

CM Controls 3 Piece Trunnion Ball Valves

The CM Controls Trunnion Ball Valves are available in a variety of configurations and materials to meet specific applications.

The CM Trunnion Ball Valves are available in 2 Inch though 48 inch, ASME Class 150/300, 600, 900, 1500, and 2500, and both full and reduced port.

Standard features include:

- Emergency sealant injection (6" and larger)
- Anti-Blowout
- Lockout Protection
- Double Block and Bleed / DIB1 / DIB2
- Valve Cavity Pressure Relief
- Manufactured to API 6D
- Meets API 607 Firesafe Design
- Specifications, NACE MRO175 and ASME B16.34-latest edition standards



Manufactured in compliance with
CSA Z245.15-17 Steel Valves

ABSA CRN # 0C21698.2

SPECIFICATIONS

How To Order:

Model number identification CM Trunnion Ball Valves.

Example: E 12 R 30 7 J 1 S P V 4 3 I

The above model number represents a 12", Reduced Port, ASME Class 300, Trunnion, RTJ End Connection, LF2 Body Material, Stainless Steel Trim, PTFE Seats, Viton Seals, Flanged, Gear Operator, DIB1

12	R	30	7	J	1	S	P	V	4	3	I
Valve Size	Port Config.	Pressure Class	Valve Design	Flange End	Body Material	Trim Material	Seat Material	Seal Material	End Connection	Drive Type	Seat Type
	R Reduced	10 150	7 Trunnion	N NPT	Blank A105	E Electro Nickel Plated	P PTFE	V Viton GLT	2 FNPT	Blank Manual	Blank DBB
		30 300		R RF	1 LF2		N Nylon	N Nylon			
		60 600									
	F Full	90 900	7 Trunnion	J RTJ	2 LCC	S Stainless Steel	V Viton	F PTFE	4 Flange End	3 Gear Operator/ Handle	I DIB1
		15 1500					S Stainless Steel	K Kalrez			6 BW
					25 2500		3 Stainless Steel	M Molon	M FFKM		
		D Devlon									

Standard Configuration:

Body – LF2, **Trim** – A350 LF2 + ENP, **Seat** – Devlon, **Seal** – Viton GLT, **End Connection** – Flanged, **Drive Type** – Gear Op/Handle

CM Trunnion Repair Kits

When ordering replacement parts for the Trunnion Ball Valve, please reference the model and serial number indicated on the nameplate. For more information contact a CM Controls Sales Representative.

FLOW COEFFICIENTS

CM Series Trunnion Ball Valves

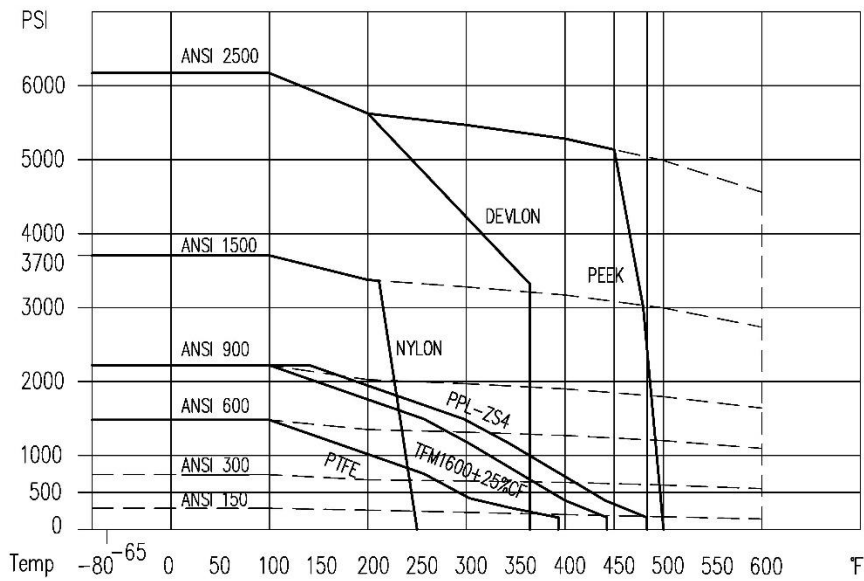
Cv is equal to volume of water @ 60°F in gallons per minute that will flow through an opening while producing a 1 PSI pressure drop across the valve.

