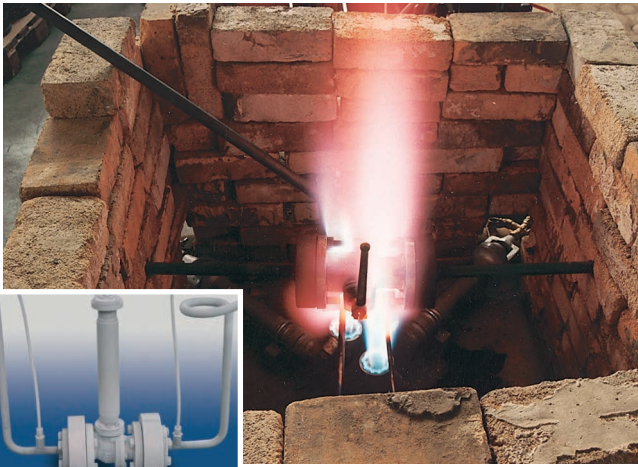


Certifications and tests



Firesafe test



Cryogenic test



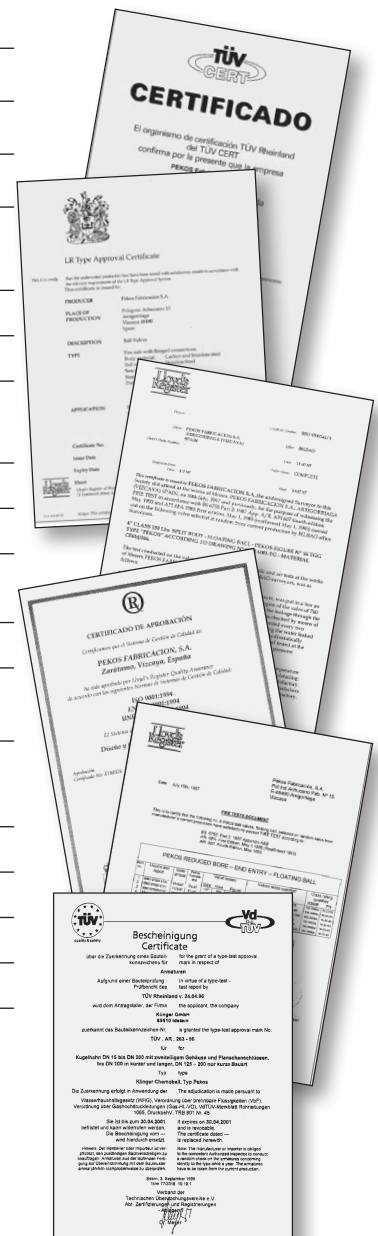
Final inspection

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

CE	Pressure equipment CE marking (97/23/EC Directive)
ATEX 	Conformity with Directive 94/9/EC - (II2GD)
ISO 10497 - API 6D API 607 - API 6FA	Fire Safe - Lloyd's Type Approval
IEC 61508	Safety Integral Level (SIL)
TÜV A352.09	Design of the valves
TA-Luft ISO 15848	Stem tightness for gas emissions
BS 6364	Valves for cryogenic service
EN 161/EN 23553-1 (former EN 264)	Automatic shut-off valves for gas burners and gas equipment
DVGW-EN 13774	Valves for gas distribution with maximum operating pressure less than or equal to 16 bar
GOST-R	Russian Federation Certificate
Sanitary approval (Russian)	Food processing and Pharmaceutical industry
UKR SEPRO	Ukraine Certificate
Helium -40 °C	Leeds University test



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)

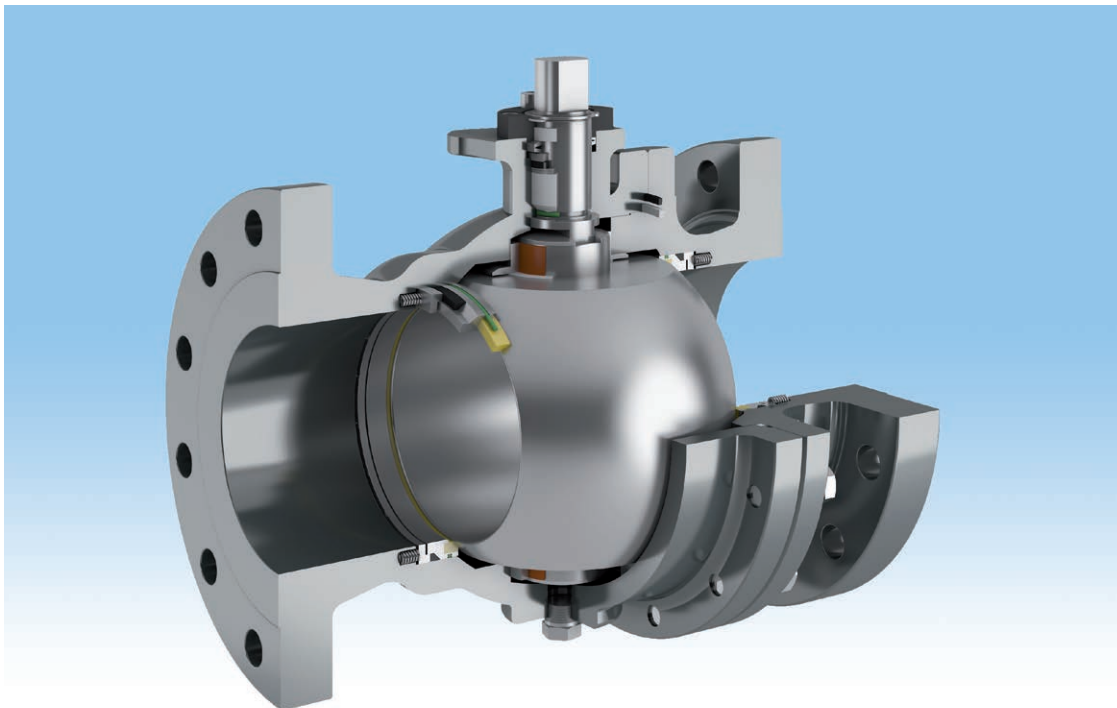
General features

- ▼ Design as per BS5351, ANSI B16.34, ISO 17292, API 6 D upon request
- ▼ ISO 5211 Top flange
- ▼ FIRE SAFE construction certified as per BS 6755 part 2, API 6FA, API 607 and ISO 10497
- ▼ Pressure testing according, API 598, ISO 5208, and API 6D upon request
- ▼ Face to face as per ANSI B16.10, API 6D
- ▼ End connections

