



Pekos[®] V A L V E S



Ball valves



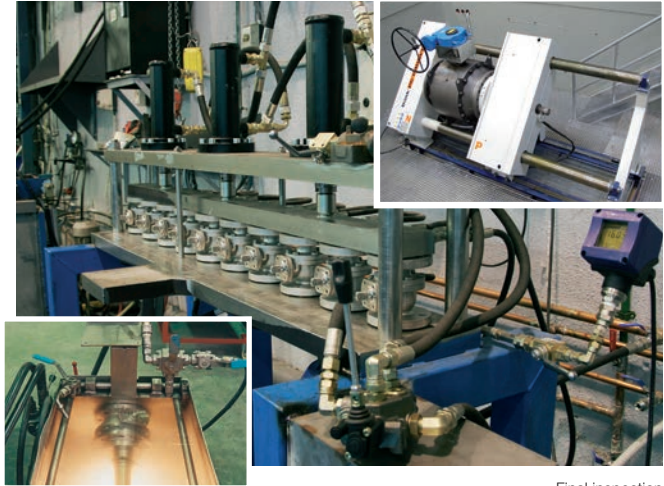
Certifications and tests



Firesafe test



Cryogenic test




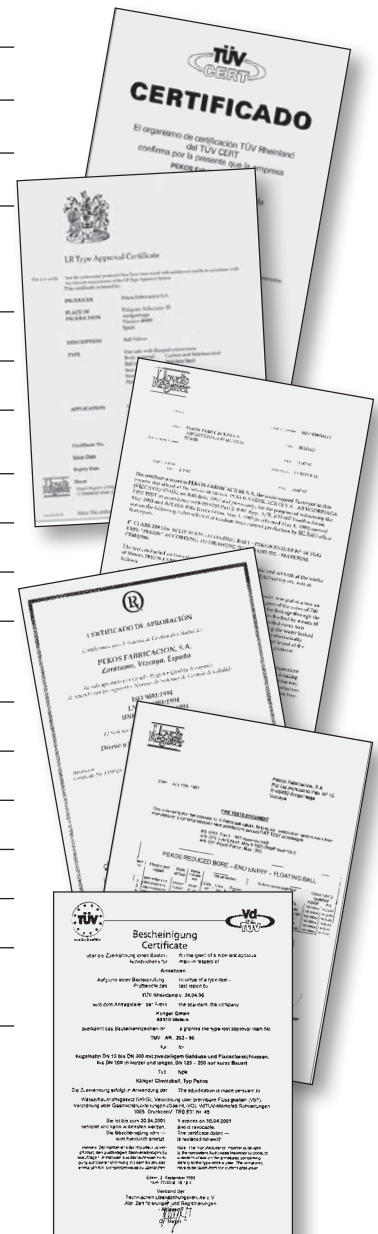
Final inspection

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
GOST-R	Russian Federation Certificate
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 for to 16 bar



