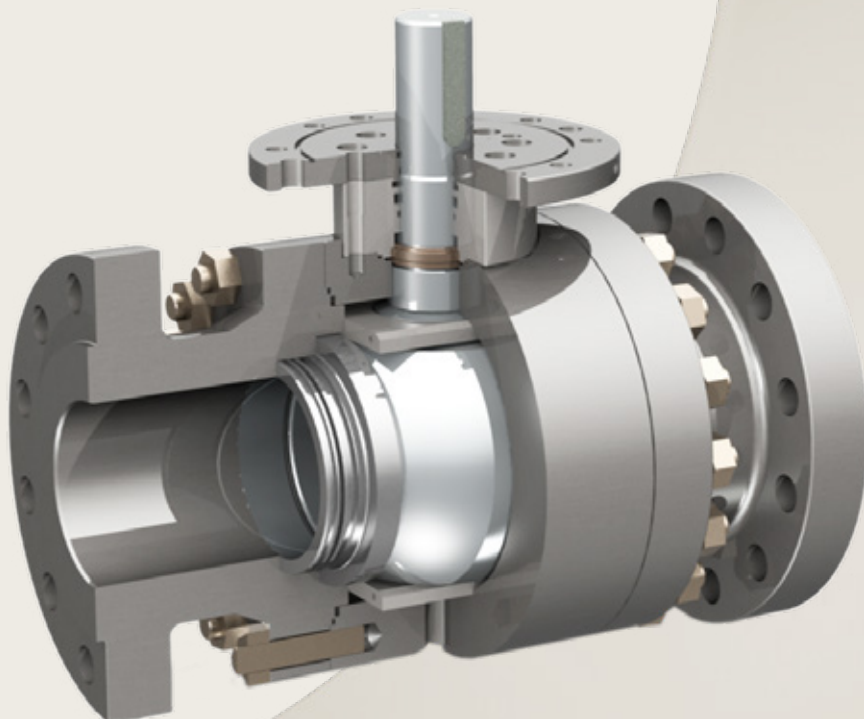


Process Automation

IMI Truflo Italy



Breakthrough
engineering for
a better world

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Side Entry Trunnion Mounted Ball Valves

Key features

- Soft or metal seated
- Two- or three-piece body
- Bi-directional tight shut-off
- Double block & bleed
- Fire safe and fire tested
- Bolted or fully welded construction
- Low operating torque design
- Wide range of materials and sizes
- Trunnion mounted with spring energized seats
- Anti-blowout stem design
- Suitable for above ground or below ground installation
- Possibility of short Pattern

Trunnion Mounted Side Entry high performance ball valves, thanks to their robust design, are engineered to meet the mostly used international standards like API 6A, API 6D, ASME B16.34, ISO 17292 and other on request.

The range contains both soft, metal or composite seats that can be configured with single or double piston effect to provide an effective double block and bleed (DB&B) in both closed and, on request, in open position.

Breakthrough engineering you can count on.



The ideal valve for Severe Service



The large use of forgings and the independent spring or bellows loaded floating seats which are always in contact with the ball, make these valves the preferred solution for various demanding applications like Cryogenic, High Temperature, Low Emission, ESD/ HIPPS, and Sub Sea.

Suitable to be used in the most severe services such as scraper launcher and receiver and hot tapping, our valves can be equipped with bellow seals, steam flushing ports and protected bearings, to cope with medium/ high amounts of solids like tar sands or catalysts.

These products receive approvals from the major End Users and Contractors and are designed to meet SIL3 requirements according to IEC 61508.

Additionally, the double or triple stem seal design (with lip seals or O-rings or optionally with leak off chambers for predictive maintenance) allows to meet and exceed the most stringent Low Fugitive Emissions Norms (ISO 15848) making our valves suitable to handle toxic or lethal fluid services.

The design is based on high quality forged or cast materials and meet all requirements of Very Severe Service applications.

The independent spring or bellows loaded floating seats which are always in contact with the ball provide an effective tight seal even at low differential pressures. Seating elements can be soft, metal or composite.

Main benefits

- Suitable to be used in the most very severe services
- Designed to meet SIL3 requirements
- Meets and exceeds the most stringent low fugitive emission standards (ISO 15848)
- Suitable to handle toxic or lethal fluid services
- Effective tight seal even at low differential pressures

Trunnion Mounted Ball



40" ANSI 150

Side Entry, Top Entry and All Welded sub-sea valves are trunnion mounted, the ball always remains aligned with the stem axis and rotates against friction bearings.

This design guarantees low operating torque and reduced seat loads, thus minimizing ball, seat and stem wear during the valve lifetime.

Side loads generated by the pressure acting on seats and ball are transmitted to the body through the bearing supports (for Side Entry and All Welded design) and through the cover (for Top Entry design).

This design ensures no side loads are transferred to the stem.

Alternative designs for parallel seats trunnion mounted ball valves



Side-Entry

- Trunnion mounted ball, spring loaded seats, 2 or 3 pieces bolted body construction.



