

Structural Characteristic

We adopte the Germany advanced technology and apply it in our new products by years of R&D, we develope Rayomond special Top-entry ball valve. With technology up to domestic leading level, these products can compete with the internmtional counterparts. Besides the features borne by the side installed fixed ball valve (see fixed ball valve), they are also given the features below:

1. One-piece valve body, top installed trunnion to fix and support, flanged or butt welded structure.
2. Inconel bellows spring makes the sealed metal seat moving toward the ball, providing the two way seal function of inlet and outlet.
3. Distinctive technology of retractable valve seat, inline replace ability of ball arm, valve stem sealing ring, metal seat and bellows spring, and torque down to the minimum for the ease of operation.
4. Ease of repair and installation, long performance life. Access for repair and replacement of trims may be done with no need to remove the valve from the pipeline, thus to lengthen the service life.
5. Low torque, reliable sealing, and spherical seat different from ordinary ball valves, which can automatically adjust the position of seal.
6. Preset platform and bolt holes for drive device, and to ISO521 1. Drive device can be installed according to users' different requirements.
7. DBB (double block and bleed) function.
8. Hand operated top installed ball valve adopts high strength one-piece ball arm structure to ensure the precise positioning of the ball.
9. Anti-blowout protective structure of valve stem to enhance the operational safety of the valve.

Technical Specifications

Technical Specifications	API Series
Design Specifications	API6D、API608、BS5351
Pressure and Temperture Class	ASME B16.34
Face-to-face	API 6D、ASME B16.10
Flanged Ends	ASME B16.5、ASME B16.47
Butt Welded	ASME B16.25
Inspection and Test	API6D、API598
Fire safe Test	API 6FA
Cast Steel Quality Inspection	MSS-SP-55

Torque Chart (N.M)

The torque ratings listed below are for the reference to choose a drive device. The properties of medium, trims and valve open frequency shall be considered as extra factors. For instance, valves with corrosion-resistant trims to deal with clean lubricating mediums, their torque may be lowered by 20%. However, to deal with stringent mediums like slurry, granular medium and oxygen, the torque may be increased by 50%. The operating torque of drawing-down valves is subject to the corresponding diameter to their neckings. (Specific options as per the actual).

Size		Pressure Class						
DN	NPS	150	300	400	600	900	1500	2500
50×40	1 1/2	61	81	85	102	149	-	-
50	2	68	108	97	136	203	333	562
80×50	3×2	68	108	97	136	203	333	562
80	3	149	244	204	305	422	811	1460
100×80	4×3	149	244	204	305	422	811	1460
100	4	244	407	422	453	583	1505	1923
150×100	6×4	244	407	422	453	583	1505	1923
150	6	323	544	647	1006	1299	2940	5840
200×150	8×6	323	544	647	1006	1299	2940	5840
200	8	647	955	1157	2532	2766	6489	12181
250×200	10×8	647	955	1157	2532	2766	6489	12181
250	10	882	1822	2178	3941	5446	12181	15281
300×250	12×10	882	1822	2178	3941	5446	12181	15281
350×250	14×10	882	1822	2178	3941	5446	12181	15281
300	12	1577	2591	3064	6893	7909	15564	19834
350×300	14×12	1577	2591	3064	6893	7909	15564	-
400×300	16×12	1577	2591	3064	6893	7909	15564	-
350	14	1873	3224	3853	6205	10948	23512	-
400×350	16×14	1873	3224	3853	6205	10948	23512	-
400	16	3050	5447	6529	8817	13682	27039	-
450×400	18×16	3050	5447	6529	8817	13682	27039	-
500×400	20×16	3050	5447	6529	8817	13682	27039	-
450	18	3819	6197	7461	11231	17705	37085	-
500	20	4508	7830	9348	14919	29866	40309	-
550	22	5490	9453	11302	16058	39324	-	-
600×500	24×20	4508	7830	9348	15140	29866	40309	-
600	24	6723	11457	15535	21840	40810	64671	-
650	26	9289	15139	17869	24889	51322	-	-
700	28	11647	18067	21063	28767	53515	-	-
750×600	30×24	6723	11457	15535	21840	40810	-	-
750	30	13558	19207	24966	34398	57057	-	-
800	32	15224	24095	28235	38880	61123	-	-
850	34	17846	30249	33291	41789	70277	-	-
900×750	36×30	13558	19207	24966	34398	57057	-	-
900	36	22032	33331	36227	51521	81349	-	-
1000	40	25972	36490	45269	60368	-	-	-
1050	42	27034	40425	53515	70277	-	-	-
1200	48	42606	64985	79311	112293	-	-	-

