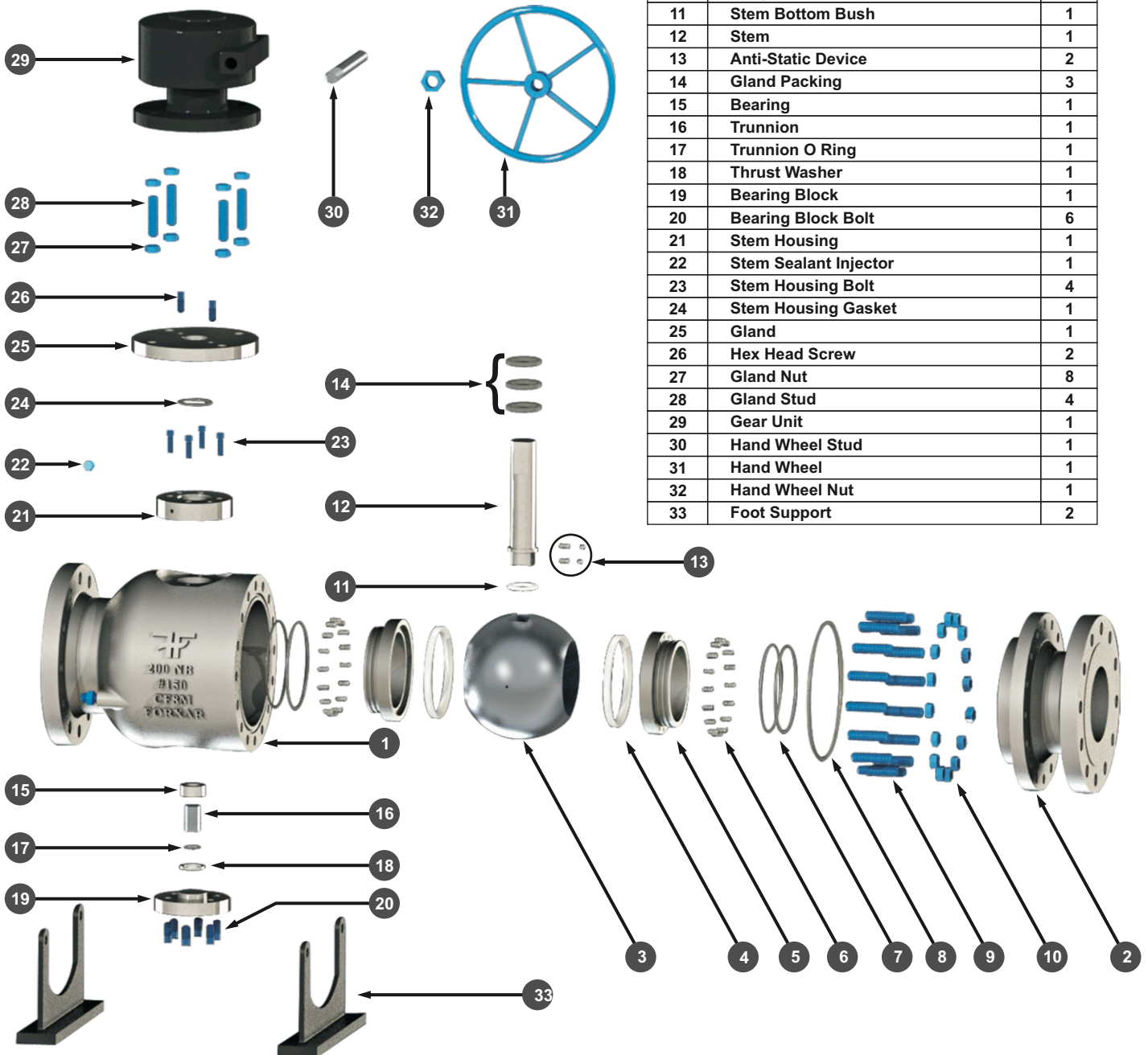


Two-piece Trunnion Mounted Ball Valves Exploded View

Component Name & Quantity

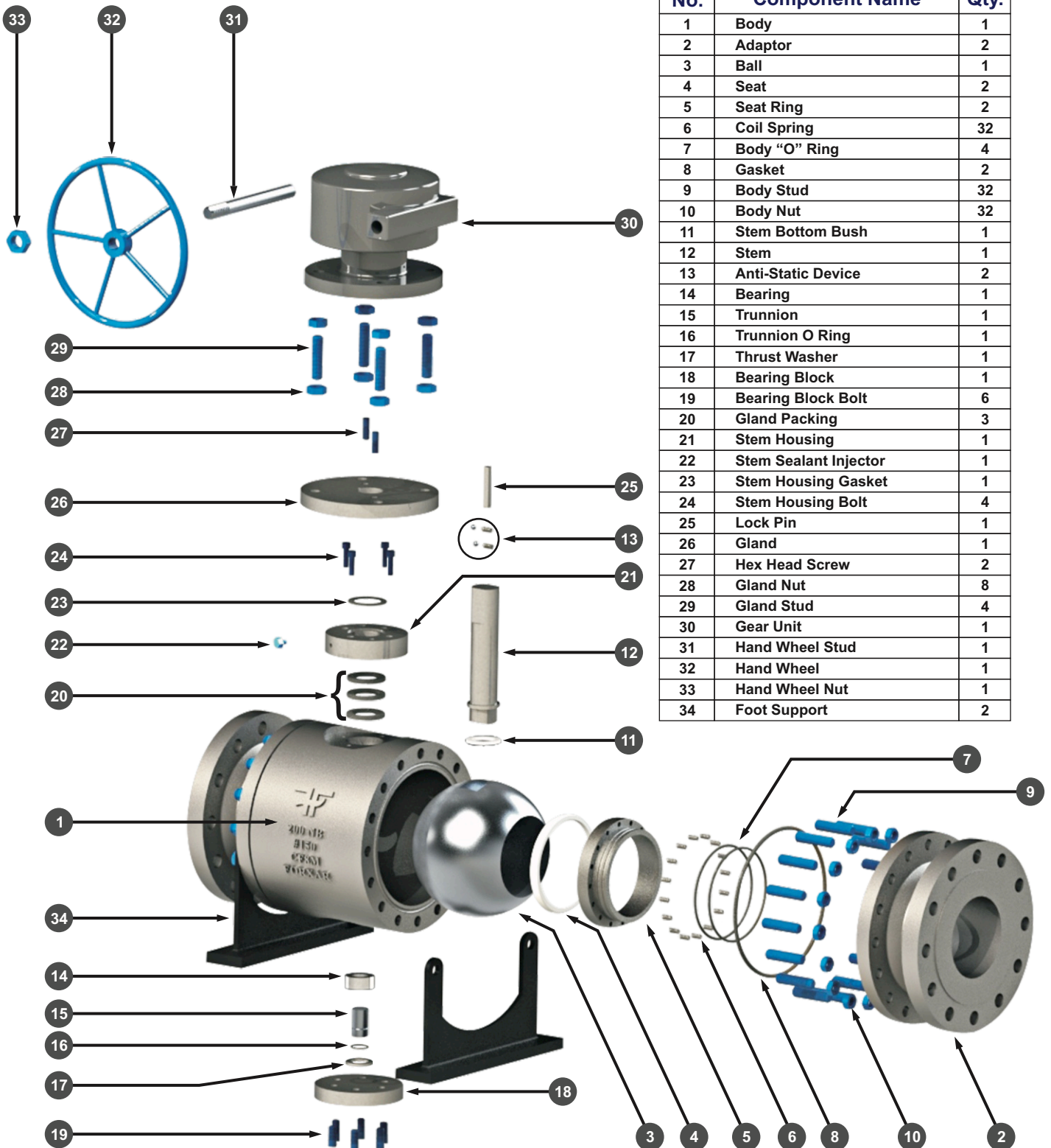
No.	Component Name	Qty.
1	Body	1
2	Adaptor	1
3	Ball	1
4	Seat	2
5	Seat Ring	2
6	Coil Spring	32
7	Body "O" Ring	4
8	Gasket	2
9	Body Stud	16
10	Body Nut	16
11	Stem Bottom Bush	1
12	Stem	1
13	Anti-Static Device	2
14	Gland Packing	3
15	Bearing	1
16	Trunnion	1
17	Trunnion O Ring	1
18	Thrust Washer	1
19	Bearing Block	1
20	Bearing Block Bolt	6
21	Stem Housing	1
22	Stem Sealant Injector	1
23	Stem Housing Bolt	4
24	Stem Housing Gasket	1
25	Gland	1
26	Hex Head Screw	2
27	Gland Nut	8
28	Gland Stud	4
29	Gear Unit	1
30	Hand Wheel Stud	1
31	Hand Wheel	1
32	Hand Wheel Nut	1
33	Foot Support	2