Top-Entry

- Trunnion mounted ball, spring loaded seats, forged or cast body bolted bonnet construction fully maintainable in line.



Fully welded

- Trunnion mounted ball, spring loaded seats, 2 or 3 pieces all welded body construction.

Suitable applications

Our SEB valve can be installed in a wide range of application:

- Well-heads flow-lines
- Pipeline
- Riser-ESDV
- GO V; SDV; BDV; XXV; XV
- Scraper Trap isolation
- Process Valves
- Sub-sea
- Low Temperature and
- cryogenic
- Quick Closing
- Metering Valves





Side Entry Ball Valve

- Size Range

1/2" to 60" (API 6D/API 6DSS)
1-13/16" to 13-5/8" (API 6A/API 17D)
- Temperature Range

-196°C to +650 °C / -321 °F to 1200 °F
- Applicable Standards

Design API 6D, 6A, 6DSS, 17D, ASME B16.34 / ISO 17292
- Pressure Class

ANSI CLASS 150 to 2500 and 4500
API 2000 to 15000
- End Connections

ANSI Flanges B16.5 / B16.47
NORSOK L-005
HUB
Welding ends BW / SW
- Face to Face ASME B16.10

Testing API 598 / ISO 5208 / API
- NACE ISO 15156 / NACE MR01.75

- Main Materials
- WCB

Alloy steel WC6, WC9
- CF8M, CF3M

Inconel
- LCB, LCC, LC3

Alloy 20
- Duplex

Aluminium bronze
- Super duplex

Titanium
- Monel

C5, C12
- Hastelloy
- 254 SMO

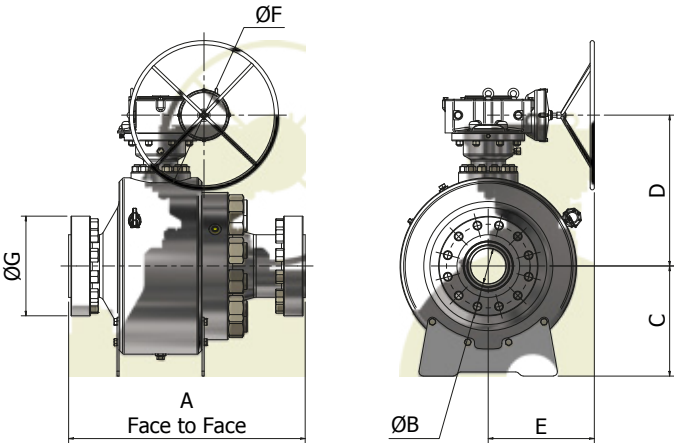


6" Ansi 900 for cryogenic application

Overall Dimensions

API 6D

Class 150



DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	108	140	-	13	100	170	-	300	90	17
20x15	3/4"x1/2"	117	152	-	19x13	100	170	-	300	100	17
20	3/4"	117	152	-	19	115	182	-	300	100	20
25x20	1x3/4"	127	165	140	25x19	115	182	-	300	110	20
25	1"	127	165	140	25	120	185	-	300	110	23
40x25	1-1/2"x 1"	165	190	178	38x25	120	185	-	300	125	23
40	1-1/2"	165	190	178	38	125	201	-	300	125	23
50x40	2"x 1 - 1/2"	178	191	216	49x38	125	201	-	300	150	23
50	2"	178	191	216	49	135	211	-	300	150	27
80x50	3" x 2"	203	283	216	74x49	135	211	-	300	190	27
80	3"	203	283	216	74	155	231	-	300	190	45
100x80	4" x 3"	229	305	241	100x74	155	231	-	300	230	50
100	4"	229	305	241	100	175	255	-	450	230	90
150x100	6"x4"	394 (*)	457 (*)	406 (*)	150x100	175	255	-	450	280	95
150	6"	394 (*)	457 (*)	406 (*)	150	220	280	360	500	280	180
200x150	8"x 6"	457 (*)	521 (*)	470 (*)	201x150	220	280	360	500	345	195
200	8"	457 (*)	521 (*)	470 (*)	201	260	320	360	500	345	280
250x200	10"x 8"	533 (*)	559 (*)	546 (*)	252x201	260	320	360	500	405	300
250	10"	533 (*)	559 (*)	546 (*)	252	300	350	385	600	405	400
300x250	12"x10"	610 (*)	635 (*)	622 (*)	303x252	300	350	385	600	485	470
300	12"	610	635	622	303	340	420	385	600	485	575
350x300	14"x12"	686	762	699	334x303	340	420	385	600	535	630
350	14"	686	762	699	334	380	450	385	700	535	825
400x350	16"x14"	762	838	775	385x334	380	450	385	700	595	870
400	16"	762	838	775	385	420	470	385	700	595	1050
500x400	20"x16"	914	991	927	487x385	420	470	385	700	700	1180
450	18"	864	914	876	436	470	530	385	700	635	1250
500	20"	914	991	927	487	500	570	410	700	700	1830
600x500	24"x 20"	1067	1143	1080	589x487	500	570	410	700	815	2070
550	22"	991	991	-	538				700		
600	24"	1067	1143	1080	589	590	650	445	700	815	2700
750x600	30"x24"	1295	1397	-	735x589	590	650	445	700	985	3500
700	28"	1245	1346	-	684	680	750	480	700	925	4200
750	30"	1295	1397	-	735	810	900	480	700	985	5000
900x750	36"x30"	1524	1727	-	874x735	810	900	480	700	1170	6100
800	32"	1372	1524	-	779	820	910	480	700	1060	6000
850	34"	1473	1626	-	830	840	930	480	700	1110	7000
900	36"	1524	1727	-	874	860	950	480	700	1170	8200
1000x900	40"x36"	1670 •	1670 •	-	976x874	860	950	480	700	1290	9200
950	38"	1590 •	1590 •	-	925	880	970	480	700	1240	9500
1000	40"	1670 •	1670 •	-	976	900	907	480	700	1290	11250
1200x1000	48"x40"	1995 •	1995 •	-	1166x976	900	990	480	700	1510	12900
1050	42"	1750 •	1750 •	-	1020	950	1050	480	700	1345	13100
1200	48"	1995 •	1995 •	-	1166	1080	1200	750	700	1510	19200
1400x1200	56"x48"	2350 •	2350 •	-	1360x1166	1080	1200	750	700	1745	21900
1350	54"	2250 •	2250 •	-	1312	1200	1320	750	700	1685	26500
1400	56"	2350 •	2350 •	-	1360	1250	1370	750	700	1745	29700
1500	60"	2550 •	2550 •	-	1458	1350	1500	750	700	1855	36000