Product Line

Size		Pressure Class					
DN	NPS	150	300	600	900	1500	2500
50×40	2×2½		●/△			☆/△	
50	2		●/△			☆/△	
80×50	3×2		●/△			☆/△	
80	3		☆/△			☆/△	
100×80	4×3		☆/△			☆/△	
100	4		☆/△			☆/△	
150×100	6×4		☆/△			☆/△	
150	6	●/☆/△/★		☆/△/★		☆/△/★	
200×150	8×6	☆/△/★		●/☆/△/★		☆/△/★	
200	8	☆/△/★		●/☆/△/★		☆/△/★	☆/△/★
250×200	10×8		☆/△/★			☆/△/★	☆/△/★
250	10		☆/△/★			☆/△/★	☆/△/★
300×250	12×10		☆/△/★			☆/△/★	☆/△/★
350×250	14×10		☆/△/★			☆/△/★	☆/△/★
300	12		☆/△/★			☆/△/★	☆/△/★
350×300	14×12		☆/△/★			☆/△/★	-
400×300	16×12		☆/△/★			☆/△/★	-
350	14		☆/△/★			☆/△/★	-
400×350	16×14		☆/△/★			☆/△/★	-
400	16		☆/△/★			☆/△/★	-
450×400	18×16		☆/△/★			☆/△/★	-
500×400	20×16		☆/△/★			☆/△/★	-
450	18		☆/△/★			☆/△/★	-
500	20		☆/△/★			☆/△/★	-
550	22		☆/△/★			☆/△/★	-
600×500	24×20		☆/△/★			☆/△/★	-
600	24		☆/△/★			☆/△/★	-
650	26		☆/△/★			-	-
700	28		☆/△/★			-	-
750×600	30×24		☆/△/★			-	-
750	30		☆/△/★			-	-
800	32		☆/△/★			-	-
850	34		☆/★			-	-
900×750	36×30		☆/△/★			-	-
900	36		☆/★			-	-
1000	40		☆/★			-	-
1050	42		☆/★			-	-
1200	48		☆/★			-	-

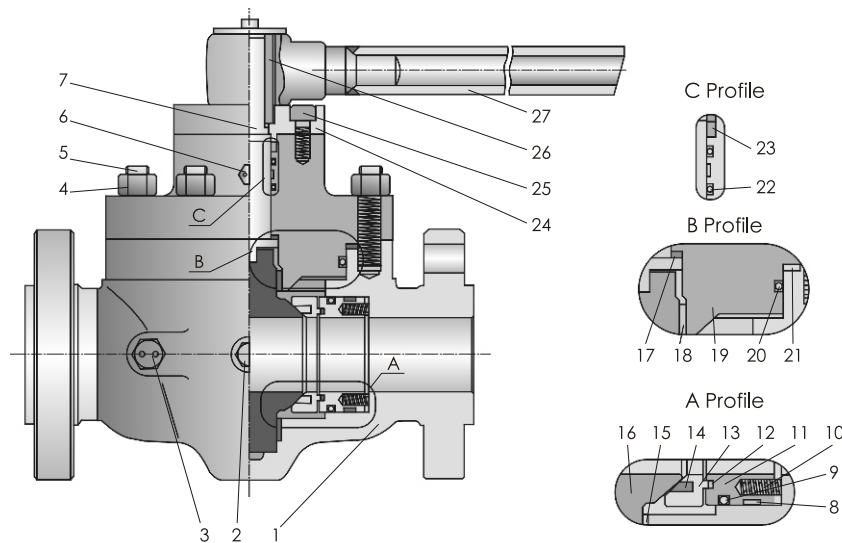
Note: ●Stands for handle operated valves
 △Stands for gearbox operated valves
 ☆Stands for air operated valves
 ★Stands for electrically operated valves
 -Stands for no option of this

Those not covered in the table can be custom made to users' requirements.

Performance Specification

Performance Specification		Pressure Class						
		150	300	400	600	900	1500	2500
Test Pressure (MPa)	Strength Test	2.94	7.67	10.20	15.30	22.98	38.30	63.83
	Sealing Test	2.16	5.62	7.48	11.23	16.85	28.08	46.81
	Pressure Test	0.6						
Applicable Temperature		-196℃~550℃ (Different Raw Material for Different Work Temperature)						
Applicable Medium		Water, Steam, Oil, Gas, Petrochemical and other comparable						
Size Range		DN50~1200(NP2"~48"), We can produce valve according to your special requirements.						
Body/Trim Material		Carbon Steel, SS, Ni-Alloy Steel, Ti Material						
Bottom Connection		Flange Connection, Butt Welded Connection						
Operation set		Hand Wheel Operation, Worm Gear Operation, Electric Operation, Pneumatic Operation						

