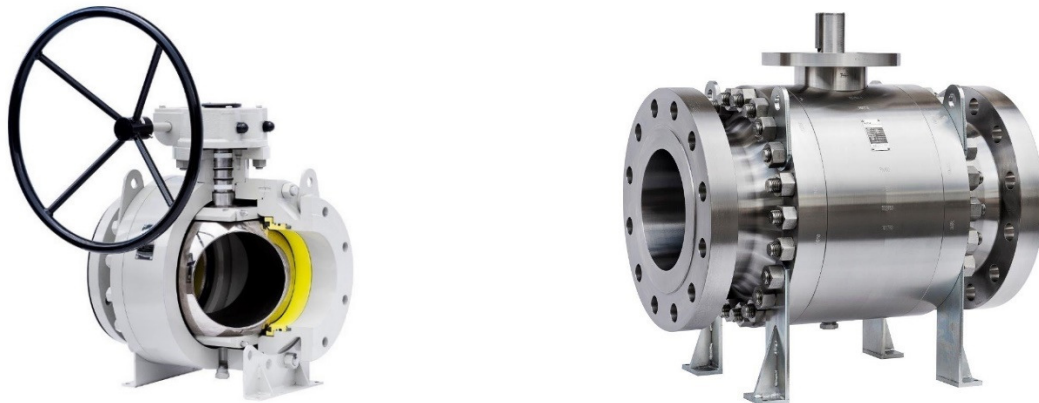


T60

Trunnion Mounted Ball Valve, Soft seated **ASME CLASS 150 / 300 / 600 / 900 / 1500 / 2500**



Features

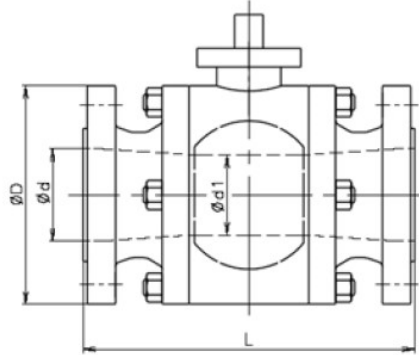
- Full bore or Reduced bore. 3-piece bolted body and cap.
- **Design Standards:** API 6D / ISO 14313 / ISO 17292:2004 / ASME B16.34:2009
- **Flanges:** ASME B16.5, RF
- **Lengths/Face-to-face:** API 6D / ASME B16.10
- **Leak test:** API 6D
- **Top flange:** ISO 5211
- **Seats:** Reinforced PTFE (Cl.150-600), Reinforced Nylon (Cl.900-2500)
- **Stem:** Anti-static and proof Blow-out
- Tight shut-off sealing mechanism and low operation torque
- Locking device in open and close position
- Triple stem sealing system with 2 O-rings & Packing
- Double Block and Bleed function
- Self-relief of excessive cavity pressure
- Available for DPE (Double Piston Effect) / SPE (Single Piston Effect)
- **Options:** NACE MR 0175, Actuation (Pneumatic & Electric), Piggable, Sealing injection (stem & seats), Stem extension.*

*For all optional provisions, please contact your local KITZ agents or distributors.

Approvals

- Fire test Certification: API 607 / API 6FA / ISO 10497
- PED 2014/68/UE approval for CE marked products.
- Fugitive Emission Certification: ISO 15848-1 BH CO₁
- ATEX approval
- SIL IEC 61508:2019 (SIL 2)
- EAC TR CU approval
- Marine Division approval

Dimensions

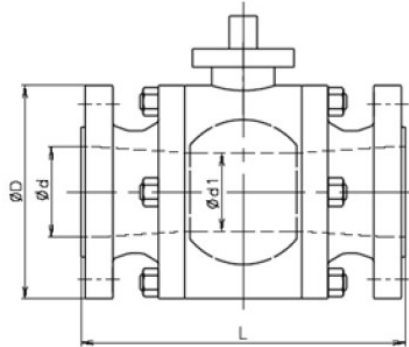


Units (mm)