Class 300

DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	140	140	151	13	100	170	-	300	95	18
20x15	3/4"x1/2"	152	152	165	19x13	100	170	-	300	115	18
20	3/4"	152	152	165	19	115	182	-	300	115	20
25x20	1x3/4"	165	165	178	25x19	115	182	-	300	125	20
25	1"	165	165	178	25	120	185	-	300	125	23
40x25	1-1/2"x 1"	190	190	203	38x25	120	185	-	300	155	23
40	1-1/2"	190	190	203	38	125	201	-	300	155	24
50x40	2"x 1 - 1/2"	216	216	232	49x38	125	201	-	300	165	25
50	2"	216	216	232	49	135	211	-	300	165	25
80x50	3" x 2"	283	283	298	74x49	135	211	-	300	210	31
80	3"	283	283	298	74	155	231	-	450	210	55
100x80	4" x 3"	305	305	321	100x74	155	231	-	450	255	63
100	4"	305	305	321	100	175	255	-	600	255	95
150x100	6"x4"	403	457	419	150x100	175	255	-	600	320	110
150	6"	403	457	419	150	220	280	320	500	320	200
200x150	8"x 6"	502 (*)	521 (*)	518 (*)	201x150	220	265	320	500	380	240
200	8"	502 (*)	521 (*)	518 (*)	201	260	320	320	600	380	280
250x200	10"x 8"	568 (*)	559 (*)	584 (*)	252x201	260	320	320	600	445	325
250	10"	568 (*)	559 (*)	584 (*)	252	300	380	370	600	445	530
300x250	12"x10"	648 (*)	635 (*)	664 (*)	303x252	300	380	370	600	520	600
300	12"	648 (*)	635 (*)	664 (*)	303	325	410	385	700	520	750
350x300	14"x12"	762	762	778	334x303	325	410	385	700	585	850
350	14"	762	762	778	334	350	430	385	700	585	1050
400x350	16"x14"	838	838	854	385x334	350	430	385	700	650	1170
400	16"	838	838	854	385	400	480	410	700	650	1480
500x400	20"x16"	991	991	1010	487x385	400	480	410	700	775	1690
450	18"	914	914	930	436	450	530	410	700	710	1650
500	20"	991	991	1010	487	500	580	445	700	775	2250
600x500	24"x 20"	1143	1143	1165	589x487	500	580	445	700	915	2700
600	24"	1143	1143	1165	589	600	700	570	700	915	3550
750x600	30"x24"	1397	1397	1422	735x589	600	700	570	700	1090	4550
700	28"	1346	1346	1372	684	650	750	570	700	1035	5850
750	30"	1397	1397	1422	735	810	900	570	700	1090	6650
900x750	36"x30"	1727	1727	1756	874x735	810	900	570	700	1270	8250
800	32"	1524	1524	1553	779	820	910	730	700	1150	7990
850	34"	1626	1626	1654	830	840	930	730	700	1205	9150
900	36"	1727	1727	1756	874	860	950	730	700	1270	10150
1000x900	40"x36"	•1750	•1750	-	976x874	860	950	730	700	1240	12280
950	38"	•1670	•1670	-	925	880	970	730	700	1170	11750
1000	40"	•1750	•1750	-	976	900	907	730	700	1240	13850
1200x1000	48"x40"	•2090	•2090	-	1166x976	900	990	730	700	1465	18700
1050	42"	•1830	•1830	-	1020	950	1050	750	700	1290	16150
1200	48"	•2090	•2090	-	1166	1080	1200	750	700	1465	24100
1400x1200	56"x48"	•2450	•2450	-	1360x1166	1080	1200	750	700	1710	32500
1350	54"	•2350	•2350	-	1312	1200	1320	750	700	1660	34000
1400	56"	•2450	•2450	-	1360	1250	1370	750	700	1710	38150
1500	60"	•2610	•2610	-	1458	1350	1500	950	700	1810	49000
1500	60"	2550 •	2550 •	-	1458	1350	1500	750	700	1855	36000