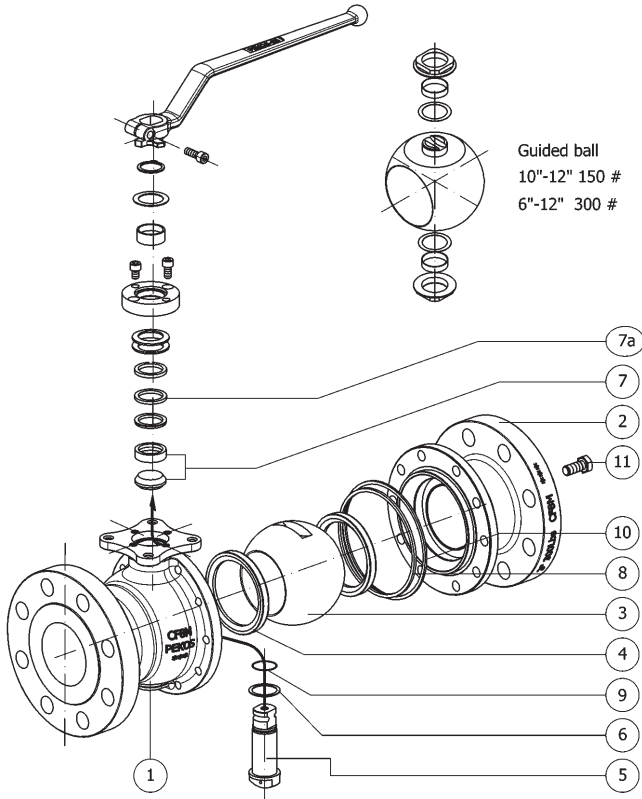
Flanged RF, RTJ.....	ANSI 16.5
Socket Weld.....	ANSI 16.11
Butt Weld.....	ANSI 16.25
NPT.....	ANSI B1.20.1
BSPP.....	BS 21, ISO 228/1, DIN 259
BSPT.....	BS 21, ISO 7/1

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
- ▼ Antiestatic stem
- ▼ Autoadjustable packing / Maintenance free
- ▼ Standard construction Fire Safe
- ▼ Self cavity pressure relief
- ▼ Low emission design
- ▼ Double Block and Bleed

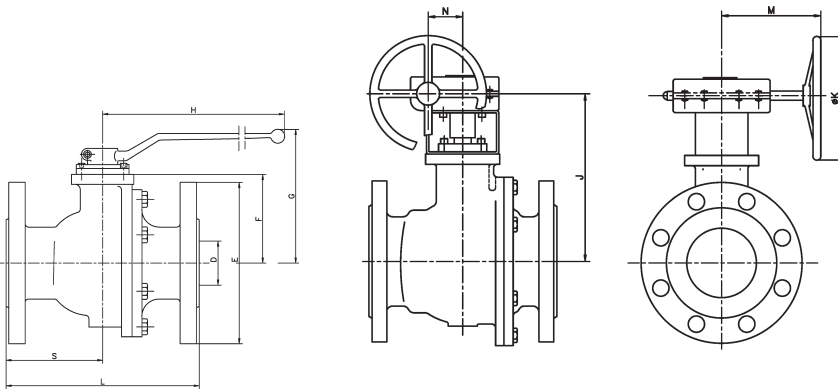


FULL BORE - FLOATING & GUIDED



Standard materials

Item	Description	Figure	
		Z14 TTTGV Z34 SSSGV Z64 SSSGV ZG14TTTGV ZG34 SSSGV	Z16 TTTGV Z36 SSSGV Z66 SSSGV ZG16TTTGV ZG36 SSSGV
1-2	Body	A216 WCC	A351CF8M
3	Ball	A351CF8M	
4	Seats	PTFE (T) PTFE+FG (R) PTFE + CG (S)	
5	Stem	AISI 316	
6	Stem seal	PTFE + CG (S)	
7	Packing 1	PTFE (T)	
7a	Packing 2	Graphite	
8	Seal body 1	PTFE (T)	
9	Oring stem	Viton®	
10	Seal body 2	Graphite	
11	Bolts body	A193 B7M	A193/A320 B8M Cl2



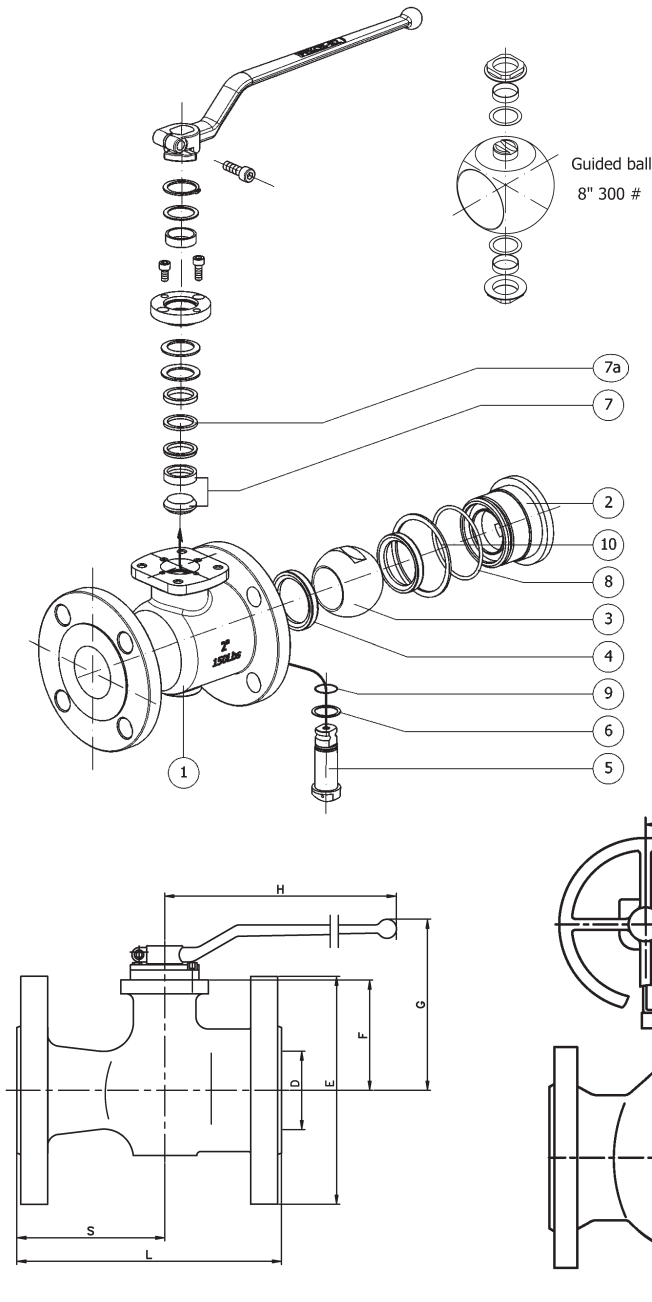
Weight (Kg)