Design Drawing of Manual Top Entry Ball Valve



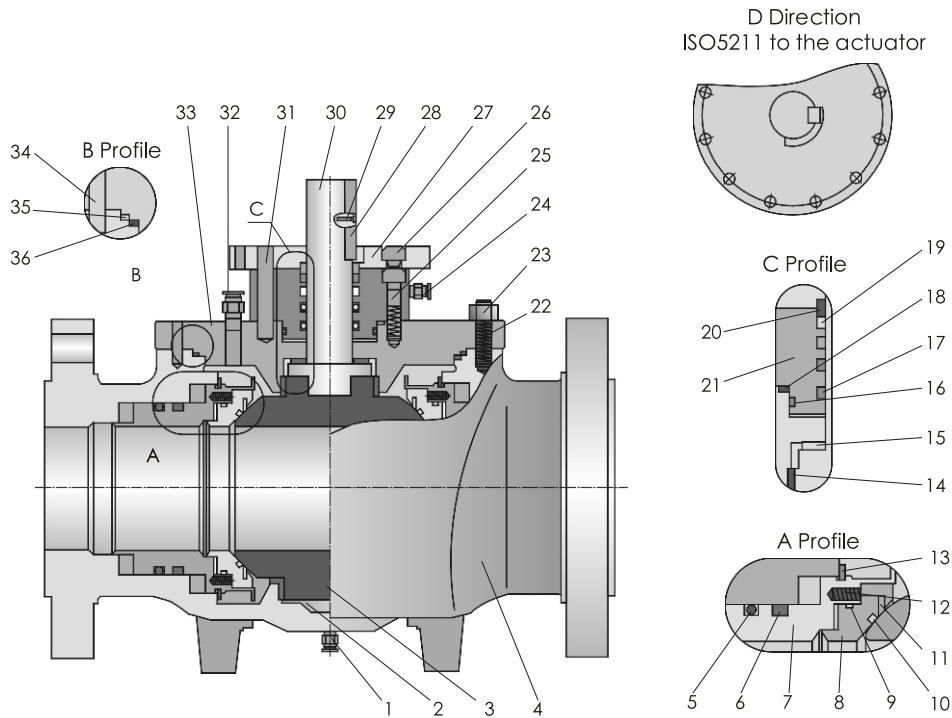
The Material of Main Parts

No.	Parts Name	Material		
		Carbon Steel	Stainless Steel	Low Temperature Steel
1	Body	A216 WCB	A351 CF8M	A352 LCC
2	Drain Valve	A29 1025	SS	SS
3	Sealant Injection Valve	A29 1025	SS	SS
4	Nut	A194 2H	A194 8	A194 7
5	Stud	A193 B7	A193 B8	A320 L7
6	Sealant Injection Valve	A29 1025	SS	SS
7	Stem	A182 F6a	A182 F316	A182 F316
8	Fire Safe Ring	Soft Graphite		
9	O-Ring	VITON		
10	Spring	INCONEL X-750		
11	Supporting Ring	A29 4140+ENP	A182 F316	A350 LF3
12	Gasket	Soft Graphite+SS		
13	Seat	A105+ENP	A29 4140+ENP	A182 F316 A350 LF3
14	Sealing Ring	PTFE, NYLON, PEEK, PCTFE, MOLON		

No.	Parts Name	Material		
		Carbon Steel	Stainless Steel	Low Temperature Steel
15	Bushing	PTFE+CS	PTFE+SS	PTFE+SS
16	Ball	A105+ENP	A182 F316	A350 LF3
17	Flat Bushing	PTFE+CS	PTFE+SS	PTFE+SS
18	Bushing	PTFE+CS	PTFE+SS	PTFE+SS
19	Bonnet	A216 WCB	A351 CF8M	A352 LCC
20	O-Ring	VITON		
21	Gasket	Soft Graphite+SS		
22	O-Ring	VITON		
23	Packing	Soft Graphite		
24	Cover	A29 4140+ENP	A182 F316	A350 LF3
25	Screw	A193 B7	A193 B8	A320 L7
26	Key	A29 1045	A29 1045	A29 1045
27	Lever	Q235A		

Notes: 1. Materials are subject to users' requirements
 2. Material of Anti-sulfur valve is according to NACE MR0175.

Design Drawing of Top Entry Ball Valve



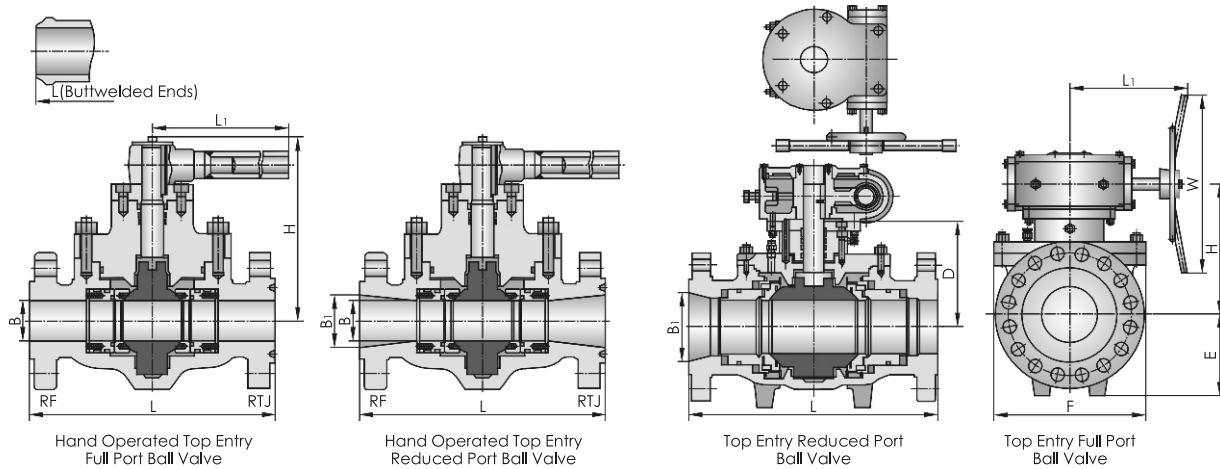
The Material of Main Parts

No.	Parts Name	Material		
		Carbon Steel	Stainless Steel	Low Temperature Steel
1	Drain Valve	A29 1025	SS	SS
2	Bushing	PTFE+CS	PTFE+SS	PTFE+SS
3	Ball	A105+ENP	A182 F316	A350 LF3
4	Stem	A216 WCB	A351 CF8M	A352 LCC
5	O-Ring	VITON		
6	Fire Safe Ring	Soft Graphite		
7	Supporting Ring	A29 4140+ENP	A182 F316	A350 LF3
8	Seat	A105+ENP	A182 F316	A350 LF3
9	O-Ring	VITON		
10	O-Ring	VITON		
11	Sealing Ring	PTFE、NYLON、PCTFE、MOLON		
12	Spring	INCONEL X-750		
13	C Type Spring	17-4		
14	Bushing	PTFE+CS	PTFE+SS	PTFE+SS
15	Flat Bush Bearing	PTFE+CS	PTFE+SS	PTFE+SS
16	O-Ring	VITON		
17	O-Ring	VITON		
18	Gasket	Soft Graphite+SS		