Class 150						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	90	165	165	163
3/4 x 1/2	19	13	100	165	165	165
3/4	19	19	100	165	165	165
1 x 3/4	25	19	110	165	165	165
1	25	25	110	165	165	165
1.1/2 x 1	38	25	125	165	190	178
1.1/2	38	38	125	165	190	178
2 x 1.1/2	49	38	150	178	216	191
2 to 24	Please refer to T60S					
26 x 20	633	487	870	1143	1245	-
26 x 22	633	538	870	1143	1245	-
26 x 24	633	589	870	1143	1245	-
26	633	633	870	1143	1245	-
28 x 22	684	538	925	1245	1346	-
28 x 24	684	589	925	1245	1346	-
28 x 26	684	633	925	1245	1346	-
28	684	684	925	1245	1346	-
30 x 24	735	589	985	1295	1397	-
30 x 26	735	633	985	1295	1397	-
30 x 28	735	684	985	1295	1397	-
30	735	735	985	1295	1397	-
32 x 26	779	633	1060	1372	1524	-
32 x 28	779	684	1060	1372	1524	-
32 x 30	779	735	1060	1372	1524	-
32	779	779	1060	1372	1524	-
34 x 28	830	684	1110	1473	1626	-
34 x 30	830	735	1110	1473	1626	-
34 x 32	830	779	1110	1473	1626	-
34	830	830	1110	1473	1626	-
36 x 30	874	735	1170	1524	1727	-
36 x 32	874	779	1170	1524	1727	-
36 x 34	874	830	1170	1524	1727	-
36	874	874	1170	1524	1727	-

Units (mm)

Class 300						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	95	165	165	163
3/4 x 1/2	19	13	115	165	165	178
3/4	19	19	115	165	165	178
1 x 3/4	25	19	125	165	165	178
1	25	25	125	165	165	178
1.1/2 x 1	38	25	155	190	190	203
1.1/2	38	38	155	190	190	203
2 x 1.1/2	49	38	165	216	216	232
2 to 24	Please refer to T60S					
26 x 20	633	487	970	1245	1245	1270
26 x 22	633	538	970	1245	1245	1270
26 x 24	633	589	970	1245	1245	1270
26	633	633	970	1245	1245	1270
28 x 22	684	538	1035	1346	1346	1372
28 x 24	684	589	1035	1346	1346	1372
28 x 26	684	633	1035	1346	1346	1372
28	684	684	1035	1346	1346	1372
30 x 24	735	589	1090	1397	1397	1422
30 x 26	735	633	1090	1397	1397	1422
30 x 28	735	684	1090	1397	1397	1422
30	735	735	1090	1397	1397	1422
32 x 26	779	633	1150	1524	1524	1553
32 x 28	779	684	1150	1524	1524	1553
32 x 30	779	735	1150	1524	1524	1553
32	779	779	1150	1524	1524	1553
34 x 28	830	684	1205	1626	1626	1654
34 x 30	830	735	1205	1626	1626	1654
34 x 32	830	779	1205	1626	1626	1654
34	830	830	1205	1626	1626	1654
36 x 30	874	735	1270	1727	1727	1756
36 x 32	874	779	1270	1727	1727	1756
36 x 34	874	830	1270	1727	1727	1756
36	874	874	1270	1727	1727	1756

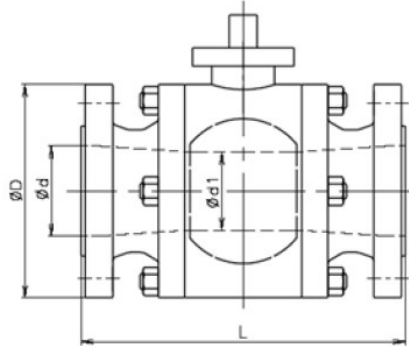


Units (mm)