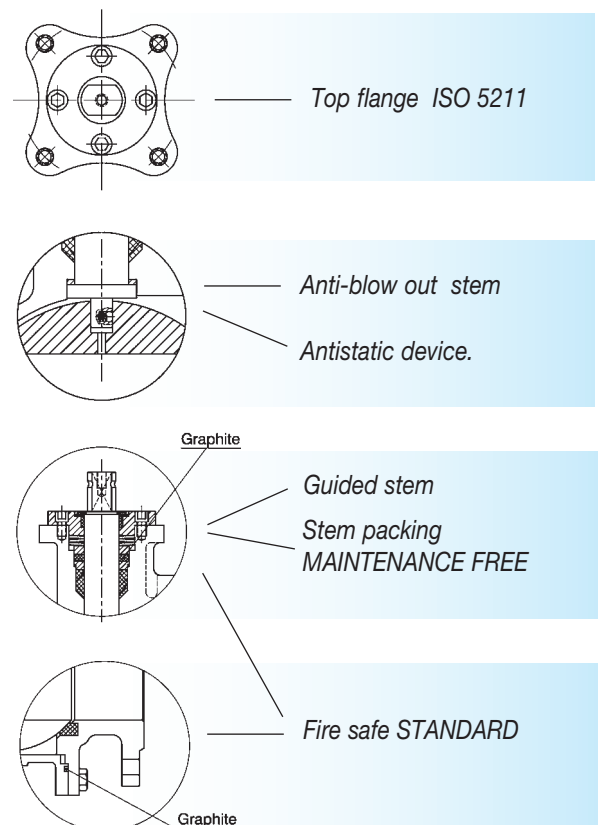
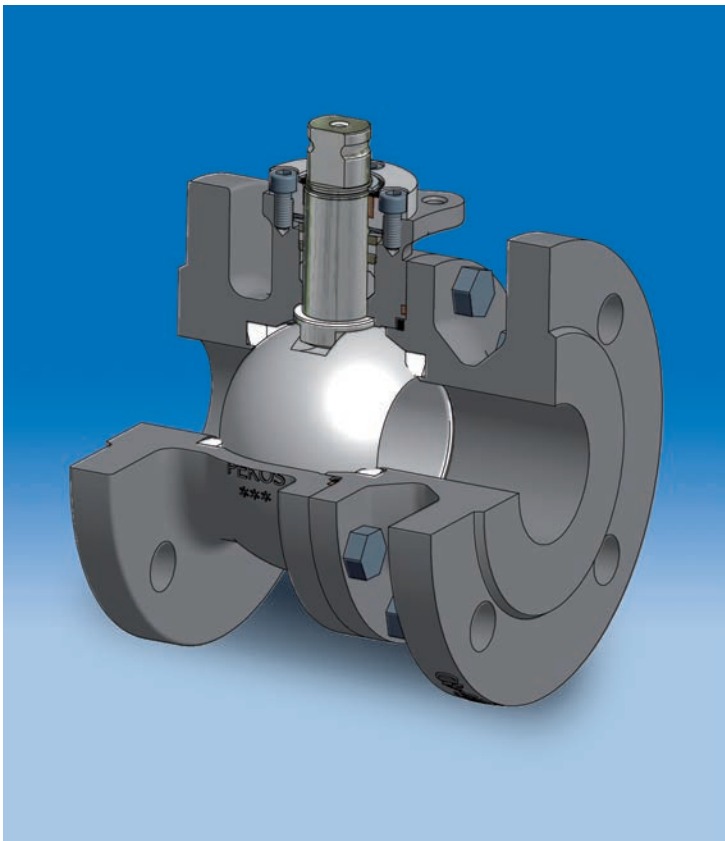
Some Company Approvals

- 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)