No.	Parts Name	Material		
		Carbon Steel	Stainless Steel	Low Temperature Steel
19	Packing	Soft Graphite		
20	Gland	A182 F6a	A182 F6a	A350 LF3
21	Cover	A29 4140+ENP	A182 F6a	A320 L7
22	Stud	A193 B7	A193 B8	A194 7
23	Nut	A194 2H	A194 8	A350 LF3
24	Sealant Injection Valve	A29 1025	SS	SS
25	Screw	A193 B7	A193 B8	
26	Screw	A193 B7	A193 B8	A320 L7
27	Connection Set	A105		
28	Key	A29 1045		
29	Screw	A193 B7		
30	Stem	A182 F6a	A182 F316	A182 F316
31	Locating Pin	A182 F6a		
32	Drain Valve	A29 1025	SS	SS
33	Bonnet	A216 WCB	A351 CF8M	A352 LCC
34	Locating Pin	A182 F6a		
35	Gasket	Soft Graphite+SS		
36	O-Ring	VITON		

- Note: 1. Materials are subject to the temperature & pressure of service fluid.
 2. Any other materials more than these listed in the chart are at user's option.
 3. Materials in accordance with NACE MR-01-75 (latest edition) are available for sour gas service.

Remarks: RF stands for Raised Flange Connection; BW stands for Buttwelded Ends Connection; RTJ stands for Ring Joint Connection.



Main Outline Dimensions

Class150 Full Port

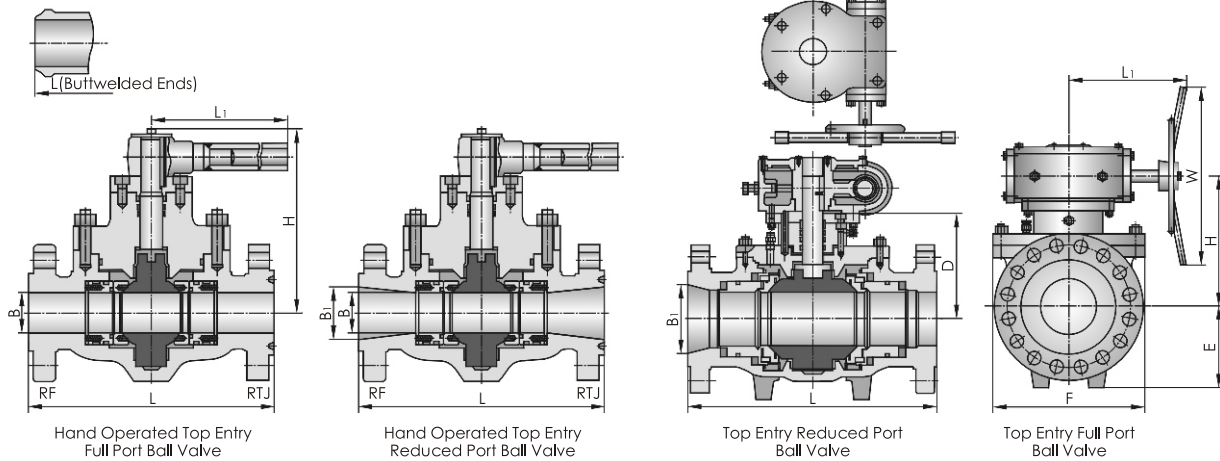
mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	178	191	216	51	51	-	85	180	212	450	-	28
80	3	203	216	283	77	77	-	112	230	228	600	-	55
100	4	229	241	305	102	102	-	145	283	272	600	-	105
150	6	394	406	457	152	152	281	220	325	333	297	350	235
200	8	457	470	521	203	203	320	260	405	384	360	500	430
250	10	533	546	559	254	254	360	311	490	424	360	500	475
300	12	610	622	635	305	305	403	366	570	467	340	700	610
350	14	686	699	762	337	337	453	428	660	517	340	700	795
400	16	762	775	838	387	387	459	450	700	549	545	700	1160
450	18	864	876	914	438	438	502	473	755	577	575	700	1570
500	20	914	927	991	489	489	551	580	870	626	575	700	2000
550	22	991	1062	1092	540	540	578	590	955	653	575	700	2830
600	24	1067	1080	1143	591	591	606	600	1030	696	579	700	3300
650	26	1143	1168	1245	635	635	675	635	1075	765	570	700	3970
700	28	1245	1270	1346	686	686	735	700	1165	825	579	700	4755
750	30	1295	1321	1397	736	736	795	775	1250	865	579	700	5820
800	32	1372	1400	1524	781	781	840	825	1325	1012	605	620	7240
850	34	1473	1502	1626	832	832	875	880	1410	1047	605	620	7960
900	36	1524	1552	1727	876	876	931	930	1475	1103	605	620	9300
1000	40	1753	-	1956	978	978	1015	1025	1640	1170	950	1400	12950
1050	42	1855	-	2083	1022	1022	1065	1080	1710	1220	950	1400	15200
1200	48	2134	-	2388	1168	1168	1180	1225	1940	1335	950	1400	22750