Trunnion: Body LF2, Ball ENP, Devlon, Viton GLT

Flow Coefficient - Cv Rating						
Size (In.)	CL 150	CL 300	CL 600	CL 900	CL 1500	CL 2500
2 RF RP	105	105	100	85	85	80
2 RF FP	420	420	400	330	330	250
2 RTJ RP	105	105	100	85	85	80
2 RTJ FP	420	420	400	330	330	250
3 RF RP	200	200	200	190	180	200
3 RF FP	1200	1050	1000	910	820	500
3 RTJ RP	200	200	200	190	180	200
3 RTJ FP	1200	1050	1000	910	820	500
4 RF RP	17500	16750	14250	14205	13310	8630
4 RF FP	6900	7100	7050	7025	6670	5350
4 RTJ FP	26300	25500	22550	21430	17070	12500
6 RF RP	800	800	790	790	780	745
6 RF FP	5150	5100	4600	4380	3800	2500
8 RF RP	2150	2150	2150	2150	2150	2150
8 RF FP	9500	9400	9000	8500	7400	5300
10 RF RP	4300	4300	4300	4450	4450	4100
10 RF FP	15000	15000	14700	14500	11500	8300
12 RF FP	23000	23000	22500	21100	18000	13000
16 RF FP	37200	37200	37200	34500	27500	-
20 RF FP	59000	59000	59000	55200	47800	-