Class 600						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	95	165	165	163
3/4 x 1/2	19	13	115	190	190	190
3/4	19	19	115	190	190	190
1 x 3/4	25	19	125	216	216	216
1	25	25	125	216	216	216
1.1/2 x 1	38	25	155	241	241	241
1.1/2	38	38	155	241	241	241
2 x 1.1/2	49	38	165	292	292	295
2 to 24	Please refer to T60S					
26 x 20	633	487	1015	1448	1448	1461
26 x 22	633	538	1015	1448	1448	1461
26 x 24	633	589	1015	1448	1448	1461
26	633	633	1015	1448	1448	1461
28 x 22	684	538	1075	1549	1549	1562
28 x 24	684	589	1075	1549	1549	1562
28 x 26	684	633	1075	1549	1549	1562
28	684	684	1075	1549	1549	1562
30 x 24	735	589	1130	1651	1651	1664
30 x 26	735	633	1130	1651	1651	1664
30 x 28	735	684	1130	1651	1651	1664
30	735	735	1130	1651	1651	1664
32 x 26	779	633	1195	1778	1778	1794
32 x 28	779	684	1195	1778	1778	1794
32 x 30	779	735	1195	1778	1778	1794
32	779	779	1195	1778	1778	1794
34 x 28	830	684	1245	1930	1930	1946
34 x 30	830	735	1245	1930	1930	1946
34 x 32	830	779	1245	1930	1930	1946
34	830	830	1245	1930	1930	1946
36 x 30	874	735	1315	2083	2083	2099
36 x 32	874	779	1315	2083	2083	2099
36 x 34	874	830	1315	2083	2083	2099
36	874	874	1315	2083	2083	2099

Units (mm)

Class 900						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	120	216	216	216
3/4 x 1/2	19	13	130	229	229	229
3/4	19	19	130	229	229	229
1 x 3/4	25	19	150	254	254	254
1	25	25	150	254	254	254
1.1/2 x 1	38	25	180	305	305	305
1.1/2	38	38	180	305	305	305
2 x 1.1/2	49	38	215	368	368	371
2 to 12	Please refer to T60S					
14 x 10	322	252	640	1029	1029	1038
14 x 12	322	303	640	1029	1029	1038
14	322	322	640	1029	1029	1038
16 x 12	373	303	705	1130	1130	1140
16 x 14	373	322	705	1130	1130	1140
16	373	373	705	1130	1130	1140
18 x 14	423	322	785	1219	1219	1232
18 x 16	423	373	785	1219	1219	1232
18	423	423	785	1219	1219	1232
20 x 16	471	373	855	1321	1321	1334
20 x 18	471	423	855	1321	1321	1334
20	471	471	855	1321	1321	1334
24 x 20	570	471	1040	1549	1549	1568
24	570	570	1040	1549	1549	1568



Units (mm)