Class150 Reduced Port

mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	178	191	216	38	51	-	85	180	212	450	-	25
80×50	3×2	203	216	283	51	77	-	85	180	212	450	-	37
100×80	4×3	229	241	305	77	102	-	112	230	228	600	-	75
150×100	6×4	394	406	457	102	152	-	145	283	272	600	-	140
200×150	8×6	457	470	521	152	203	281	220	325	333	297	350	265
250×200	10×8	533	546	559	203	254	320	260	405	384	360	500	480
300×250	12×10	610	622	635	254	305	360	311	490	424	360	500	510
350×250	14×10	686	699	762	254	337	360	311	490	424	360	500	690
350×300	14×12	686	699	762	305	337	403	366	570	467	340	700	820
400×300	16×12	762	775	838	305	387	403	366	570	467	340	700	970
400×350	16×14	762	775	838	387	337	453	428	660	517	340	700	955
450×400	18×16	864	876	914	387	438	450	450	700	549	545	700	1295
500×400	20×16	914	927	991	387	489	459	450	700	549	545	700	1590
500×450	20×18	914	927	991	438	489	502	473	755	577	575	700	1800
600×500	24×20	1067	1080	1143	489	591	551	580	870	626	575	700	2440
750×600	30×24	1295	1321	1397	591	736	606	600	1030	696	579	700	4100
900×750	36×30	1524	1552	1727	736	876	795	775	1250	865	579	700	7200



Main Outline Dimensions

Class300 Full Port

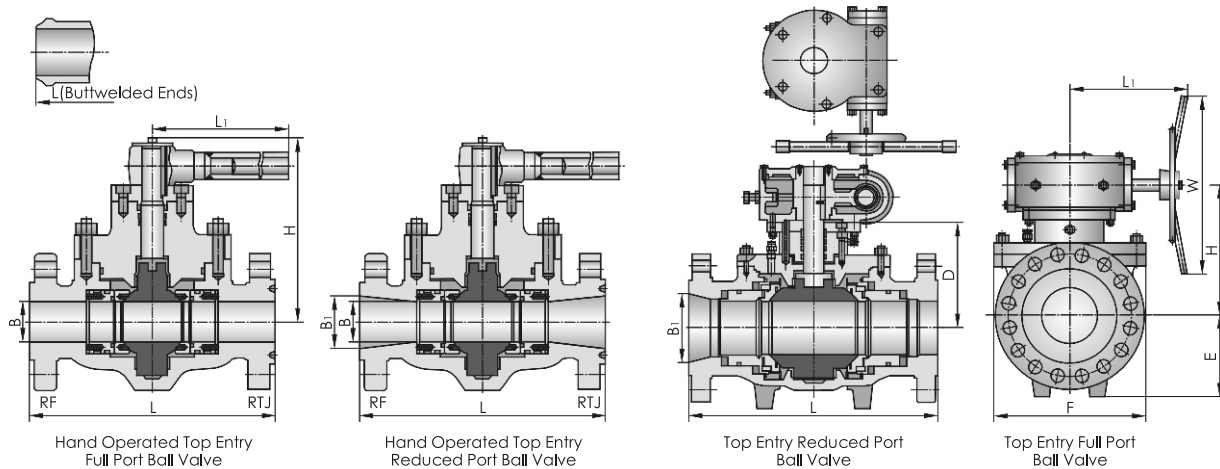
mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	216	216	232	51	51	-	85	180	212	450	-	33
80	3	283	283	298	77	77	-	112	230	228	600	-	64
100	4	305	305	321	102	102	-	145	283	272	1000	-	123
150	6	403	403	419	152	152	281	220	325	345	360	500	275
200	8	502	521	518	203	203	330	260	405	385	340	700	505
250	10	568	559	584	254	254	371	311	490	426	340	700	557
300	12	648	635	664	305	305	418	366	570	473	340	700	715
350	14	762	762	778	337	337	470	428	660	530	545	700	932
400	16	838	838	854	387	387	477	450	700	537	545	700	1360
450	18	914	914	930	438	438	522	473	755	597	575	700	1840
500	20	991	991	1010	489	489	573	580	880	663	579	700	2340
550	22	1092	1092	1114	540	540	600	590	965	690	579	700	3320
600	24	11443	1143	1165	591	591	631	600	1040	721	579	700	3870
650	26	1245	1245	1270	635	635	702	635	1085	874	605	620	4655
700	28	1346	1346	1372	686	686	764	700	1175	919	950	1400	5575
750	30	1397	1397	1422	736	736	827	775	1265	982	950	1400	6825
800	32	1524	1524	1553	781	781	874	825	1340	1029	950	1400	8490
850	34	1626	1626	1654	832	832	910	880	1425	1065	950	1400	9335
900	36	1727	1727	1756	876	876	968	930	1490	1123	950	1400	10900
1000	40	1956	1956	-	978	978	1056	1025	1655	1211	950	1400	15185
1050	42	2083	2083	-	1022	1022	1107	1080	1725	1262	950	1400	17820
1200	48	2170	2170	-	1168	1168	1228	1225	1960	1499	1045	1400	26675

