ANSI 410	
	I-Inclined stem	9 - Wafer			A105/LF2+ENP	
	J-Heating jacket (full)	15 - CL-1500			A105/LF2+ENP	
	K-3 pieces	25 - CL-2500			1.4027	
	M-Metallic seat	80 - CL-800	3		A105/LF2+ENP	
	N-PMSS	90 - CL-900			WCC A105	
	O-Degreased				CA15	
	P-Protected seat				1.0619	1.4408
	R-Scraper Seat				1.0352	1.4462
	RB-Reduced Bore				WCC	CF8M
	S-Spring seat				A105	F51
	TH-Threaded Body				LCC	
	U-Unidirectional				LF2	
	V-O-ring seat				1.0619QT	LF2 + ENP
	W-Welded body				1.622	
	X-Double Piston effect				1.0352	
					CF8M	CF8M
					F316	F51
					1.4408	1.4408
					1.4401	1.4462
					1.4539	1.4539
					904L	904L
					CF3M	CF3M
					F316L	F51
					1.4409	1.4409
					1.4404	1.4462
					LCC	CF8M
					LF2	F51
					1.0619QT	1.4408
					1.6220	1.4462

CONSTRUCTION						
III	IV	V	VI	VII		
SEAT	BALL	BODY SEAL		STEM O-RING		
B-PFA	B-PFA	1	2	A-FEPM		
C-Cr Carbide (CrC)	G-GRAPHITE	A-FEPM		E-EPDM		
D-DELFIN®	R-PTFE + 25% FG	B-PFA		F-FLUOROSILICONE (FVMQ)		
E-PTFE+EKONOL	S-PTFE+ 25% CG	C-METAL SEAL		H-HNBR		
G-GRAPHITE	T-PTFE	E-EPDM		I-SILICONE (VMQ)		
H-COLMONOY	U-UHMWPE	F-FLUOROSILICONE (FVMQ)		K-FFKM		
K-PCTFE		G-GRAPHITE		L-CHLOROPRENE		
L-Stellite		H-HNBR		N-NBR		
N-DEVILON® V		I-SILICONE (VMQ)		O-NEOPRENE		
O-PEEK+PTFE+FG		K-FFKM		V-FKM		
P-PEEK		L-CHLOROPRENE				
Q-PEEK + 12% PTFE		N-NBR				
R - PTFE + 25% FG		R-PTFE + 25% FG				
S-PTFE+ 25% CG		T-PTFE + 25% CG				
T-PTFE		S-PTFE				
U-UHMWPE		U-UHMWPE				
V-FKM		V-FKM				
X-PTFE + 50% SS.						
W-Tu Carbide (WC)						
Z-PEEK+PTFE+CG						



DIN
From DN15 up to DN 600
DIN PN 10 up to PN 420
From -196° C up to +700° C



Split body floating



Full trunnion



Cryogenic



End entry floating



3 & 4 way floating and trunnion



Wafer



Heating jacket



Tank bottom



Metal to metal



Three piece forged



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