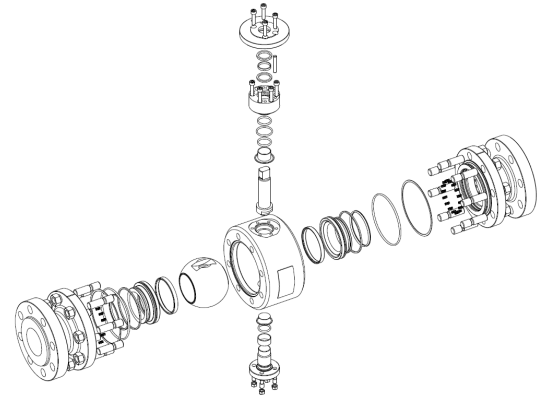
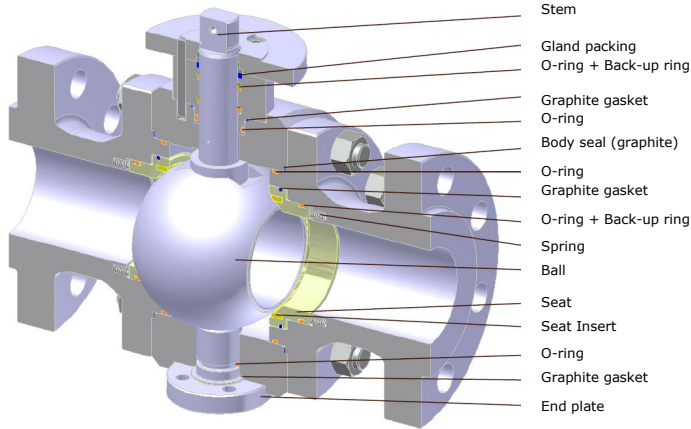
Class 1500						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	120	216	216	216
3/4 x 1/2	19	13	130	229	229	229
3/4	19	19	130	229	229	229
1 x 3/4	25	19	150	254	254	254
1	25	25	150	254	254	254
1.1/2 x 1	38	25	180	305	305	305
1.1/2	38	38	180	305	305	305
2 x 1.1/2	49	38	215	368	368	371
2 to 12	Please refer to T60S					
14 x 10	315	239	750	1257	1257	1276
14 x 12	315	287	750	1257	1257	1276
14	315	315	750	1257	1257	1276
16 x 12	360	287	825	1384	1384	1407
16 x 14	360	315	825	1384	1384	1407
16	360	360	825	1384	1384	1407
18 x 14	406	315	915	1537	-	1559
18 x 16	406	360	915	1537	-	1559
18	406	406	915	1537	-	1559
20 x 16	454	360	985	1664	-	1686
20 x 18	454	406	985	1664	-	1686
20	454	454	985	1664	-	1686
24 x 20	546	454	1170	1943	-	1972
24	546	546	1170	1943	-	1972

Units (mm)

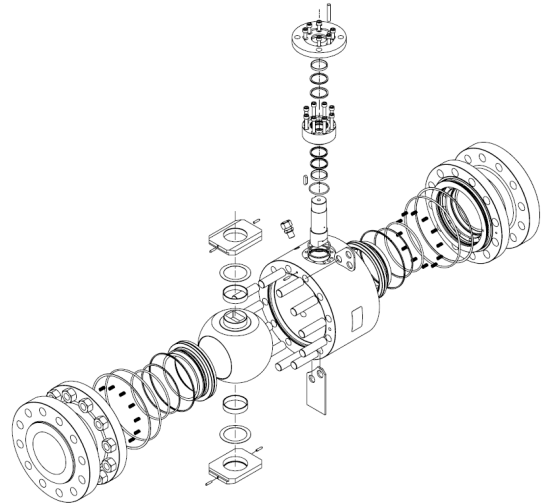
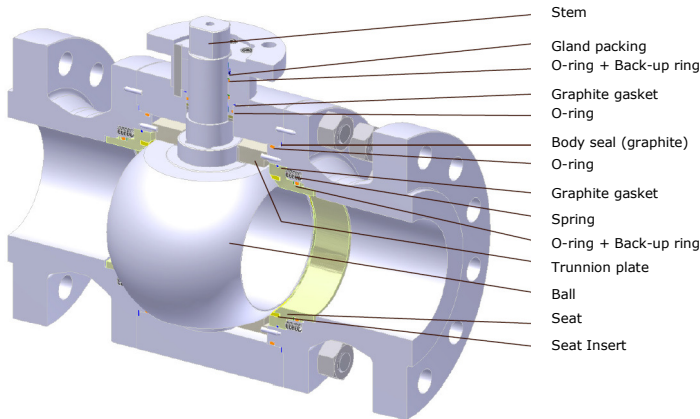
Class 2500						
SIZE	d	d1	D	L		
				RF	WE	RJ
1/2	13	13	135	264	264	264
3/4 x 1/2	19	13	140	273	273	273
3/4	19	19	140	273	273	273
1 x 3/4	25	19	160	308	308	308
1	25	25	160	308	308	308
1.1/2 x 1	38	25	205	384	384	387
1.1/2	38	38	205	384	384	387
2 x 1.1/2	42	38	235	451	451	454
2	42	42	235	451	451	454
3 x 2	62	42	305	578	578	584
3	62	62	305	578	578	584
4 x 3	87	62	355	673	673	683
4	87	87	355	673	673	683
6 x 4	131	87	485	914	914	927
6	131	131	485	914	914	927
8 x 6	179	131	550	1022	1022	1038
8	179	179	550	1022	1022	1038