NPS	Class 150	Class 300	Class 600	G.Box
1/2"	2,5	3	4	-
3/4"	3,3	4,5	6	-
1"	4,2	5	8	-
1 1/2"	7,4	10,5	14	-
2"	10,6	12,5	19	-
2 1/2"	17	20	22,5	-
3"	22	27	-	-
4"	32	44	-	-
6"	81	105	-	9
8"	143	179	-	20
10"	245	287	-	20
12"	367	480	-	20/25

Dimensions

NPS	Class 150 & 300										Class 600						Gearbox					
	D	L		E		F	G	H	S		ISO 5211	L	E	F	G	H	S	ISO 5211	J	M	N	K
		150	300	150	300				150	300												
1/2"	15	108	140	89	95	52	105	185	47	64	F05s	165	95	61	112	185	68	F05	-	-	-	-
3/4"	20	117	152	99	118	54	107	185	52	76	F05s	190	120	61	112	185	84	F05	-	-	-	-
1"	25	127	165	108	124	60	113	185	56	70	F05	216	125	61	112	185	96	F05	-	-	-	-
1 1/2"	40	165	191	127	156	75	145	300	77	78	F07	241	456	76	130	300	115	F07	-	-	-	-
2"	50	178	216	152	165	84	153	300	92	90	F07	292	165	83	137	300	129	F07	-	-	-	-
2 1/2"	65	190	241	178	190	96	166	300	95	120	F07	330	190	96	150	300	152	F07	-	-	-	-
3"	80	203	283	191	210	114	205	355	101	142	F10	-	-	-	-	-	-	-	-	-	-	-
4"	100	229	305	229	254	128	220	355	114	152	F10	-	-	-	-	-	-	-	-	-	-	-
6"	150	394	403	279	318	175	284	680	165	211	F12	-	-	-	-	-	-	-	295	287	71	400
8"	200	457	502	343	381	245	362	750	228	251	F14	-	-	-	-	-	-	-	377	305	86	500
10"	250	533	568	406	445	285	-	-	270	283	F14	-	-	-	-	-	-	-	417	305	86	500
12"	300	610	648	483	521	336	-	-	305	324	F14	-	-	-	-	-	-	-	474	346	104	500

REDUCED BORE - SIDE ENTRY - FLOATING



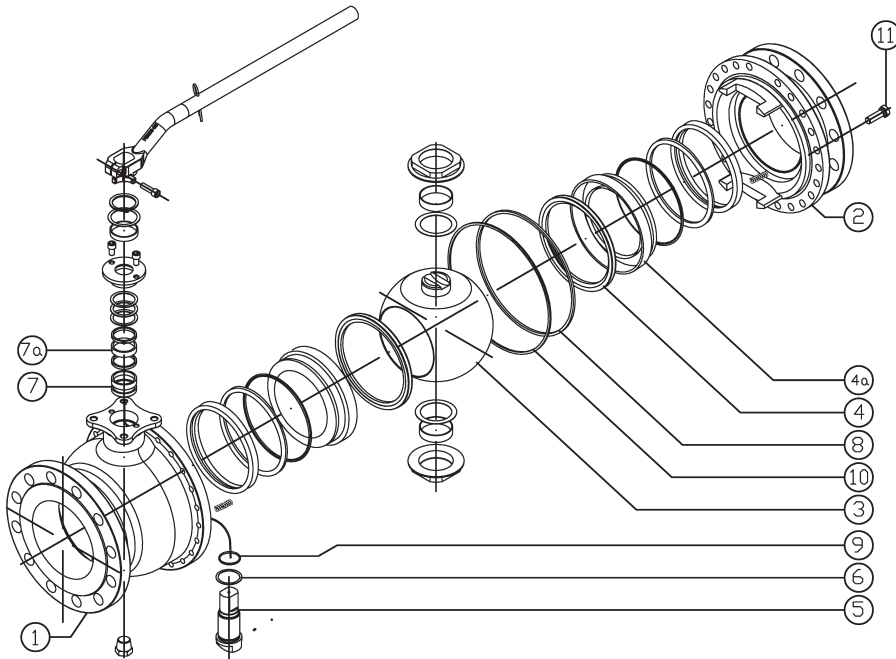
Standard materials

Item	Description	Figure	
		ZRB14 TTGW ZRB34 SSGW	ZRB16 TTGW ZRB36 SSGW
1-2	Body	A216 WCC	A351CF8M
3	Ball	A351CF8M	
4	Seats	PTFE (T) PTFE+FG (R) PTFE + CG (S)	
5	Stem	AISI 316	
6	Stem seal	PTFE + CG (S)	
7	Packing 1	PTFE (T)	
7a	Packing 2	Graphite	
8	Seal body 1	Viton®	
9	Oring stem	Viton®	
10	Seal body 2	Graphite	