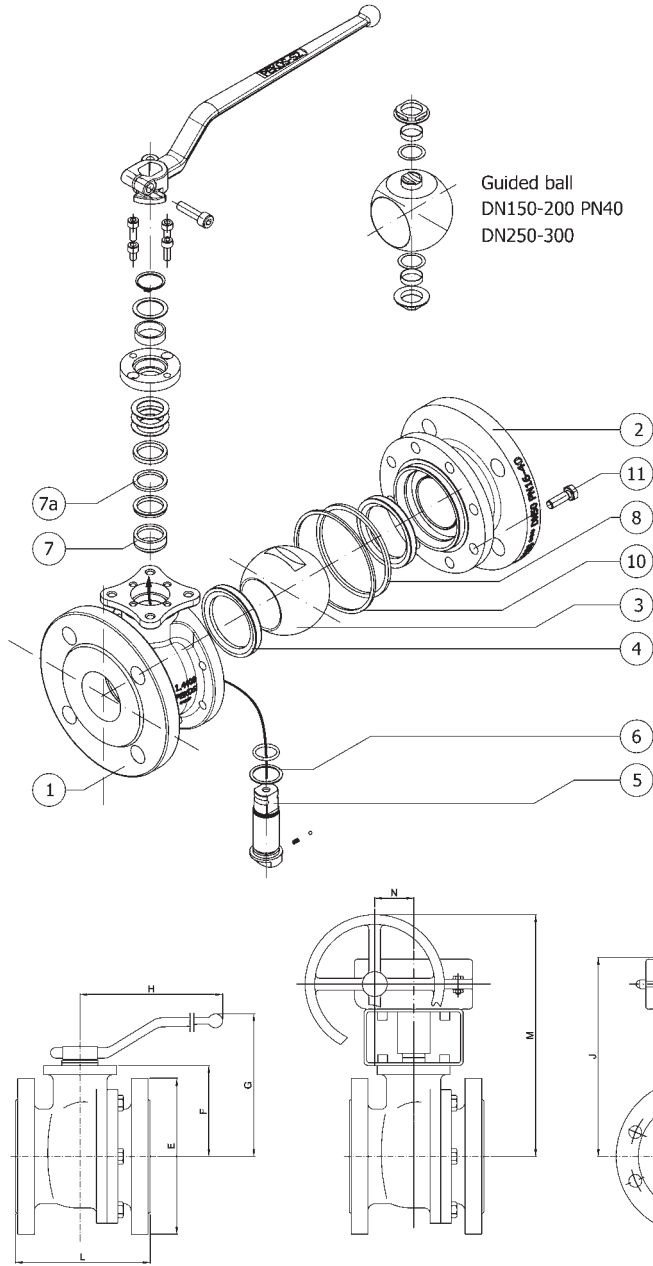
General features

- ▼ Floating and Guided ball.
- ▼ Construction “split body”.
- ▼ Design as per EN-12516, ISO 17292
- ▼ Construction DIN 3357 PN 10 up to PN 40.
- ▼ Distance between flanges as per EN 558.
- ▼ Flanges drilled as per EN-1092-1 (PN10-40) and ISO 7005-1 (PN10-40).
- ▼ Flanges surfaces as per EN 1092 type B and DIN 2526 form C.
- ▼ Leak test as per EN 12266, ISO 5208 and DIN 3230 part 3.
- ▼ Top flange ISO 5211.
- ▼ Standard construction materials are: cast iron, carbon steel and stainless steel.
- ▼ Special alloys can be supplied upon request.

Design advantages



FLOATING & GUIDED



Standar 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

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

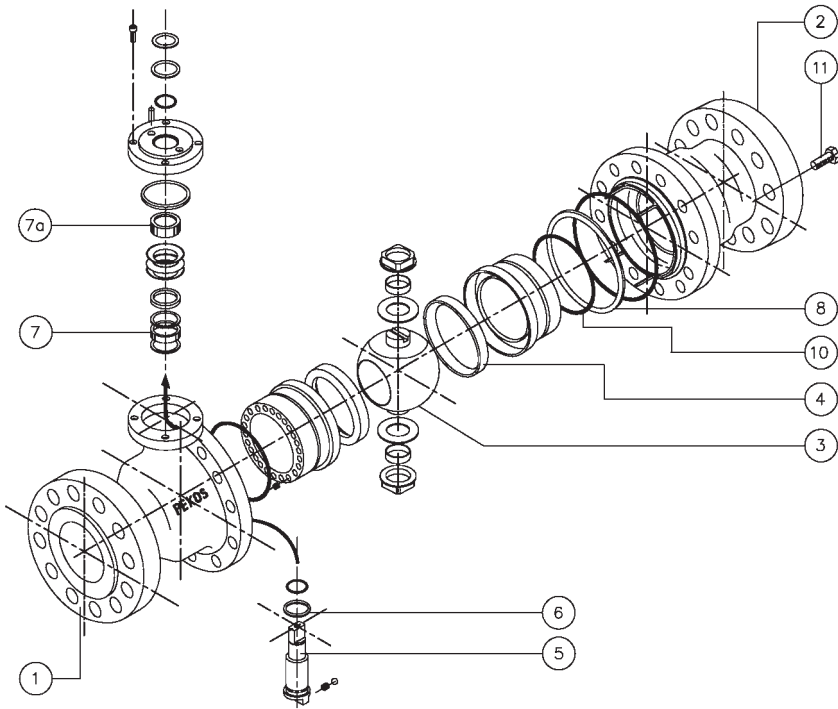
Dimensions (mm)

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.

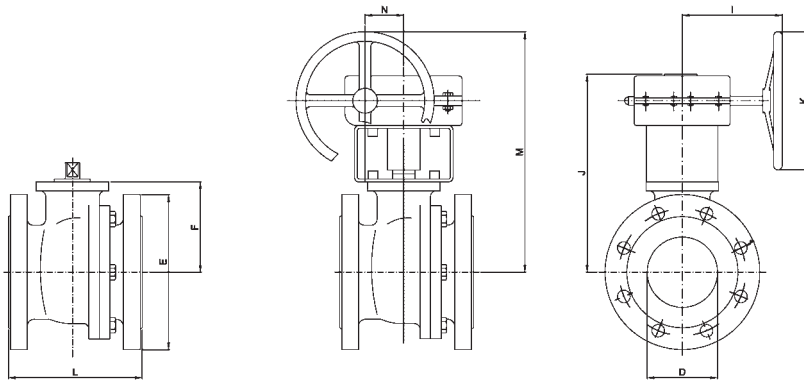
Dimensions with gear box correspond only to PN16, gear box for PN40 under request.