Notes
(**) End flanges to api 6a 6b or 6bx (as applicable)
(***) Any type of alternative end flanges available on request
ØDimensions are millimeters, weights are kg
• To be agreed since not specified on relevant code

Class 600

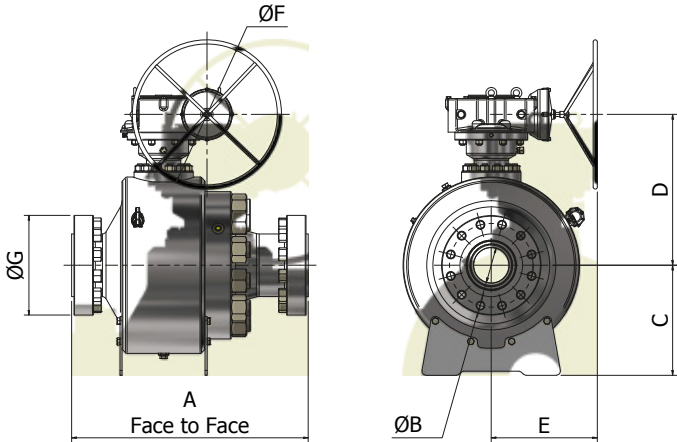
DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	165	165	163	13	100	170	-	300	95	20
20x15	3/4"x1/2"	190	190	190	19x13	100	170	-	300	115	20
20	3/4"	190	190	190	19	115	182	-	300	115	22
25x20	1x3/4"	216	216	216	25x19	115	182	-	300	125	22
25	1"	216	216	216	25	120	185	-	300	125	25
40x25	1-1/2"x 1"	241	241	241	38x25	120	185	-	300	155	25
40	1-1/2"	241	241	241	38	125	201	-	300	155	27
50x40	2"x 1 - 1/2"	292	292	295	49x38	125	201	-	300	165	27
50	2"	292	292	295	49	135	220	-	450	165	32
80x50	3" x 2"	356	356	359	74x49	135	220	-	450	210	42
80	3"	356	356	359	74	170	240	325	350	210	65
100x80	4" x 3"	432	432	435	100x74	170	240	325	350	275	85
100	4"	432	432	435	100	190	260	360	500	275	115
150x100	6"x4"	559	559	562	150x100	190	260	360	500	355	155
150	6"	559	559	562	150	230	290	375	600	355	250
200x150	8"x 6"	660	660	664	201x150	230	290	375	600	420	310
200	8"	660	660	664	201	260	350	375	600	420	450
250x200	10"x 8"	787	787	791	252x201	260	350	375	600	510	560
250	10"	787	787	791	252	310	380	385	600	510	750
300x250	12"x10"	838	838	841	303x252	310	380	385	600	560	830
300	12"	838	838	841	303	350	430	460	700	560	950
350x300	14"x12"	889	889	892	334x303	350	430	460	700	605	1170
350	14"	889	889	892	334	400	480	460	700	605	1150
400x350	16"x14"	991	991	994	385x334	400	480	460	700	685	1350
400	16"	991	991	994	385	450	540	460	700	685	1590
500x400	20"x16"	1194	1194	1200	487x385	450	540	460	700	815	2150
450	18"	1092	1092	1095	436	475	570	570	700	745	2190
500	20"	1194	1194	1200	487	500	600	570	700	815	2790
600x500	24"x 20"	1397	1397	1407	589x487	500	600	570	700	940	3350
550	22"	1295	1295	1305	538			570	700		4000
600	24"	1397	1397	1407	589	600	720	570	700	940	5000
750x600	30"x24"	1651	1651	1664	735x589	600	720	570	700	1130	6750
700	28"	1549	1549	1562	684	650	780	730	700	1075	5900
750	30"	1651	1651	1664	735	700	840	730	700	1130	6970
900x750	36"x30"	2083	2083	2099	874x735	700	840	730	700	1315	10500
800	32"	1778	1778	1794	779	720	864	730	700	1195	8600
850	34"	1930	1930	1946	830	750	900	730	700	1245	11990
900	36"	2083	2083	2099	874	750	900	730	700	1315	13900
1000x900	40"x36"	2090 •	2090 •	-	976x874	750	900	750	700	1320	17000
950	38"	1997 •	1997 •	-	925	750	900	750	700	1270	16200
1000	40"	2090 •	2090 •	-	976	850	1020	750	700	1320	19000
1200x1000	48"x40"	2480 •	2480 •	-	1166x976	850	1020	750	700	1595	25650
1050	42"	2175 •	2175 •	-	1020	900	1080	750	700	1405	21500
1200	48"	2480 •	2480 •	-	1166	1000	1200	950	700	1595	31500
1400x1200	56"x48"	2890 •	2890 •	-	1360x1166	1000	1200	950	700	1855	42480
1350	54"	2780 •	2780 •	-	1312	1100	1320	1100	700	1780	43700
1400	56"	2890 •	2890 •	-	1360	1150	1380	1100	700	1855	47800
1500	60"	3100 •	3100 •	-	1458	1200	1440	1100	700	1995	58200