Dimensions

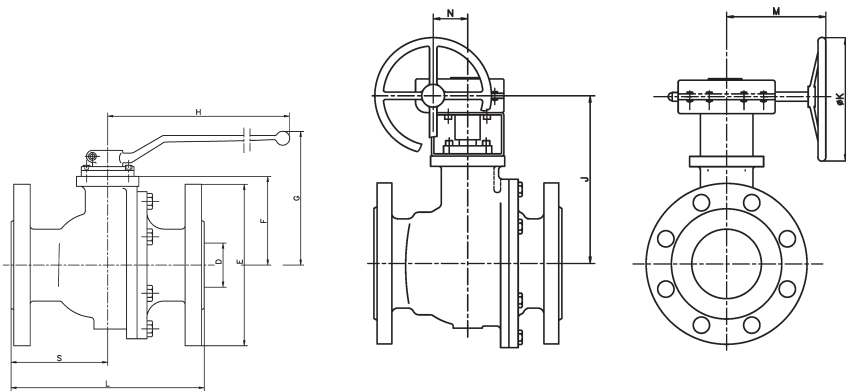
NPS	D	L		E		F	G	H	S		ISO 5211	G. box				Weight (kg)		
		150	300	150	300				150	300		J	M	N	K	150	300	G.box
1/2" x 1/4"	10	108	-	89	-	43	91	185	61	-	F05s	-	-	-	-	2	2,5	-
3/4" x 1/2"	15	117	152	99	118	46	94	185	57	92	F05s	-	-	-	-	2,5	3,6	-
1" x 3/4"	20	127	165	108	124	54	102	185	72	104	F05s	-	-	-	-	3,5	4,8	-
1 1/2" x 1"	32	165	191	127	156	65	118	185	93	118	F05	-	-	-	-	5,5	9	-
2" x 1 1/2"	40	178	216	152	165	75	145	300	108	146	F07	-	-	-	-	9	12	-
3" x 2"	65	203	283	191	210	96	166	300	123	203	F07	-	-	-	-	17	25	-
4" x 3"	80	229	305	229	254	114	205	355	137	203	F10	-	-	-	-	25	39	-
6" x 4"	100	267	403	279	318	148	257	680	147	283	F12	-	-	-	-	46	75	-
8" x 6"	144	292	419	343	381	172	281	680	157	284	F12	-	-	-	-	80	118	-
10" x 8"	187	330	-	406	-	237	-	-	170	-	F14	369	305	86	500	124	-	20
12" x 10"	235	356	-	483	-	266	-	-	178	-	F14	398	305	86	500	196	-	20

FULL TRUNNION - 2 PIECES



Standard materials

Item	Description	Figure	
		ZGS14 TTTGV ZGS34 SSSGV	ZGS16 TTTGV ZGS36 SSSGV
1-2	Body	A216 WCC	A351CF8M
3	Ball	A351CF8M	
4	Seats	PTFE (T) PTFE + FG (R) PTFE + CG (S)	
4a	Ring Seat	AISI 316	
5	Stem	A182 F51	
6	Stem seal	PTFE + CG (S)	
7	Packing 1	PTFE (T)	
7a	Packing 2	Graphite	
8	Seal body 1	PTFE (T)	
9	Oring stem	Viton®	
10	Seal body 2	Graphite	
11	Bolts body	A193 B7M	A193/A320 B8M C12



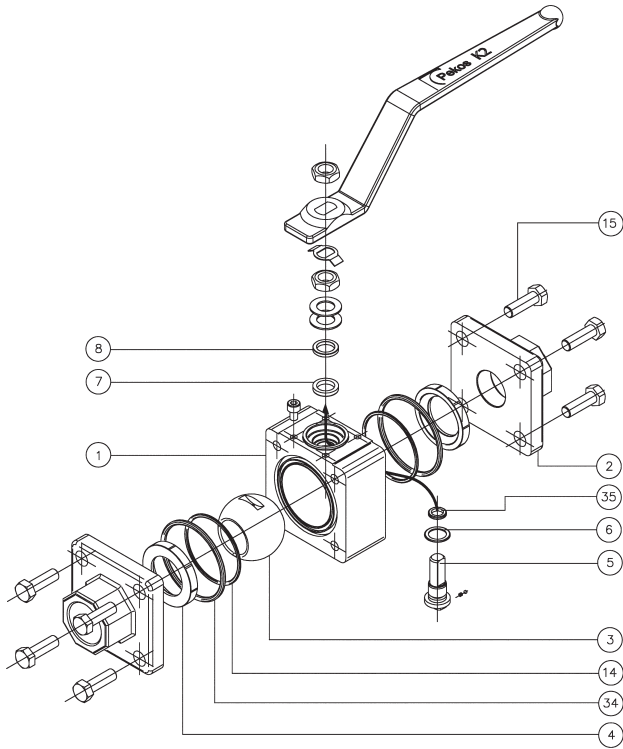
Weight (Kg)

NPS	Class 150	Class 300	G.Box
2"	10,6	12,5	-
2 1/2"	17	20	-
3"	22	27	-
4"	32	44	-
6"	100	117	9
8"	148	197	20
10"	241	284	20
12"	374	400	20/25

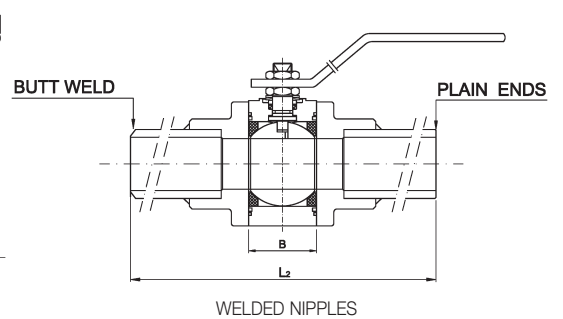
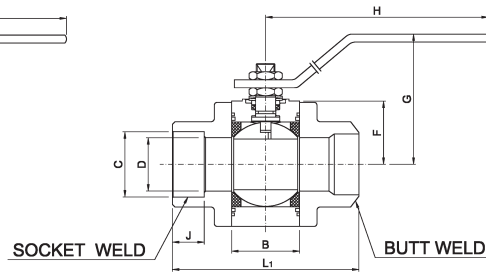
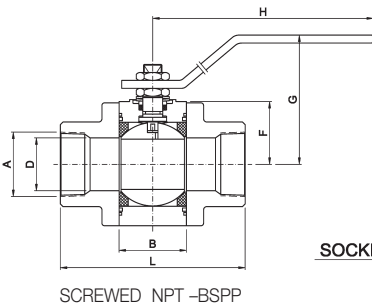
Dimensions

NPS	Class 150 & 300										Gear Box				
	D	L		E		F	G	H	S		ISO 5211	J	M	N	K
		150	300	150	300				150	300					
2"	50	178	216	152	165	84	153	300	92	90	F07	-	-	-	-
2 1/2"	65	190	241	178	190	96	166	300	95	120	F07	-	-	-	-
3"	80	203	283	191	210	114	205	355	101	142	F10	-	-	-	-
4"	100	229	305	229	254	128	220	355	114	152	F10	-	-	-	-
6"	150	394	403	279	318	175	284	680	165	211	F12	295	287	71	400
8"	200	457	502	343	381	245	362	750	228	251	F14	377	305	86	500
10"	250	533	568	406	445	285	-	-	270	283	F14	417	305	86	500
12"	300	610	648	483	521	336	-	-	305	324	F14	474	346	104	500