Class300 Reduced Port

mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	216	216	232	38	51	-	85	180	212	450	-	29
80×50	3×2	283	283	298	51	77	-	85	180	212	450	-	43
100×80	4×3	305	305	321	77	102	-	112	230	228	600	-	88
150×100	6×4	403	403	419	102	152	-	145	283	272	1000	-	164
200×150	8×6	502	521	518	152	203	281	220	325	345	360	500	311
250×200	10×8	568	559	584	203	254	330	260	405	385	340	700	563
300×250	12×10	648	635	664	254	305	371	311	490	426	340	700	598
350×250	14×10	762	762	778	254	337	371	311	490	426	340	700	809
350×300	14×12	762	762	778	305	337	418	366	570	473	340	700	960
400×300	16×12	838	838	854	305	387	418	366	570	473	340	700	1135
400×350	16×14	838	838	854	387	337	470	428	660	530	545	700	1120
450×400	18×16	914	914	930	387	438	477	450	700	537	545	700	1518
500×400	20×16	991	991	1010	387	489	477	450	700	537	545	700	1865
500×450	20×18	991	991	1010	438	489	522	473	755	597	575	700	2110
600×500	24×20	1143	1143	1165	489	591	573	580	880	663	579	700	2860
750×600	30×24	1397	1397	1422	591	736	631	600	1040	721	579	700	4810
900×750	36×30	1727	1727	1756	736	876	827	775	1265	982	950	1400	8440



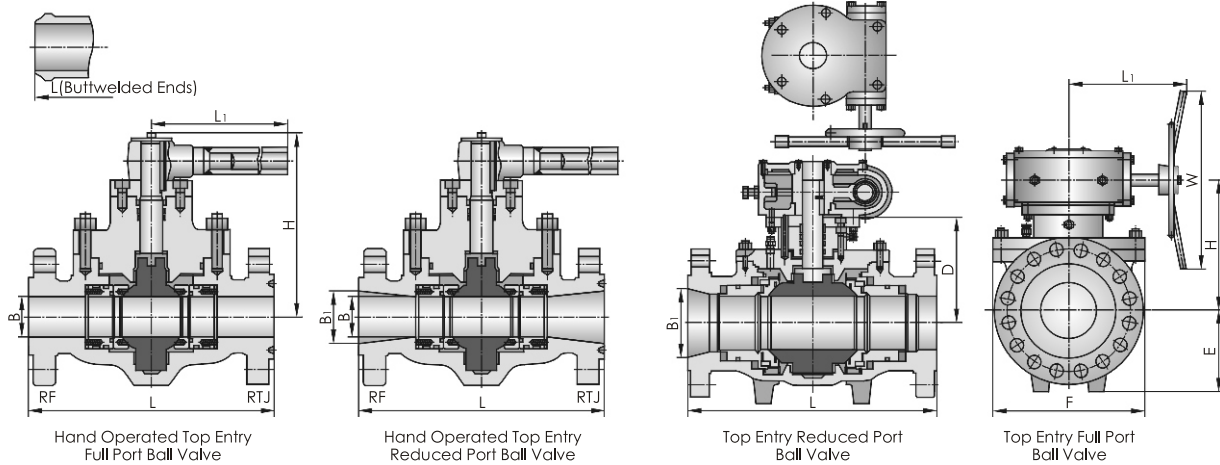
Main Outline Dimensions

Class600 Full Port

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	292	292	295	51	51	-	85	180	212	600	-	37
80	3	356	356	359	77	77	-	112	230	228	600	-	72
100	4	432	432	435	102	102	-	145	283	250	1000	-	137
150	6	559	559	562	152	152	281	220	325	336	1000	700	302
200	8	660	660	664	203	203	340	260	415	395	340	700	560
250	10	787	787	791	254	254	355	311	505	415	340	700	710
300	12	838	838	841	305	305	401	366	585	461	545	700	910
350	14	889	889	892	337	337	451	428	680	526	575	700	1190
400	16	991	991	994	387	387	493	450	730	568	575	700	1735
450	18	1092	1092	1095	438	438	539	473	784	629	575	700	2350
500	20	1194	1194	1200	489	489	592	580	900	682	579	700	3000
550	22	1295	1295	1305	540	540	621	590	890	711	579	700	4240
600	24	1397	1397	1407	591	591	653	600	1070	808	950	1400	4950
650	26	1448	1448	1461	635	635	725	635	1115	880	950	1400	5950
700	28	1549	1549	1562	686	686	790	700	1210	945	950	1400	7130
750	30	1651	1651	1664	736	736	850	775	1300	1005	950	1400	8730
800	32	1778	1778	1794	781	781	900	825	1380	1055	950	1400	10850
850	34	1930	1930	1946	832	832	940	880	1460	1095	950	1400	11930
900	36	2083	2083	2099	876	876	1000	930	1535	1155	950	1400	13950
1000	40	2337	2337	2337	978	978	1090	1025	1700	1360	1045	1400	19420
1050	42	2437	2437	2437	1022	1022	1140	1080	1775	1410	1045	1400	22350
1200	48	2540	2540	2540	1168	1168	1270	1225	2015	1570	1080	1400	32340

Class600 Reduced Port

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	292	292	295	38	51	-	85	180	212	450	-	33
80×50	3×2	356	356	359	51	77	-	85	180	212	600	-	48
100×80	4×3	432	432	435	77	102	-	112	230	228	1000	-	97
150×100	6×4	559	559	562	102	152	-	145	283	250	1000	-	181
200×150	8×6	660	660	664	152	203	281	220	325	336	340	700	340
250×200	10×8	787	787	791	203	254	340	260	415	395	340	700	625
300×250	12×10	838	838	841	254	305	355	311	505	415	545	700	760
350×250	14×10	889	889	892	254	337	355	311	505	415	545	700	1030
350×300	14×12	889	889	892	305	337	401	366	585	461	545	700	1230
400×300	16×12	991	991	994	305	387	401	366	585	461	545	700	1450
400×350	16×14	991	991	994	387	337	451	428	680	526	575	700	1430
450×400	18×16	1092	1092	1095	387	438	493	450	730	568	575	700	1940
500×400	20×16	1194	1194	1200	387	489	493	450	730	568	575	700	2380
500×450	20×18	1194	1194	1200	438	489	539	473	784	629	579	700	2700
600×500	24×20	1397	1397	1407	489	591	592	580	900	682	579	700	3660
750×600	30×24	1651	1651	1664	591	736	653	600	1070	808	950	1400	6150
900×750	36×30	2083	2083	2099	736	876	850	775	1300	1005	950	1400	10800