Three-piece Trunnion Mounted Ball Valves Exploded View

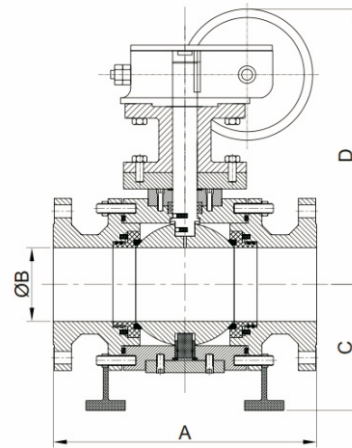
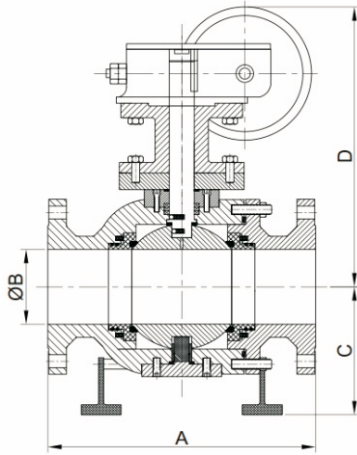
Component Name & Quantity

No.	Component Name	Qty.
1	Body	1
2	Adaptor	2
3	Ball	1
4	Seat	2
5	Seat Ring	2
6	Coil Spring	32
7	Body "O" Ring	4
8	Gasket	2
9	Body Stud	32
10	Body Nut	32
11	Stem Bottom Bush	1
12	Stem	1
13	Anti-Static Device	2
14	Bearing	1
15	Trunnion	1
16	Trunnion O Ring	1
17	Thrust Washer	1
18	Bearing Block	1
19	Bearing Block Bolt	6
20	Gland Packing	3
21	Stem Housing	1
22	Stem Sealant Injector	1
23	Stem Housing Gasket	1
24	Stem Housing Bolt	4
25	Lock Pin	1
26	Gland	1
27	Hex Head Screw	2
28	Gland Nut	8
29	Gland Stud	4
30	Gear Unit	1
31	Hand Wheel Stud	1
32	Hand Wheel	1
33	Hand Wheel Nut	1
34	Foot Support	2



Trunnion-mounted Ball Valves Dimensions

ASME Class 150 & 300 (Full Bore)