3 PIECES FORGED STEEL VALVES



Item	Qty	Description	Materials	
			K809 SGSGV KRB809 SGSGV	K806 SGSGV KRB806 SGSGV
1	1	Body 1	A350 LF2/A105	A182 F316L/F316
2	2	Body 2	A350 LF2/A105	A 182 316L
3	1	Ball	AISI 316	
4	2	Seats	PTFE+CG (S)	
5	1	Stem	AISI 316	
6	1	Stem seals	PTFE+CG (S)	
7	1	Packing ring	Graphite (G)	
8	1	Gland packing	AISI 316	
14	2	Body seal 1	PTFE+CG (S)	
15	8-12-16	Body bolt	A320 L7M	A193 B8M
34	2	Body seal 2	Graphite (G)	
35	1	Oring stem	Viton® (V)	



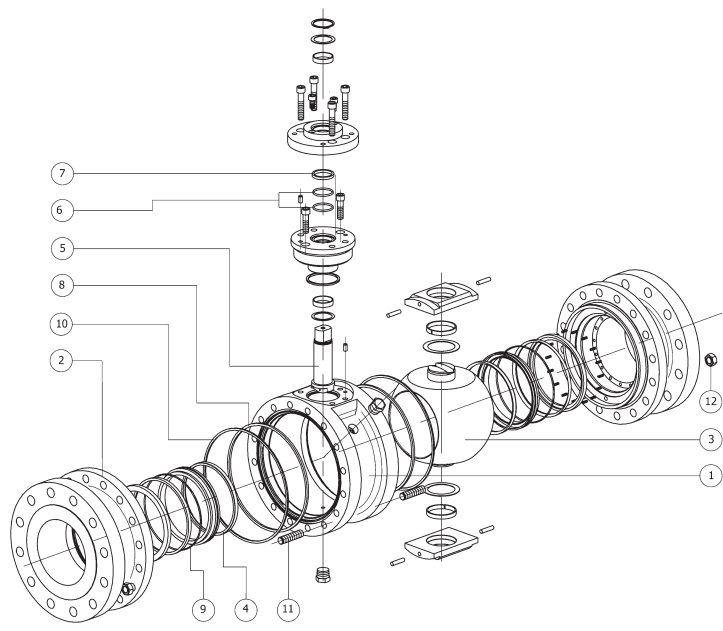
Full Bore

NPS	Class	A	B	D	F	G	H	L	L ₁	L ₂	C	J (min.)	Weight Kg
1/4"	800	1/4"	19	11	31	82	145	75	75	275	14.5	9.5	1,0
3/8"		3/8"	19	11	31	82	145	75	75	275	18	9.5	1,0
1/2"		1/2"	21	15	34	85	145	80	80	280	22	9.5	1,2
3/4"		3/4"	28	21	39	101	180	100	100	300	27.5	12.5	2,2
1"		1"	37	25	38	105	180	110	110	310	34	12.5	3,1
1 1/4"		1 1/4"	44	32	41	108	180	120	120	320	43	12.5	4,5
1 1/2"	1 1/2"	51	38	47	110	233	140	140	340	49	12.5	5,5	
2"	600	2"	60	49	58	119	233	142	191	-	61.5	16	10,0
2 1/2"		2 1/2"	72	62	70	143	425	170	210	-	74	16	13,5
3"	400	3"	72	76	88	170	425	229	305	-	90	16	17,5

Reduced Bore

NPS	Class	A	B	D	F	G	H	L	L ₁	L ₂	C	J (min.)	Weight Kg
1/2"	800	1/2"	19	11	31	82	145	75	75	275	22	9.5	1,0
3/4"		3/4"	21	15	34	85	145	80	80	280	27.5	12.5	1,2
1"		1"	28	21	39	101	180	100	100	300	34	12.5	2,2
1 1/4"		1 1/4"	37	25	38	105	180	110	110	310	43	12.5	3,1
1 1/2"		1 1/2"	44	32	41	108	180	120	120	320	49	12.5	4,5
2"		2"	51	38	47	110	233	140	140	340	61.5	16	5,5
2 1/2"	600	2 1/2"	60	49	58	119	233	142	191	-	74	16	10,0
3"		3"	72	62	70	143	425	170	210	-	90	16	13,5
4"	400	4"	72	76	88	170	425	229	305	-	115.5	19	17,5

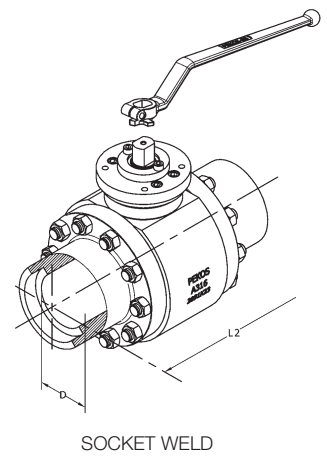
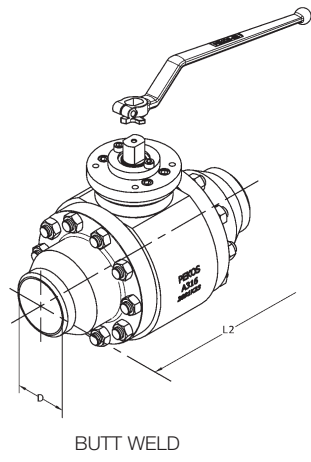
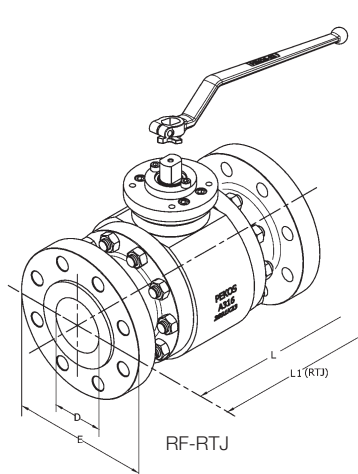
FULL TRUNNION



Standard materials

Item	Description	Figure*	
		GKS14 SGSGV GKS34 SGSGV GKS64 SGSGV GKS904 NGGVV GKS154 NGGVV GKS254 NGGVV	GKS16 SGSGV GKS36 SGSGV GKS66 SGSGV GKS906 NGGVV GKS156 NGGVV GKS256 NGGVV
1-2	Body	A216 WCC A105N/LF2	A351 CF8M A182 F316
3	Ball	A351 CF8M / LF2+ENP	
4	Seats	PTFE (T) PTFE +FG (R) PTFE+CG(S) DEVLON (N)	
5	Stem	A182 F51	
6	Stem O-ring	Viton®	
7	Packing	Graphite	
9	Seat seal	Graphite	
8-10	Body seal	Viton® - Graphite	
11	Studs	A320 L7M	A193/A320 B8M Cl2
12	Nuts	A194 7M	A194 8M