Class 900

DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	245	245	245	13	100	140	-	300	120	23
20x15	3/4"x1/2"	245	245	245	19x13	100	140	-	300	130	23
20	3/4"	245	245	245	19	100	140	-	300	130	25
25x20	1x3/4"	254	254	254	25x19	100	140	-	300	150	26
25	1"	254	254	254	25	135	145	-	300	150	27
40x25	1-1/2"x 1"	305	305	305	38x25	135	145	-	300	180	28
40	1-1/2"	305	305	305	38	125	201	-	300	180	30
50x40	2"x 1 - 1/2"	368	368	371	49x38	125	201	-	300	215	35
50	2"	368	368	371	49	140	200	360	500	215	52
80x50	3" x 2"	381	381	384	74x49	140	200	360	500	240	72
80	3"	381	381	384	74	170	240	360	350	240	105
100x80	4" x 3"	457	457	460	100x74	170	240	360	350	290	125
100	4"	457	457	460	100	190	260	375	600	290	165
150x100	6"x4"	610	610	613	150x100	190	260	375	600	380	210
150	6"	610	610	613	150	230	310	385	600	380	390
200x150	8"x 6"	737	737	740	201x150	230	310	385	600	470	470
200	8"	737	737	740	201	300	360	385	700	470	525
250x200	10"x 8"	838	838	841	252x201	300	360	385	700	545	630
250	10"	838	838	841	252	325	400	385	700	545	950
300x250	12"x10"	965	965	968	303x252	325	400	385	700	610	1150
300	12"	965	965	968	303	365	450	460	700	610	1430
350x300	14"x12"	1029	1029	1038	322x303	365	450	460	700	640	3400
350	14"	1029	1029	1038	322	400	500	460	700	640	1540
400x350	16"x14"	1130	1130	1140	373x322	400	500	460	700	705	4870
400	16"	1130	1130	1140	385	450	550	460	700	705	2150
500x400	20"x16"	1321	1321	1334	373	450	550	460	700	855	2795
450	18"	1219	1219	1232	423	500	600	570	700	785	2890
500	20"	1321	1321	1334	471	550	680	570	700	855	4100
600x500	24"x 20"	1549	1549	1568	570x471	550	680	570	700	1040	5330
550	22"	-	-	-	522				700		5200
600	24"	1549	1549	1568	570	650	790	750	700	1040	6500
750x600	30"x24"	1880	1880	1902	712x570	650	790	750	700	1230	8450
700	28"	1753	1753	-	665	700	850	750	700	1170	10000
750	30"	1880	1880	1902	712	750	930	750	700	1230	11950
900x750	36"x30"	2286	2286	2315	855x712	750	930	750	700	1460	15530
800	32"	2032	2032	-	760	750	960	750	700	1315	14350
850	34"	2159	2159	-	808	750	980	750	700	1395	16900
900	36"	2286	2286	2315	855	800	1000	750	700	1460	19800
1000x900	40"x36"	2550	2550	-	956x855	800	1050	750	700	1510	23750
950	38"	2420	2420	-	904	850	1110	750	700	1460	23000
1000	40"	2550	2550	-	956	920	1200	950	700	1510	26500
1200x1000	48"x40"	3070	3070	-	1149x956	920	1200	950	700	1785	31800
1050	42"	2690	2690	-	1006	920	1250	950	700	1560	30400
1200	48"	3070	3070	-	1149	920	1300	1100	700	1785	44500
1400x1200	56"x48"										
1350	54"										
1400	56"										
1500	60"										