CM TRUNNION SERIES - Technical Information

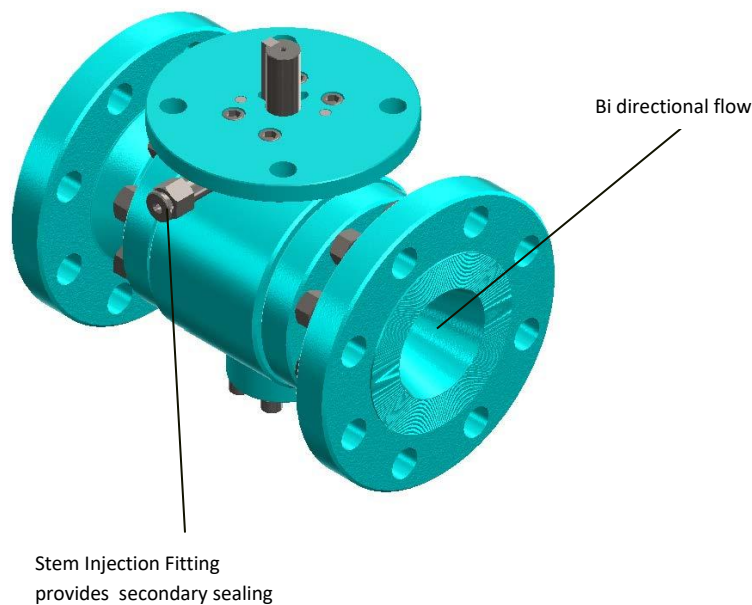
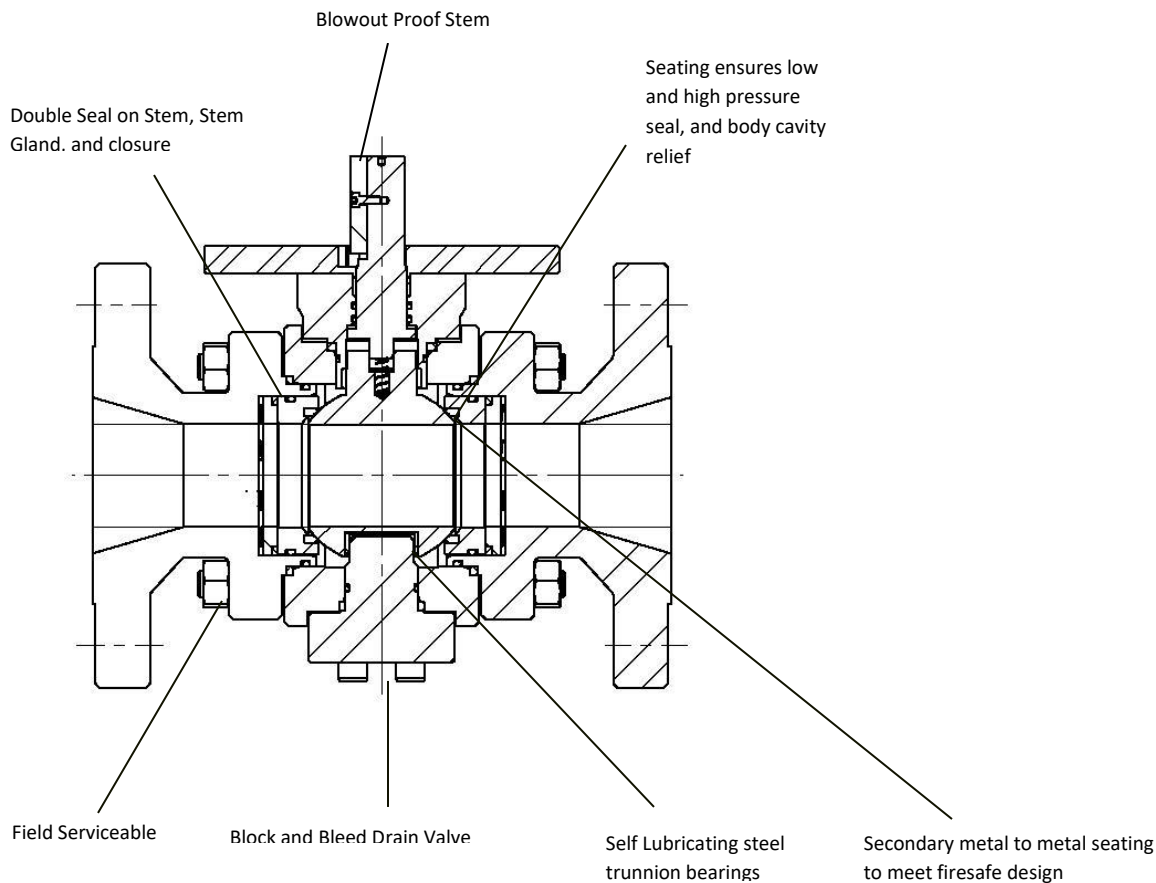
Pressure and Temperature Limits:



Standard Materials Low Temperature Limits:

Material	Low Temperature Capabilities
RPTFE	-40°C (-40F)
Devlon	-53°C (-63.4F)
Peek	-60°C (-76F)
Nylon	-46°C (-50.8F)

Trunnion Series – 2 through 48 Inch Features



FEATURES

Emergency Sealant Injection

All 6 inch and larger CM Trunnion Ball Valves come standard with a seat emergency sealant system. An emergency sealant system is available on 2 thru 4 inch valves upon request.

Blowout Proof Stems

Anti-Blowout protection is standard on all CM Trunnion Ball Valves.

Composition Seal

Low pressure sealing is achieved by the capabilities of elastomers along with the strength and durability of hard plastics in the valve seats

Metal to Metal Seating

Certain corrosive and or erosive applications demand metal to metal seating. CM utilizes various hard face materials on the ball and seat face to achieve metal to metal seating requirements.

Lockout Protection

All CM Trunnion Ball Valves come standard with lockout protection. Both lever and gear operated ball valves are able to be easily lockout for safety and servicing.

Actuation

Pneumatic, hydraulic, and electric actuators are easily adaptable to CM Trunnion Series Ball Valves. CM Controls is able to supply and assemble the correct ball valve/actuator solution best suited for any application.