The reduced bore valves figure begins with GKS RB



Weight (kg)

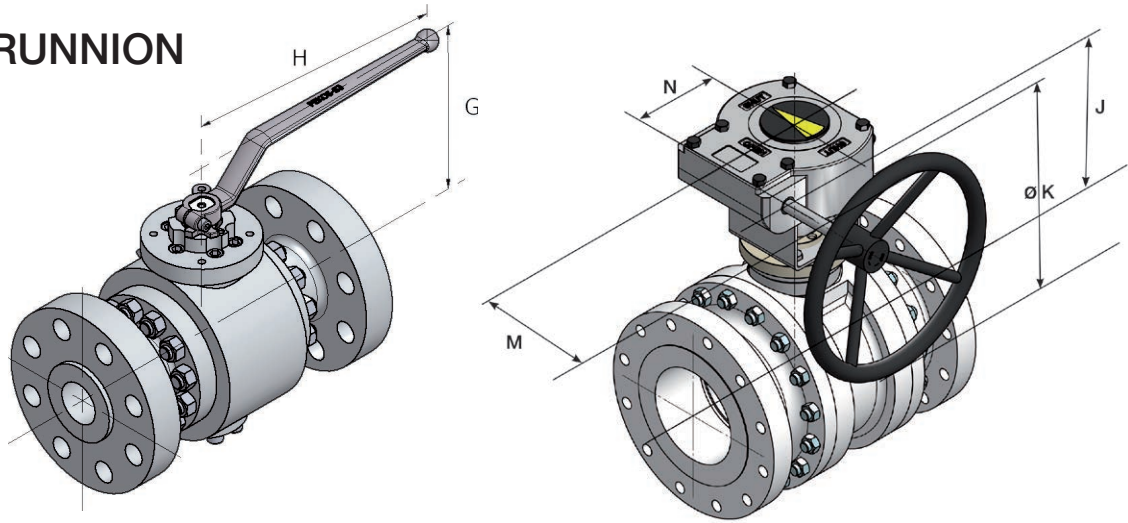
Full Bore

NPS	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
2"	12	25	30	45	49	115
3"	25	37	63	105	110	208
4"	37	77	108	165	182	340
6"	116	138	232	380	390	712
8"	199	239	415	640	650	1859
10"	387	437	659	952	960	2817
12"	516	729	880	1312	1320	3892
14"	688	928	1400	1595	1320	-
16"	890	1200	1696	1692	2360	-
18"	1700	1550	2994	2755	-	-
20"	2100	2200	3475	3752	-	-
24"	3550	3730	5200	-	-	-

Reduced Bore

NPS	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
3 "x 2"	22	31	38	82	96	128
4" x 3"	32	62	69	110	146	236
6" x 4"	71	105	120	207	286	387
8" x 6"	133	239	258	525	520	811
10" x 8"	229	437	461	702	805	2129
12"x 10"	445	729	732	1190	1140	3232
14"x 10"	593	928	977	1580	1660	-
16" x 12"	791	1200	1554	2330	2068	-
18" x 14"	1023	1550	1883	3200	-	-
20" x 16"	1955	2200	3323	4270	-	-
24" x 20"	2415	2800	4160	-	-	-

FULL TRUNNION



Dimensions

Class 150/300/600

NPS		D		L (RF)			L1(RTJ)			L2 (BW) (SW)			E		
FB	RB	150-600 FB	150-600 RB	150	300	600	150	300	600	150	300	600	150	300	600
2"	-	50	-	178	216	292	191	232	295	216	216	292	152	165	165
3"	3" x 2"	75	50	203	283	356	215	300	359	283	283	356	191	210	210
4"	4" x 3"	100	75	229	305	432	241	321	435	305	305	432	229	254	273
6"	6" x 4"	150	100	394	403	559	406	419	562	457	457	559	279	318	356
8"	8" x 6"	201	150	457	502	660	470	518	663	521	521	660	343	381	419
10"	10" x 8"	252	201	533	568	787	545	584	790	559	559	787	406	445	508
12"	12" x 10"	303	252	610	648	838	622	664	841	635	635	838	483	521	559
14"	14" x 10"	334	252	686	762	889	698	778	891	762	762	889	535	585	605
16"	16" x 12"	385	303	762	838	991	774	854	877	838	838	991	595	650	685
18"	18" x 14"	438	334	864	914	1092	877	930	1095	914	914	1092	635	710	745
20"	20" x 16"	487	385	914	991	1194	927	1007	1200	991	991	1194	700	775	815
24"	24" x 20"	589	487	1067	1143	1397	1080	1165	1407	1143	1143	1397	815	915	940

NPS		Class 150							Class 300							Class 600						
FB	RB	G	H	J	K	M	N	ISO 5211	G	H	J	K	M	N	ISO 5211	G	H	J	K	M	N	ISO 5211
2"	3" x 2"	154	293	-	-	-	-	F07	153	293	-	-	-	-	F07	154	293	-	-	-	-	F07
3"	4" x 3"	207	350	-	-	-	-	F10	205	350	-	-	-	-	F10	181	350	-	-	-	-	F10
4"	6" x 4"	221	350	-	-	-	-	F10	220	350	-	-	-	-	F10	-	-	397	500	189	86	F12
6"	8" x 6"	268	680	-	-	-	-	F12	-	-	372	500	189	86	F12	-	-	401	500	189	86	F14
8"	10" x 8"	-	-	347	500	189	86	F14	-	-	427	500	189	86	F14	-	-	397	500	230	105	F16
10"	12" x 10" 14" x 10"	-	-	392	500	230	105	F14	-	-	472	500	230	105	F14	-	-	456	500	275	130	F16
12"	16" x 12"	-	-	454	500	230	105	F14	-	-	545	500	230	105	F14	-	-	526	500	335	211	F25
14"	18" x 14"	-	-	504	500	275	130	F16	-	-	517	500	275	130	F16	-	-	619	600	300	182	F25
16"	20" x 16"	-	-	554	600	300	182	F16	-	-	561	600	300	182	F16	-	-	600	669	388	263	F25
18"	-	-	-	621	600	388	263	F25	-	-	621	600	388	263	F25	-	-	600	689	429	278	F30
20"	24" x 20"	-	-	655	600	429	278	F25	-	-	671	600	429	278	F25	-	-	700	736	499	431	F30
24"	-	-	-	791	700	499	431	F30	-	-	791	700	499	431	F30	-	-	700	816	499	431	F30