FULL TRUNNION 2 PIECES



Standar 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



Weight (kg)

DN	Weight		
	F1 (1)	F5 (3)	Gear Box
125	70	56	15
150	110	75/83	15
200	194	134/147	21
250	335	228/254	21
300	491	321/372	31

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

Dimensions (mm)

DN	D	L		E		F	I	J	K	M	N
		F1 (1)	F5 (3)	PN16	PN40						
125	125	425	325	250	-	158	210	326	400	479	71
150	150	480	350	285	300	175	210	343	400	496	71
200	200	600	400	340	375	245	272	418	500	566	86
250	250	730	450	405	450	285	272	458	500	682	86
300	300	850	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)

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

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

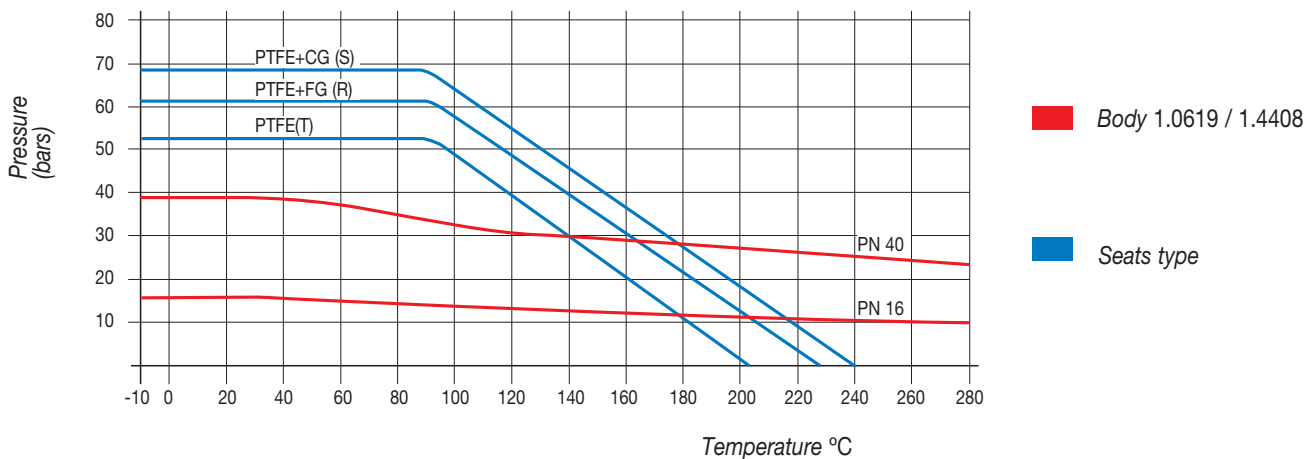
Class A and ISO 5208.

	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

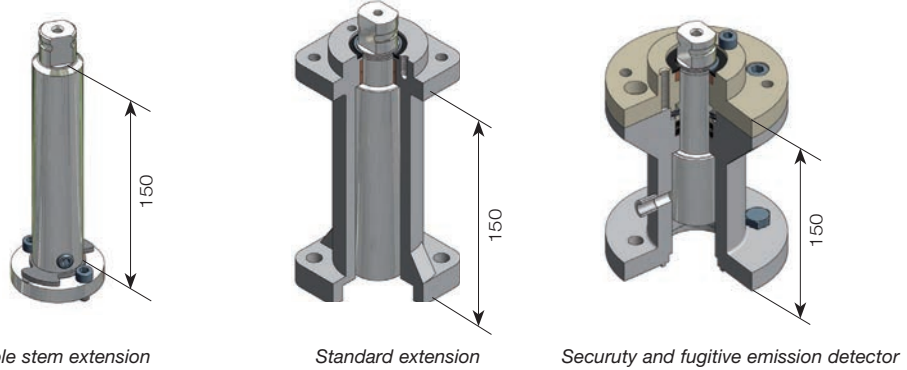
Tests duration	
Size / DN	Time
15-40	0.25 min
50-150	1 min
200	2 min
250-300	3 min