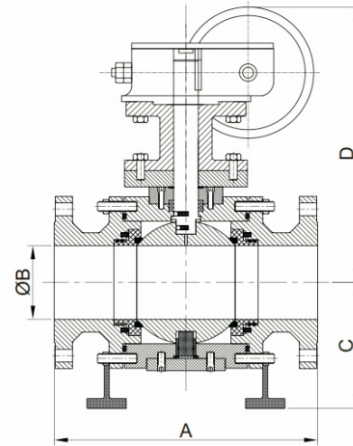
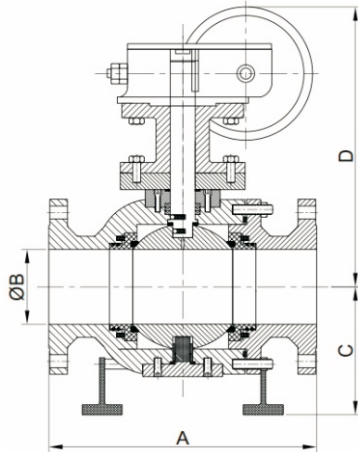
Size	2-piece # 150								3-piece # 150							
	A			B	C	D	Wt.		A			B	C	D	Wt.	
	NPS	RF	RTJ				BW	FL	BW	RF	RTJ				BW	FL
2	178	191	216	49	60	160	20	16	-	-	-	-	-	-	-	-
3	203	216	283	74	90	260	35	30	-	-	-	-	-	-	-	-
4	229	241	305	100	105	280	45	40	-	-	-	-	-	-	-	-
6	394	406	457	150	160	485	140	120	-	-	-	-	-	-	-	-
8	457	470	521	201	215	595	235	205	457	470	521	201	320	600	290	260
10	533	546	559	252	265	635	340	300	533	546	559	252	390	690	430	390
12	610	622	635	303	310	720	530	465	610	622	635	303	410	710	620	560
14	686	699	762	334	340	745	680	595	686	699	762	334	445	760	810	730
16	762	775	838	385	380	790	870	760	762	775	838	385	490	785	1040	935
18	864	876	914	436	430	885	1280	1130	864	876	914	436	535	830	1310	1180
20	914	927	991	487	490	940	1625	1425	914	927	991	487	590	920	1860	1675
24	1067	1080	1143	589	555	1010	2460	2150	1067	1080	1143	589	655	1000	3120	2817

Size	2-piece # 300								3-piece # 300							
	A			B	C	D	Wt.		A			B	C	D	Wt.	
	NPS	RF	RTJ				BW	FL	BW	RF	RTJ				BW	FL
2	216	232	216	49	75	250	25	20	-	-	-	-	-	-	-	-
3	283	298	283	74	90	260	45	40	-	-	-	-	-	-	-	-
4	305	321	305	100	130	380	75	65	-	-	-	-	-	-	-	-
6	403	419	457	150	165	485	180	165	-	-	-	-	-	-	-	-
8	502	518	521	201	235	595	290	255	502	518	521	201	360	610	355	320
10	568	584	559	252	275	665	445	405	568	584	559	252	380	650	530	475
12	648	664	635	303	320	720	660	595	648	664	635	303	420	730	835	760
14	762	778	762	334	360	820	900	800	762	778	762	334	460	760	1010	910
16	838	854	838	385	390	850	980	850	838	854	838	385	490	850	1390	1250
18	914	930	914	436	445	900	1620	1450	914	930	914	436	545	890	1805	1640
20	991	1010	991	487	490	1005	2010	1790	991	1010	991	487	610	940	2290	2065
24	1143	1165	1143	589	575	1080	3010	2710	1143	1165	1143	589	685	1075	3525	3200

All dimensions in mm and weights in kg

Trunnion-mounted Ball Valves

ASME Class 600 & 900 (Full Bore)