Main Outline Dimensions

Class900 Full Port

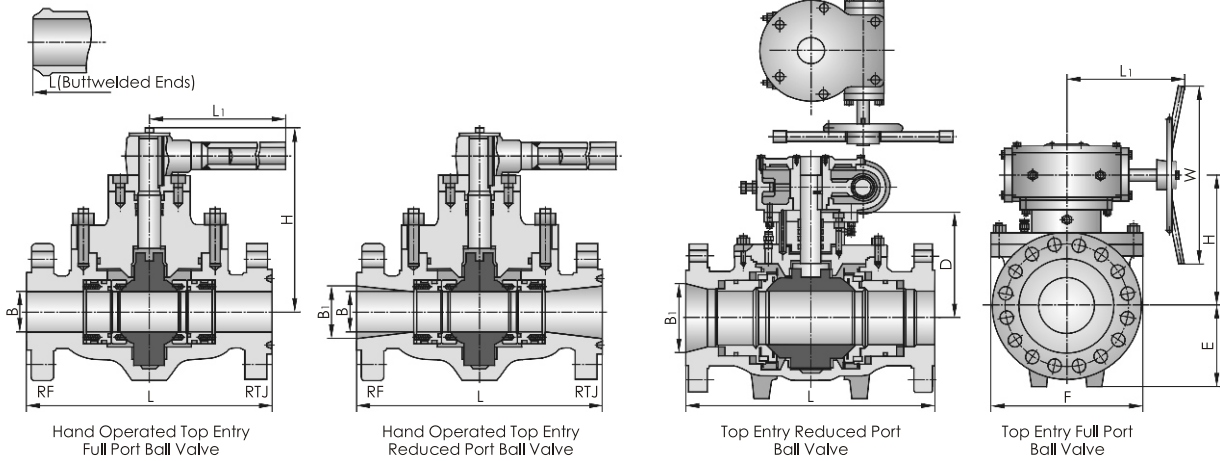
mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	368	368	371	51	51	-	85	195	215	600	-	52
80	3	381	381	384	77	77	-	112	240	193	1000	-	108
100	4	457	457	460	102	102	227	145	295	291	360	-	200
150	6	610	610	613	152	152	258	225	330	313	340	500	456
200	8	737	737	740	203	203	318	260	425	378	545	700	845
250	10	838	838	841	254	254	370	320	525	430	545	700	1070
300	12	965	965	968	305	305	418	375	600	493	575	700	1675
350	14	1029	1029	1038	324	324	470	440	695	545	575	700	1800
400	16	1130	1130	1140	375	375	515	465	750	605	579	700	2650
450	18	1219	1219	1232	425	425	560	485	800	650	579	700	3550
500	20	1321	1321	1334	473	473	620	600	925	775	950	1400	4530
600	24	1549	1549	1568	571	571	680	620	1095	835	950	1400	7450
650	26	1651	1651	1674	619	619	760	655	1145	915	950	1400	8925
700	28	1753	1753	1775	667	667	824	720	1240	979	950	1400	10695
750	30	1880	1880	1902	714	714	886	800	1335	1157	950	1400	13095
800	32	2032	2032	2054	762	762	938	848	1415	1209	1045	1400	16200
850	34	2159	2159	2188	810	810	980	905	1495	1251	1045	1400	17800
900	36	2286	2286	2315	857	857	1042	957	1570	1313	1045	1400	20930

Class900 Reduced Port

mm

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	368	368	371	38	51	-	85	195	215	450	-	49
80×50	3×2	381	381	384	51	77	-	85	195	215	600	-	70
100×80	4×3	457	457	460	77	102	-	112	240	193	1000	-	146
150×100	6×4	610	610	613	102	152	227	145	295	291	360	-	273
200×150	8×6	737	737	740	152	203	258	225	330	313	340	500	573
250×200	10×8	838	838	841	203	254	318	260	425	378	545	700	943
300×250	12×10	965	965	968	254	305	370	320	525	430	545	700	1150
350×250	14×10	1029	1029	1038	254	324	370	320	525	430	545	700	1550
350×300	14×12	1029	1029	1038	324	305	418	375	600	493	575	700	1855
400×300	16×12	1130	1130	1140	305	375	418	375	600	493	575	700	2185
400×350	16×14	1130	1130	1140	324	375	470	440	695	545	575	700	2160
450×400	18×16	1219	1219	1232	375	425	515	465	750	605	579	700	2925
500×400	20×16	1321	1321	1334	375	473	515	465	750	605	579	700	3590
500×450	20×18	1321	1321	1334	425	473	560	485	800	650	579	700	4100
600×500	24×20	1549	1549	1568	473	571	620	600	925	775	950	1400	5520
750×600	30×24	1880	1880	1902	571	714	680	620	1095	835	950	1400	9225
900×750	36×30	2286	2286	2315	714	857	886	800	1335	1157	950	1400	15700