Double Block and Bleed / DIB1

All CM Trunnion Ball Valves allow for block and bleed applications in the closed position only. For ball valves 6" and larger, in the closed position, the valve may be completely flushed under pressure.

Valve Cavity Pressure Relief / DBB

In the closed position a Trunnion Ball Valve will trap the process inside the body cavity. Certain conditions may cause expansion and contraction within. The CM Trunnion Ball Valve is designed to self-relieve, which will allow the process in the body to escape to the installation.

Specifications/Certifications

All CM Controls Ball Valves are manufactured in accordance of applicable standards.

API6A and API6D, API607 certifications are maintained and current.

All CM Trunnion ball valves conform to NACE MRO 175 design standards.

ABSA, The Pressure Equipment Safety Authority – CRN #21698.2

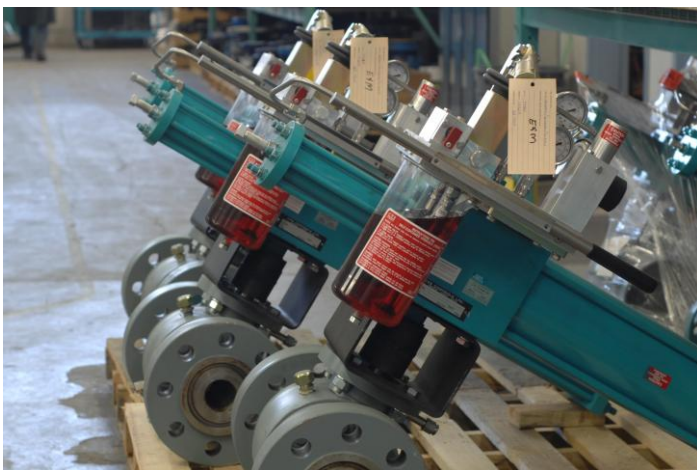
CM Controls Ltd. is a certified and registered ISO 9001-2015 manufacturing facility. Our in house quality assurance program is dedicated to continually improve the efficiency and the effectiveness of our quality management system. Our product is confirmed by a rigid quality control program which utilizes the most up to date methods of testing and inspection.