Class 1500

DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	245	245	245	13	100	140	-	300	120	23
20x15	3/4"x1/2"	245	245	245	19x13	100	140	-	300	130	23
20	3/4"	245	245	245	19	100	140	-	450	130	25
25x20	1x3/4"	340	340	340	25x19	100	140	-	450	150	26
25	1"	340	340	340	25	135	145	-	600	150	27
40x25	1-1/2"x 1"	305	305	305	38x25	135	145	-	600	180	28
40	1-1/2"	305	305	305	38	125	201	-	600	180	30
50x40	2"x 1 - 1/2"	368	368	371	49x38	125	201	-	600	215	35
50	2"	368	368	371	49	140	200	360	500	215	52
80x50	3" x 2"	470	470	473	74x49	140	200	360	500	265	72
80	3"	470	470	473	74	175	230	360	500	265	112
100x80	4" x 3"	546	546	549	100x74	175	230	360	500	310	132
100	4"	546	546	549	100	200	265	375	600	310	200
150x100	6"x4"	705	705	711	144x100	200	265	375	600	395	295
150	6"	705	705	711	144	270	350	460	700	395	525
200x150	8"x 6"	832	832	841	192x144	270	350	460	700	485	600
200	8"	832	832	841	192	350	400	460	700	485	875
250x200	10"x 8"	991	991	1000	239x192	350	400	460	700	585	1075
250	10"	991	991	1000	239	380	465	485	700	585	1570
300x250	12"x10"	1130	1130	1146	287x239	380	465	485	700	675	2050
300	12"	1130	1130	1146	287	420	520	500	700	675	2375
350x300	14"x12"	1257	1257	1276	315x287	420	520	500	700	750	3470
350	14"	1257	1257	1276	315	490	580	570	700	750	3000
400x350	16"x14"	1384	1384	1407	360x315	490	580	570	700	825	5600
400	16"	1384	1384	1407	360	550	650	750	700	825	4250
500x400	20"x16"	1664	1664	1686	454x360	550	650	750	700	985	5750
450	18"	1537	1537	1559	406	600	720	750	700	915	6350
500	20"	1664	1664	1686	454	650	780	750	700	985	9200
600x500	24"x 20"	1945	1945	1972	546x454	650	780	750	700	1170	12450
550	22"	1945	1945	-				750	700		
600	24"	1945	1945	1972	546	850	1050	750	700	1170	14700
750x600	30"x24"	2350	2350	2380	686x546	850	1050	750	700	TBA	19850
700	28"	2180	2180	2210	641	900	1150	950	700	TBA	23200
750	30"	2350	2350	2380	686	950	1250	950	700	TBA	28500
900x750	36"x30"	2780	2780	2810	819x686	950	1250	950	700	TBA	38500
800	32"	2490	2490	2520	730	980	1270	950	700	TBA	34500
850	34"	2650	2650	2680	775	1000	1320	950	700	TBA	41350
900	36"	2780	2780	2810	819	1100	1450	950	700	TBA	49000



Class 2500

DN	SIZE	A-RF	A-BWE	A-RTJ	Ø B	C	D	E	F	Ø G (**)(***)	WGT
15	1/2"	254	254	254	13	100	140	-	300	135	25
20x15	3/4"x1/2"	254	254	254	19x13	100	140	-	300	140	25
20	3/4"	254	254	254	19	100	140	-	450	140	25
25x20	1x3/4"	356	356	356	25x19	100	140	-	450	160	27
25	1"	356	356	356	25	135	145	-	600	160	28
40x25	1-1/2"x 1"	387	387	387	38x25	135	145	-	600	205	30
40	1-1/2"	387	387	387	38	140	250	325	350	205	50
50x40	2"x 1 - 1/2"	451	451	454	42x38	140	205	325	350	235	70
50	2"	451	451	454	42	170	220	360	500	235	95
80x50	3" x 2"	578	578	584	62x42	170	220	360	500	305	170
80	3"	578	578	584	62	200	250	375	600	305	210
100x80	4" x 3"	673	673	683	87x62	200	250	375	600	355	270
100	4"	673	673	683	87	240	290	375	600	355	380
150x100	6"x4"	914	914	927	131x87	240	290	375	600	458	550
150	6"	914	914	927	131	290	360	460	700	485	820
200x150	8"x 6"	1022	1022	1038	179x131	290	360	460	700	550	1170
200	8"	1022	1022	1038	179	380	490	485	700	550	1450
250x200	10"x 8"	1270	1270	1292	223x179	380	490	485	700	675	1780
250	10"	1270	1270	1292	223	450	590	500	700	675	2200
300x250	12"x10"	1422	1422	1445	265x223	450	590	500	700	760	2700
300	12"	1422	1422	1445	265	530	640	570	700	760	3400
350x300	14"x12"	1590•	1590•	1590•	292x265	530	640	570	700	TBA	3900
350	14"	1590•	1590•	1590•	292	620	750	570	700	TBA	4950
400x350	16"x14"	1800•	1800•	1800•	333x292	620	750	570	700	TBA	5400
400	16"	1800•	1800•	1800•	333	700	850	750	700	TBA	6950
500x400	20"x16"	2200•	2201•	2202•	419x333	700	850	750	700	TBA	9750
450	18"	2020•	2020•	2020•	374	780	950	750	700	TBA	9500
500	20"	2200•	2201•	2202•	419	870	1050	950	700	TBA	12500