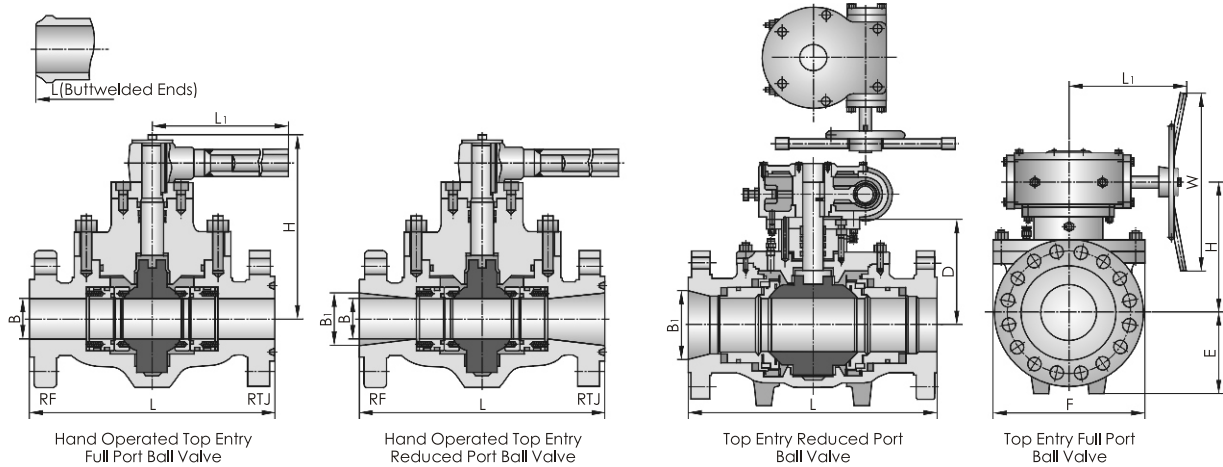
Main Outline Dimensions

Class 1500 Full Port

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	368	368	371	51	51	-	85	205	179	600	-	52
80	3	470	470	473	77	77	-	120	250	201	1000	-	152
100	4	546	546	549	102	102	240	155	310	295	340	700	280
150	6	705	705	711	146	146	273	240	370	333	545	700	640
200	8	832	832	841	194	194	335	280	455	410	575	700	1180
250	10	991	991	1000	241	241	385	340	565	460	575	700	1500
300	12	1130	1130	1146	289	289	436	400	670	511	575	700	2065
350	14	1257	1257	1276	317	317	485	467	730	575	579	700	2700
400	16	1384	1384	1407	362	362	530	495	790	620	579	700	3980
450	18	1537	1537	1559	407	407	585	520	840	740	950	1400	5325
500	20	1664	1664	1686	457	457	640	639	965	795	950	1400	6800
600	24	2043	2043	2071	534	534	708	640	1145	979	1045	1400	11900

Class 1500 Reduced Port

DN (mm)	NPS (in)	L			B	B ₁	D	E	F	H	L ₁	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	368	368	371	38	51	-	85	205	179	450	-	49
80×50	3×2	470	470	473	51	77	-	85	205	179	600	-	98
100×80	4×3	546	546	549	77	102	-	120	250	201	1000	-	205
150×100	6×4	705	705	711	102	146	240	155	310	295	340	700	382
200×150	8×6	832	832	841	146	194	273	240	370	333	545	700	720
250×200	10×8	991	991	1000	194	241	335	280	455	410	575	700	1320
300×250	12×10	1130	1130	1146	241	289	385	340	565	460	575	700	1600
350×250	14×10	1257	1257	1276	241	317	385	340	565	460	575	700	2170
350×300	14×12	1257	1257	1276	317	317	436	400	565	460	575	700	2780
400×300	16×12	1384	1384	1407	289	362	436	400	670	511	575	700	3280
400×350	16×14	1384	1384	1407	317	362	485	467	670	511	579	700	3240



Main Outline Dimensions Class2500 Full Port

DN (mm)	NPS (in)	L			B	B1	D	E	F	H	L1	W	Weight (kg) RF
		RF	BW	RTJ									
50	2	451	451	454	44.5	44.5	198	105	270	250	297	300	120
80	3	578	578	584	63.5	63.5	250	127	350	305	340	700	246
100	4	673	673	683	89	89	305	156	400	360	340	700	470
150	6	914	914	927	133	133	355	240	480	430	575	700	937
200	8	1022	1022	1038	181	181	438	280	530	513	575	700	1410
250	10	1270	1270	1292	226	226	530	365	720	620	590	700	2600
300	12	1422	1422	1445	267	267	590	430	860	740	505	620	4200

Class2500 Reduced Port

DN (mm)	NPS (in)	L			B	B1	D	E	F	H	L1	W	Weight (kg) RF
		RF	BW	RTJ									
50×40	2×1 1/2	451	451	454	38	44.5	-	93	250	150	600	-	80
80×50	3×2	578	578	584	44.5	63.5	198	105	270	250	297	300	160
100×80	4×3	673	673	683	63.5	89	250	127	350	305	340	700	300
150×100	6×4	914	914	927	89	133	305	156	400	360	340	700	670
200×150	8×6	1022	1022	1038	133	181	355	240	480	430	575	700	1150
250×200	10×8	1270	1270	1292	181	226	438	280	530	513	575	700	2100
300×250	12×10	1422	1422	1445	226	267	530	365	720	620	590	700	3300