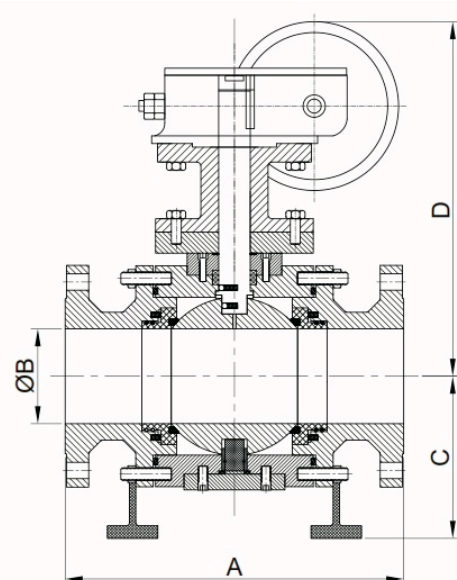
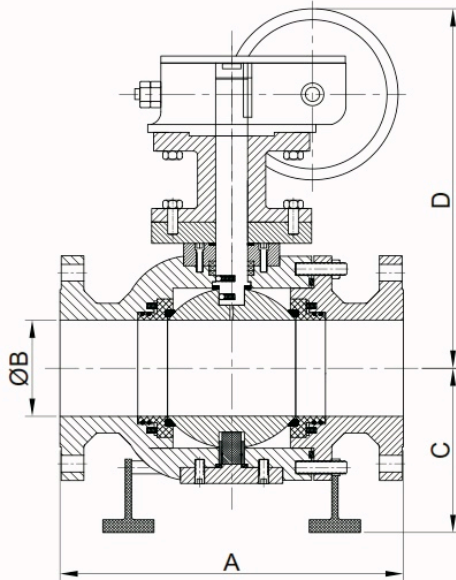
Size	2-piece # 600								3-piece # 600							
	A			B	C	D	Wt.		A			B	C	D	Wt.	
	NPS	RF	RTJ				BW	FL	BW	RF	RTJ				BW	FL
2	292	295	292	49	75	250	35	30	-	-	-	-	-	-	-	-
3	356	359	356	74	105	355	65	55	-	-	-	-	-	-	-	-
4	432	435	432	100	130	450	110	100	-	-	-	-	-	-	-	-
6	559	562	559	150	175	565	295	270	-	-	-	-	-	-	-	-
8	660	664	660	201	235	645	450	400	660	664	660	201	340	575	480	435
10	787	791	787	252	310	765	754	670	787	791	787	252	390	735	820	745
12	838	841	838	303	355	810	970	870	838	841	838	303	450	950	1130	1035
14	889	892	889	334	380	840	1330	1210	889	892	889	334	470	960	1480	1365
16	991	994	991	385	425	935	1570	1405	991	994	991	385	530	1060	1915	1760
18	1092	1095	1092	436	475	1060	2350	2130	1092	1095	1092	436	570	1065	2240	2025
20	1194	1200	1194	487	530	1130	2965	2685	1194	1200	1194	487	600	1190	2690	2420
24	1397	1407	1397	589	600	1265	4500	4050	1397	1407	1397	589	740	1285	5445	4990

Design	Size	A			B	C	D	Wt.	
	NPS	RF	RTJ	BW				FL	BW
2-piece # 900	2	368	371	368	49	95	335	65	60
	3	381	384	381	74	120	435	85	70
	4	457	460	457	100	145	545	160	145
	6	610	613	610	150	195	620	350	320
3-piece # 900	8	737	740	737	201	360	670	650	590
	10	838	841	838	252	410	770	915	820
	12	965	968	965	303	460	865	1430	1330
	14	1029	1038	1029	322	500	910	1600	1445
	16	1130	1140	1130	373	545	940	2195	1970
	18	1219	1232	1219	423	580	1060	3150	2860
	20	1321	1334	1321	471	650	1215	4880	4475
24	1549	1568	1549	570	690	1305	7300	6655	

All dimensions in mm and weights in kg

Trunnion-mounted Ball Valves

ASME Class 1500 & 2500 (Full Bore)



Design	Size NPS	A			B	C	D	Wt.	
		RF	RTJ	BW				FL	BW
2-piece # 1500	2	368	371	368	49	95	340	70	60
	3	470	473	470	74	125	445	110	95
	4	546	549	546	100	180	605	265	240
	6	705	711	705	144	225	645	490	440
3-piece # 1500	8	832	841	832	192	390	750	935	855
	10	991	1000	991	239	475	875	1800	1650
	12	1130	1146	1130	287	510	1020	2580	2355
	14	1257	1276	1257	315	550	1060	3350	3055
	16	1384	1407	1384	360	620	1185	4190	3770
	18	1537	1559	1537	406	645	1235	6330	5695
	20	1664	1686	1664	454	785	1305	8800	7880
24	1950	1972	1950	546	845	1465	14435	12995	