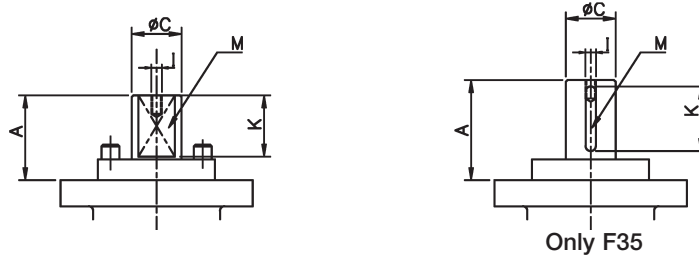
Class 900/1500/2500

NPS		D						L (RF)			L1(RTJ)			L2 (BW) (SW)			E		
FB	RB	900 FB	900 RB	1500 FB	1500 RB	2500 FB	2500 RB	900	1500	2500	900	1500	2500	900	1500	2500	900	1500	2500
2"	-	50	-	50	-	42	-	368	368	451	371	371	454	368	368	451	215	215	235
3"	3" x 2"	75	50	75	50	62	42	381	470	578	384	473	584	381	470	578	240	265	305
4"	4" x 3"	100	75	100	75	87	62	457	546	673	460	549	683	457	546	673	290	310	355
6"	6" x 4"	150	100	144	100	131	87	610	705	914	613	711	927	610	705	914	380	395	485
8"	8" x 6"	201	150	192	144	179	131	737	832	1022	740	841	1038	737	832	1022	470	485	550
10"	10" x 8"	252	201	239	192	223	179	838	991	1270	841	1000	1292	838	991	1270	545	585	675
12"	12" x 10"	303	252	287	239	265	223	965	1130	1422	968	1146	1445	965	1130	1422	610	675	760
14"	14" x 10"	334	252	315	239	-	-	1029	1250	-	1039	1276	-	1029	1250	-	640	750	-
16"	16" x 12"	373	303	360	287	-	-	1130	1384	-	1140	1407	-	1130	1384	-	705	825	-
18"	18" x 14"	423	334	-	-	-	-	1219	-	-	1221	-	-	1219	-	-	785	-	-
20"	20" x 16"	471	373	-	-	-	-	1321	-	-	1334	-	-	1321	-	-	855	-	-

NPS		Class 900							Class 1500							Class 2500						
FB	RB	G	H	J	K	M	N	ISO 5211	G	H	J	K	M	N	ISO 5211	G	H	J	K	M	N	ISO 5211
2"	3" x 2"	203	350	-	-	-	-	F10	203	350	-	-	-	-	F10	-	-	319	500	201	71	F12
3"	4" x 3"	-	-	343	500	201	71	F12	-	-	347	500	189	86	F12	-	-	392	500	189	86	F14
4"	6" x 4"	-	-	371	500	189	86	F12	-	-	372	500	230	105	F14	-	-	366	500	230	105	F16
6"	8" x 6"	-	-	429	500	230	105	F14	-	-	381	500	275	130	F16	-	-	414	500	335	211	F25
8"	10" x 8"	-	-	361	500	346	185	F16	-	-	459	500	335	211	F25	-	-	487	600	388	263	F25
10"	12" x 10" 14" x 10"	-	-	474	500	275	130	F16	-	-	527	600	388	263	F25	-	-	527	600	388	263	F30
12"	16" x 12"	-	-	556	500	335	211	F25	-	-	559	600	388	263	F30	-	-	567	600	429	278	F35
14"	18" x 14"	-	-	649	600	388	263	F30	-	-	559	600	429	278	F30	-	-	-	-	-	-	-
16"	20" x 16"	-	-	699	600	388	263	F30	-	-	651	700	499	431	F35	-	-	-	-	-	-	-
18"	-	-	-	746	700	499	431	F35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20"	-	-	-	771	700	499	431	F35	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- Valves up to ISO 5211 F14: Gear box assembled to the valve with mounting bracket.
- Valves with ISO 5211 F16 and higher: Gear box assembled directly without mounting bracket.

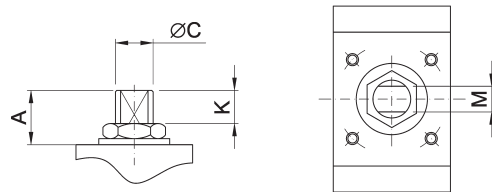
TOP FLANGE ISO 5211



ISO 5211	F05s	F05	F07	F10	F12	F14	F16	F25	F30	F35
M (e/c)	11	14	17	22	27	36	46	55	75	Key 32 x 18
C	14	18	22	28	36	48	60	72	98	120
A	13,5	19,5	30	40	50	63	73	83	106	200
K	11	17	20	22	35	40	60	70	100	180
I	M4	M4	M6	M8	M8	M10	M10	M10	M12	M16

TOP FLANGE ISO 5211 FOR 3 PIECES FORGED STEEL VALVES

NPS F.B.	NPS R.B.	ISO 5211	M	øC	A	K	MAST
1/4"	-	F03	5.5	M10X1	9	5	17
3/8"	1/2"	F03	5.5	M10X1	9	5	17
1/2"	3/4"	F03	5.5	M10X1	10	5	17
3/4"	1"	F04	7.5	M12X1,25	15	12	34
1"	1 1/4"	F04	7.5	M12X1,25	20	12	34
1 1/4"	1 1/2"	F05	9	M15X1,5	20	12	65
1 1/2"	2"	F05	9	M15X1,5	25	12	65
2"	2 1/2"	F05	9	M15X1,5	28	12	65
2 1/2"	3"	F07	16	M22X1,5	29	17	234
3"	4"	F07	18	M24X2	36	17	234



MAST (Maximum allowable stem torque in Nm).