Pressure-Temperature limitations

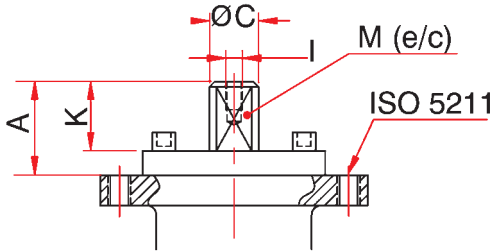
Pressure - Temperature graph



Stem extensions



Top flange ISO 5211

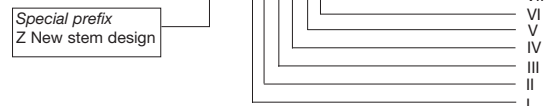


DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
ISO 5211	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F12	F14	F14	F14
M	11	11	14	14	17	17	17	22	22	27	27	36	36	36
C	14	14	18	18	22	22	22	28	28	36	36	48	48	48
A	13.5	13.5	19.5	19.5	30	30	30	40	40	50	50	63	63	73
K	11	11	17	17	20	20	20	22	22	35	35	40	40	60
I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

How to order PEKOS ball valves

	I	II	III	IV	V	VI	VII
SPECIAL PREFIX	I Class	II Body Ball	Seats	Stem Packing	Body seal 1	Body seal 2	O ring stem
B - Sampling valve	0 - F4/F5	0-Special Special	T - PTFE	T - PTFE	T - PTFE		V - Viton® (FKM)
C - Cavity filler	1 - CL-150	1-Cast iron CF8M 1,4408	R - PTFE + 25% FV	R - PTFE + 25% FV	R - PTFE + 25% FV		N - NBR/HNBR
D - Seat and stem Sealant fitting	2 - F1	2-Cast iron CF8M 1,4408	S - PTFE+ 25% CG	S - PTFE+ 25% CG	S - PTFE+ 25% CG		E - EPDM
D4 - Seat Sealant fitting	3 - CL-300		CF8 1,4027	X - PTFE + 50% SS.	B - PFA	B - PFA	
D5 - Stem Sealant fitting	4 - CL-400	CA15 AISI410	B - PFA	G - GRAPHITE	G - GRAPHITE		L-CHLOROPRENE
E - Standard stem extension	5 - Tank bottom	A105/LF2+ENP	K - KEL F0® (PCTFE)	U - UHMWPE0®	U - UHMWPE0®		I - SILICONE
F - Security stem extension	6 - CL-600	1,0619 1,0352	P - PEEK	Y - TF17500®	Y - TF17500®		A - ALFAS® (FEPM)
G - Guided ball	7 - 4 ways	3 A105 WCC	Q - PEEK + 12% PTFE	G - TFM	M - TFM		
H - Heating jacket (semi)	8 - 3 ways	CA15	O - PEEK+PTFE+FV		V - VITON® (FKM)		
I - Inclined stem	9 - Wafer	4 1,0619 1,0352	Z - PEEK+PTFE+CG		N - NITRILE		
J - Heating jacket (full)	15 - CL-1500	A105 WCC	N - DEVLON0® V		E - EPDM		
K - 3 pieces	25 - CL-2500	5 LCC LF2	D - DELRIN0®		K - KALREZ® (FFKM)		
L - Locking device	80 - CL-800	1,0619QT 1,6220 1,0352	U - UHMWPE0®		L-CHLOROPRENE		
M - Metallic seat	90 - CL-900	6 CF8M	G - GRAPHITE		I - SILICONE		
O - Degreased		1,4408	C - S. steel+ Cr Carbide		A - ALFAS® (FEPM)		
P - Protected seat		7 1,4539 904L	W - TUNGSTEN				
S - Spring seat		904L	H-COLMONOY				
T - Simple stem extension		LCC LF2	V - VITON® (FKM)				
U - Unidirectional		9 1,0619QT 1,6220 1,0352	Y - TF17500®				
V - O-ring seat		1,4408 1,4462	M-TFM				
W - Welded body							
RB - Reduced bore							

Example: Fig. ZLU - 16 TGGVN - DN80



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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