Design	Size NPS	A			B	C	D	Wt.	
		RF	RTJ	BW				FL	BW
2-piece # 2500	2	451	454	451	42	120	360	105	90
	3	578	584	578	62	145	525	205	170
	4	673	683	673	87	185	605	370	310
	6	914	927	914	131	320	750	1100	1000
3-piece # 2500	8	1022	1038	1022	179	550	890	1980	1820
	10	1270	1292	1270	223	555	1045	3275	3000
	12	1422	1445	1422	265	680	1125	5150	4635
	14	1575	1600	1575	292	700	1235	8015	7210
	16	1752	1778	1752	333	780	1350	10700	9700
	18	*	*	*	374	*	*	*	*

All dimensions in mm and weights in kg

Ordering Information of Ball Valves

As Per Our Design

1) Type of Valves	
Types	Nomen.
1 Piece Ball Valve	1BV
2 Piece Ball Valve	2BV
3 Piece Ball Valve	3BV
Flush Bottom Ball Valve	FBV
Jacketed Type Ball Valve	JBV
Three Way Ball Valve	3WBV
2 Piece Trunnion Mounted Ball Valve	2TBV
3 Piece Trunnion Mounted Ball Valve	3TBV

2) Materials	
Type Of Materials	Nomen.
S S310	S1
Ss304 / ASTM A182 Gr. F304	S4
SS304 L	S4L
SS316	S6
SS316L	S6L
SS317	S7
SS321	S21
SS446	S46
Monal 400	M4
Incoloy 625	I6
Incoloy 825	I8
Carbon Steel	CS
A105	A1
Alloy 20	A20
ASTM A182 F51 (Duplex F51)	F51
ASTM A182 F60 (Duplex F60)	F60
ASTM A182 F53 (Super Duplex F53)	F53
ASTM A312 TP 304L	P4L
ASTM A182 F11	F11
ASTM A182 GR F5	F5
ASTM A312 TP 304	TP4
Hastelloy C276	HC2
A350 Gr. LF1/ LF2/ LF3	LF2
SS410	S41
ASTM A240 TP 316L	P6L
Inconel-600	I60
ASTM A234 Gr. WPB	WPB
Mild Steel	MS
Nickel Alloy	NA
Galvanized	GLV

3) Sizes	
Size	Nomen.
1/8"	6
1/4"	8
3/8"	10
1/2"	15
3/4"	20
1"	25
1 1/4"	32
1 1/2"	40
2"	50
2 1/2"	65
3"	80
4"	100
5"	125
6"	150
8"	200
10"	250
12"	300
14"	350
16"	400
18"	450
20"	500
22"	550
24"	600
26"	650
28"	700
30"	750
32"	800
36"	900

4) Type Of Bore	
Type	Nomen.
Full Bore	FB
Reduced Bore	RB

5) Type of End Connections.	
Type	Nomen.
Flange End	FL
Butt Weld End	BW
Socket Weld End	SW
Tounge & Groove	TG
Ring Type Joint	RTJ
NPT Threaded	NT
BSPT Threaded	BT
SW NPT	SN

6) Type Of Class	
Types	Nomen.
Class 150	#150
Class 300	#300
Class 400	#400
Class 600	#600
Class 900	#900
Class 1500	#1500
Class 2500	#2500
Class 4500	#4500
Sch 10	S10
Sch 20	S20
Sch 40	S40
Sch 80	S80
Sch 160	S160
Sch XXS	SXXS
Table F	F
Table E	E
Table D	D

7) Special Requirement	
Types	Nomen.
IBR	IBR
Fire Safe	FS

8) Operating System	
Types	Nomen.
Lever Operated	1 / L
Gear Unit	2 / G
Pneumatic	3 / P
Electric	4 / E

Ex. 1 PIECE BALL VALVE, 100NB, FLANGE END
 ASTM 182 A SS 316 FULL BORE #300, WITH IBR = 1BV-S6-100FB-FL-#300-IBR