API 6A

Class 2000

DN	SIZE	A	Ø B	C	D	E	F	Ø G (**)(***)	WGT
46	1-13/16"	•	46.0						
52x46	2-1/16"x 1-13/16"	•	46.0					165	
52	2-1/16"	295	52.4	135	220	-	450	165	32
65	2-9/16"	333	65.1	170	240	325	350	210	62
79	3-1/8"	359	79.4	170	240	325	350	210	65
79x81	3-1/8"x 3-3/16"	•	81.0					210	
103	4-1/16"	435	103.2	190	260	360	500	275	115
103x105	4-1/16"x4- 1/8"	•	104.8					275	
103x108	4-1/16"x4- 1/4"	•	108.0					275	
130	5-1/8"	•	130.2					330	
179x152	7-1/16"x6"	562	152.4	230	290	375	600	355	250
179x162	7-1/16"x 6-3/8"	•	161.9					355	
179x168	7-1/16"x 6-5/8"	•	168.3					355	
179	7-1/16"	•	179.4					355	
179x181	7-1/16"x 7-1/8"	•	181.0					355	
228	9"	•	228.0					420	
279	11"	•	279.0					510	
346	13- 5/8"	•	346.0					560	

Class 3000

DN	SIZE	A	Ø B	C	D	E	F	(**)(***)	Ø G WGT
46	1-13/16"	•	46						
52x46	2-1/16"x 1-13/16"	•	46					215	
52	2-1/16"	371	52.4	140	200	360	500	215	52
65	2-9/16"	422	65,1	170	240	360	350	240	100
79	3-1/8"	384	79.4	170	240	360	350	240	105
79x81	3-1/8"x 3-3/16"	•	81					240	
103	4-1/16"	460	103,2	190	260	375	600	290	165
103x105	4-1/16"x4- 1/8"	•	104,8					290	
103x108	4-1/16"x4- 1/4"	•	108					290	
130	5-1/8"	•	130,2					350	
179x152	7-1/16"x6"	613	152,4	230	310	385	600	380	390
179x162	7-1/16"x 6-3/8"	•	161,9					380	
179x168	7-1/16"x 6-5/8"	•	168,3					380	
179	7-1/16"	•	179.4					380	
179x181	7-1/16"x 7-1/8"	•	181					380	
228	9"	•	228					470	
279	11"	•	279					545	
346	13- 5/8"	•	346					610	

Notes
(**) End flanges to api 6a 6b or 6bx (as applicable)
(***) Any type of alternative end flanges available on request
⌘⌘Dimensions are millimeters, weights are kg
• To be agreed since not specified on relevant code

Class 5000

DN	SIZE	A	Ø B	C	D	E	F	Ø G (**)(***)	WGT
46	1-13/16"	•	46						
52x46	2-1/16"x 1-13/16"	•	46						
52	2-1/16"	371	52.4	140	200	360	500	215	52
65	2-9/16"	473	65,1	175	230	360	500	265	112
79	3-1/8"	473	79.4	175	230	360	500	265	112
79x81	3-1/8"x 3-3/16"	•	81					265	
103	4-1/16"	549	103,2	200	265	375	600	310	200
103x105	4-1/16"x4- 1/8"	•	104,8					310	
103x108	4-1/16"x4- 1/4"	•	108					310	
130	5-1/8"	•	130,2					375	
179x130	7-1/16"x 5-1/8"	•	130,2					395	
179x152	7-1/16"x6"	711	152,4	270	350	460	700	395	525
179x162	7-1/16"x 6-3/8"	•	161,9					395	
179x168	7-1/16"x 6-5/8"	•	168,3					395	
179	7-1/16"	•	179.4					395	
179x181	7-1/16"x 7-1/8"	•	181					395	
228	9"	•	228					485	
279	11"	•	279					585	

Class 10000

DN	SIZE	A	Ø B	C	D	E	F	Ø G (**)(***)	WGT
46	1-13/16"	•	46						
52x46	2-1/16"x 1-13/16"	•	46						
52	2-1/16"	371	52,4	140	200	360	500	215	52
65	2-9/16"	473	65,1	175	230	360	500	265	112
79	3-1/8"	473	79,4	175	230	360	500	265	112
79x81	3-1/8"x 3-3/16"	•	81					265	
103	4-1/16"	549	103,2	200	265	375	600	310	200
103x105	4-1/16"x4- 1/8"	•	104,8					310	
103x108	4-1/16"x4- 1/4"	•	108					310	
130	5-1/8"	•	130,2					375	
179x130	7-1/16"x 5-1/8"	•	130,2					395	
179x152	7-1/16"x6"	711	152,4	270	350	460	700	395	525
179x162	7-1/16"x 6-3/8"	•	161,9					395	
179x168	7-1/16"x 6-5/8"	•	168,3					395	
179	7-1/16"	•	179,4					395	
179x181	7-1/16"x 7-1/8"	•	181					395	
228	9"	•	228					485	
279	11"	•	279					585	