Material List

Up to size 4"



Size 6" and larger



Item	Non-corrosive	Low Temperature	Corrosive	Sour service	
Body	A105	LF2	F316 or 316	F51 or S31803	F55 or S32760
Cap	A105	LF2	F316 or 316	F51 or S31803	F55 or S32760
Ball	13Cr or A105+ENP	316 or LF2+ENP	F316 or 316	F51 or S31803	F55 or S32760
Stem	13Cr or 630	316 or 630	316 or S31803	S31803	S32760
End plate	A105	LF2	316	S31803	S32760
Seat	A105+ENP	LF2+ENP	316	S31803	S32760
Trunnion plate	A105 or WCB	LF2 or LCB	316 or CF8M	S31803 or CD3MN	S32760 or CD3MWCuN
Gland plate	A105	LF2	316	S31803	S32760
Spring	AISI 301	AISI 301	N07750	N07750	N07750
Gaskets	CS+PTFE	CS+PTFE	316SS+PTFE	N06625+PTFE	N06625+PTFE
Stud bolt / Nut	B7 / 2H	L7 / 4	B8 / 8	B8 / 8	B8 / 8
O-ring	HNBR	L-NBR	FKM	FKM	FKM
Seat insert	R-PTFE (up to class 600) Nylon 6 (class 900 and over)				

Operation Torque (BTO)

T60 ½" to 24"							
VALVE SIZE		MAXIMUM DIFFERENTIAL PRESSURE (bar) / OPERATING TORQUE (N-m)					
NPS	DN	Class 150	Class 300	Class 600	Class 900	Class 1500	Class 2500
½"	15	-	-	-	32	43	52
¾"	20	-	-	-	42	58	67
1"	25	-	-	-	60	84	98
1 ½"	40	-	-	-	119	166	197
2"	50	40	46	75	135	187	233
3"	80	77	89	139	226	357	377
4"	100	122	150	244	405	654	698
6"	150	340	463	740	1173	1888	2023
8"	200	598	826	1333	2081	3190	-
10"	250	878	1246	2004	3142	5371	-
12"	300	1282	1817	2898	4521	-	-
14"	350	1752	2526	4039	6618	-	-
16"	400	2430	3544	5694	-	-	-
18"	450	2951	4355	7007	-	-	-
20"	500	3983	5893	9585	-	-	-
24"	600	6088	9167	14913	-	-	-

NOTES:

- * All torques shown in this table do not include any safety factor and margin for actuation and service condition.
- * All torques in this table are shown direct torque of the valve for standard material without any reduction gear.
- * Seat material:
 - Class 150, 300 & 600: R-PTFE (15% Glass & 5% MoS2 filled PTFE)
 - Class 900, 1500 & 2500: Nylon 6 + MoS2
- * Additional factor shall be considered for other materials as below: (Ask for other seat materials)
 - Class 150, 300 & 600:
 - 10%: For 15% carbon or graphite filled PTFE
 - 20%: For 25% carbon filled PTFE
 - 30%: For Nylon 6
 - 43%: For Nylon 12 or Devlon
 - Class 900, 1500 & 2500:
 - 10%: For Nylon 12 or Devlon
 - 20%: For PCTFE
 - 30%: For PEEK

P-T Rating

Pressure-Temperature Rating

FIGURE: T60 (Trunnion Mounted Ball Valve)