MAST (Maximum allowable stem torque Nm)

Stem material	F05s	F05	F07	F10	F12	F14	F16	F25	F30	F35
316	42	92	244	510	1047	2482	4926	8490	21438	--
F51	95	207	549	1146	2356	5585	11084	19102	48235	32400
17-4 PH	153	334	835	1847	3795	8997	17856	30774	77705	52200

BREAKAWAY TORQUE (Nm)

FLOATING, GUIDED BALL

NPS FB	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	SEAT TYPE
NPS RB	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	--	TYPE
Class 150	9	11	16	32	48	62	103	145	400	720	1160	1650	(T)
Class 300	17	20	23	51	84	108	180	260	710	1470	1950	2180	(S)
Class 600	20	28	50	114	195	240	--	--	--	--	--	--	(S)

FLOATING, GUIDED BALL AND 3 PIECES FORGED STEEL VALVES

NPS FB	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
NPS RB	--	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
SEAT TYPE (S)	11	11	16	19	23	25	65	78	91	120

FULL TRUNNION

NPS FB	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	SEAT TYPE
NPS RB	3"	4"	6"	8"	10"	12"-14"	16"	18"	20"	--	24"	--	TYPE
Class 150	68	145	203	640	990	1340	1660	2815	3790	5100	6400	8200	(S)
Class 300	115	212	490	990	1550	2020	2450	4165	5500	8100	10800	20500	(S)
Class 600	160	420	715	1580	2500	3400	4650	6800	8600	13120	17800	26500	(S)
Class 900	215	712	920	1740	2712	3440	4070	6900	9200	14500	20100	--	(N)
Class 1500	310	880	1365	3360	5230	6580	7740	13180	17500	--	--	--	(N)
Class 2500	400	1200	2050	5100	8200	10150	12000	--	--	--	--	--	(N)

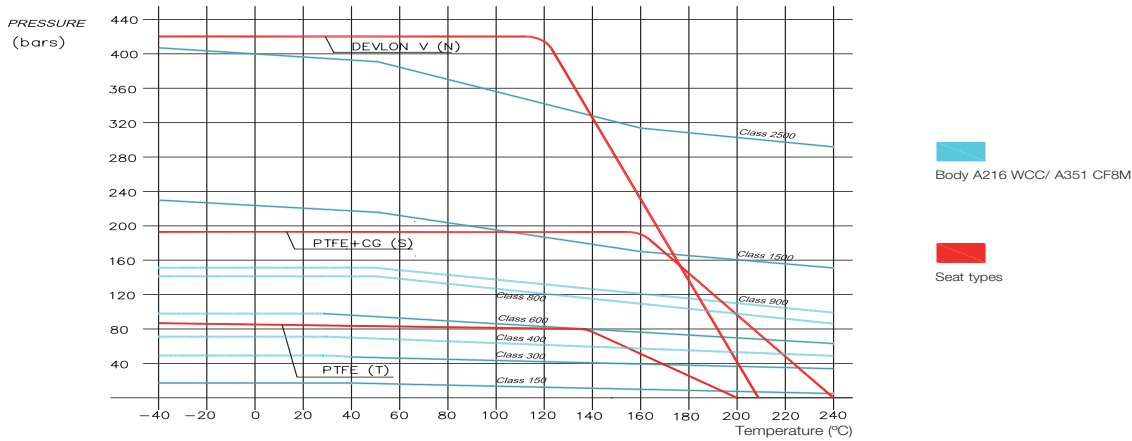
- Torque values obtained during test with water at maximum working pressure for each class on valves fitted with Pekos' standard seats material for each type of valve.
- If different material seats are used then torque values will change.
- The breakaway torques could rise by approximately 50% during first few cycles after long periods of inactivity.

K_v VALUES (m³/h)

NPS FB	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
NPS RB	--	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
Kv	9	10	20	44	88	200	310	480	960	1700

NPS FB	6"	8"	10"	12"	14"	16"	18"	20"	24"
NPS RB	8"	10"	12" - 14"	16"	18"	20"	--	24"	--
Kv	4100	8200	11500	18340	26300	30200	35400	54100	70300

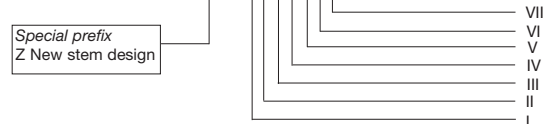
Pressure – Temperature limitations



How to order PEKOS ball valves

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	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	S - PTFE + 25% CG	S - PTFE + 25% CG	S - PTFE + 25% CG		E - EPDM
D4 - Seat Sealant fitting	3 - CL-300		CF8	X - PTFE + 50% SS.	B - PFA	B - PFA		K - KALREZ® (FFKM)
D5 - Stem Sealant fitting	4 - CL-400	CA15	B - PFA	G - GRAPHITE	G - GRAPHITE		L-CHLOROPRENE	
E - Standard stem extension	5 - Tank bottom	AISI410	K - KELFO® (PCTFE)	U - UHMWPE®	U - UHMWPE®		I - SILICONE	
F - Security stem extension	6 - CL-600	A105/LF2+ENP	P - PEEK	Y - TF17500®	Y - TF17500®		A - ALFAS® (FEPM)	
G - Guided ball	7 - 4 ways	1,0619 1,0352	A105/LF2+ENP AISI410	Q - PEEK + 12% PTFE	G - TFM	M - TFM		
H - Heating jacket (semi)	8 - 3 ways	WCC	CA15	O - PEEK+PTFE+FV		V - VITON® (FKM)		
I - Inclined stem	9 - Wafer	1,0619 1,0352	1,4408 1,4462	Z - PEEK+PTFE+CG		N - NITRILE		
J - Heating jacket (full)	15 - CL-1500	A105	CF8M	N - DEVLON® V		E - EPDM		
K - 3 pieces	25 - CL-2500	WCC	F51			K - KALREZ® (FFKM)		
L - Locking device	80 - CL-800	LCC LF2	LF2+ENP	D - DELRIN®		L-CHLOROPRENE		
M - Metallic seat	90 - CL-900	1,06190T 1,6220 1,0352	1,4408 1,4462	U - UHMWPE®		I - SILICONE		
O - Degreased		CF8M	F51	G - GRAPHITE		A - ALFAS® (FEPM)		
P - Protected seat		1,4408	1,4408 1,4462	C - S. steel+ Cr Carbide				
S - Spring seat		1,4539 904L	1,4539 904L	W - TUNGSTEN				
T - Simple stem extension		904L		H-COLMONOY				
U - Unidirectional		LCC LF2	CF8M F51	V - VITON® (FKM)				
V - O-ring seat		1,06190T 1,6220 1,0352	1,4408 1,4462	Y - TF17500®				
W - Welded body				M- TFM				
RB - Reduced bore								

Example: Fig. ZLU - 16 TGGVN - DN80



Viton® and Delrin® are registered trademark of Dupon.

• The technical data herein is for general information only and may change without prior notice.

ANSI
From 1/4" up to 24"
ANSI 150-300-600-900-1500-2500
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



www.pekos.es

Rec del Molinar, 9 - P.I. El Circuit
08160 Montmeló (Barcelona) - Spain

Tel.: (+34) 93 568 92 56 / Fax: (+34) 93 579 92 44

pekos@pekos.es