Class 15000

DN	SIZE	A	Ø B	C	D	E	F	Ø G (**)(***)	WGT
46	1-13/16"	•	46						
52x46	2-1/16"x 1-13/16"	•	46						
52	2-1/16"	371	52,4	140	200	360	500	215	52
65	2-9/16"	473	65,1	175	230	360	500	265	112
79	3-1/8"	473	79,4	175	230	360	500	265	112
79x81	3-1/8"x 3-3/16"	•	81					265	
103	4-1/16"	549	103,2	200	265	375	600	310	200
103x105	4-1/16"x4- 1/8"	•	104,8					310	
103x108	4-1/16"x4- 1/4"	•	108					310	
130	5-1/8"	•	130,2					375	
179x130	7-1/16"x 5-1/8"	•	130,2					395	
179x152	7-1/16"x6"	711	152,4	270	350	460	700	395	525
179x162	7-1/16"x 6-3/8"	•	161,9					395	
179x168	7-1/16"x 6-5/8"	•	168,3					395	
179	7-1/16"	•	179,4					395	
179x181	7-1/16"x 7-1/8"	•	181					395	
228	9"	•	228					485	
279	11"	•	279					585	

Body style

Wafer & lugged

Double Flanged

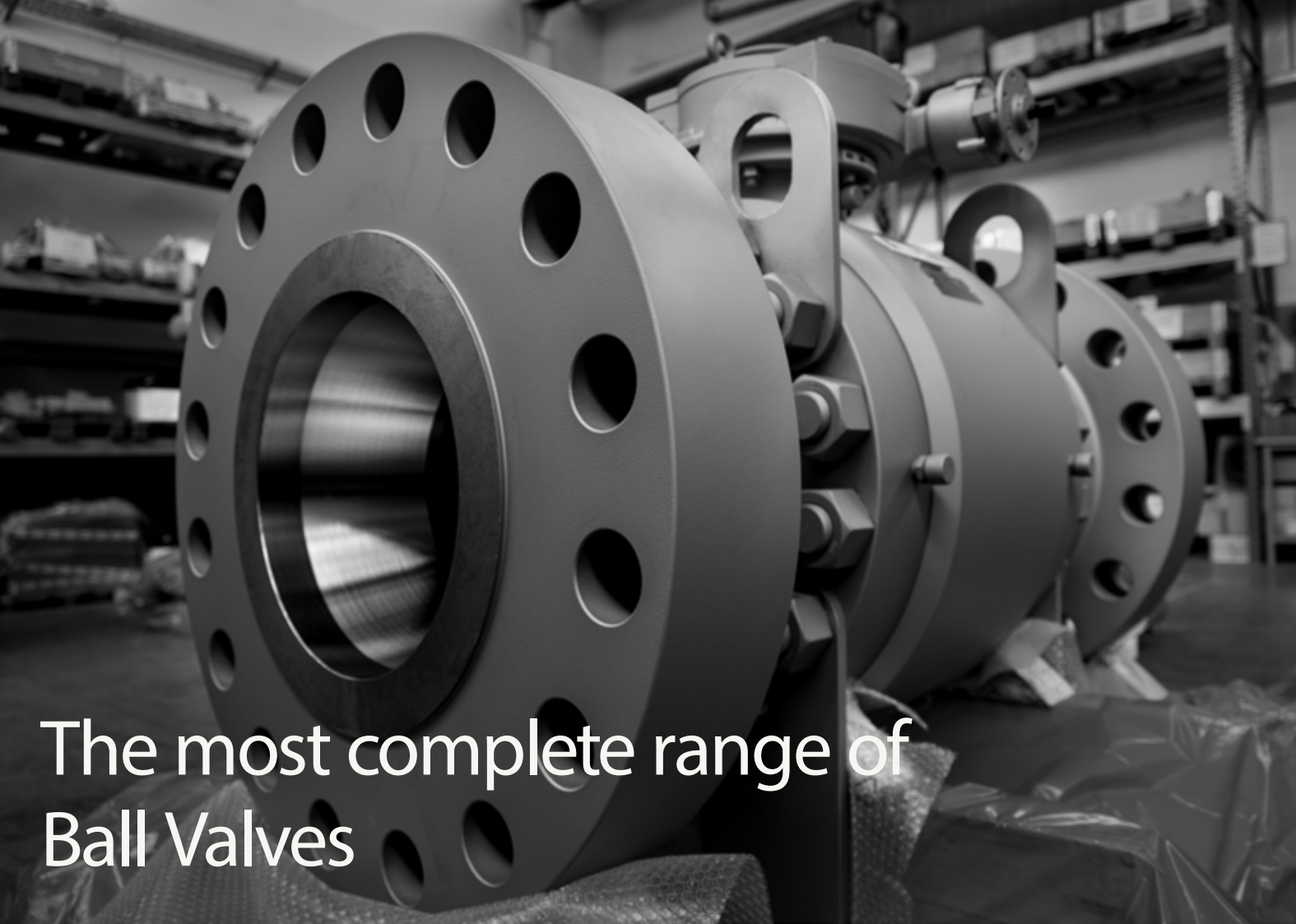
Butt Weld / Butt

Weld Top Entry

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