Application and Design

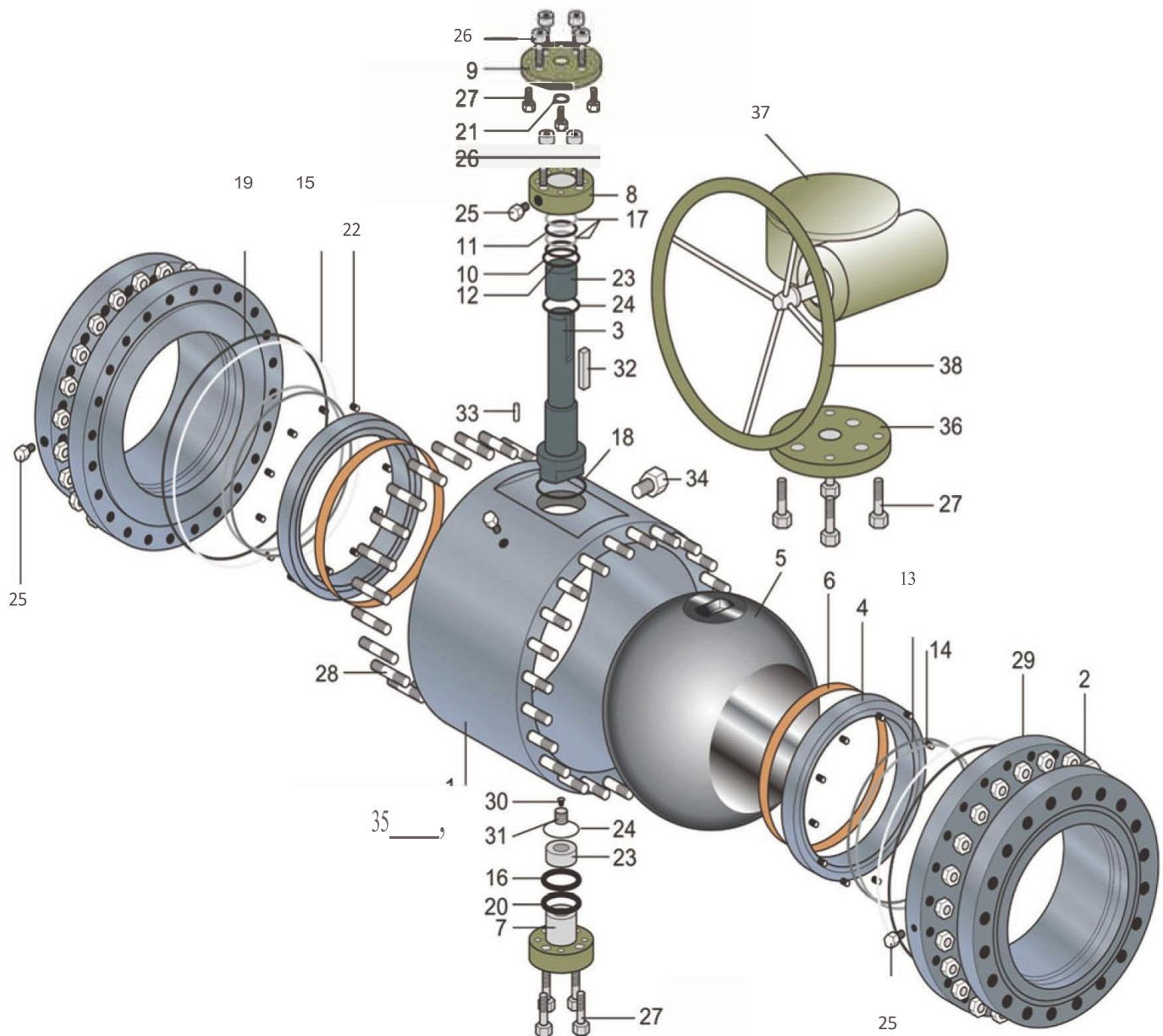
CM Controls in house engineering and application design can assist in finding the right solution best suited for your application.

Hydraulic or pneumatic actuation and Emergency Shut Down Devices (ESD) can be supplied and assembled to customer specifications. CVS Controls also has a wide variety of pressure pilots, limit switches, positioners as well as solenoid valves to complete the design package.

Contact a CM Controls sales representative for more information.



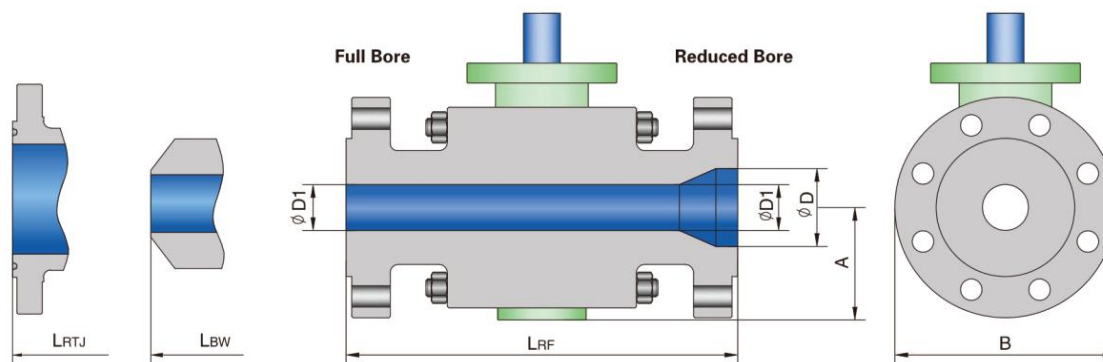
Trunnion Series – 2 through 48 Inch



Assembly/Materials

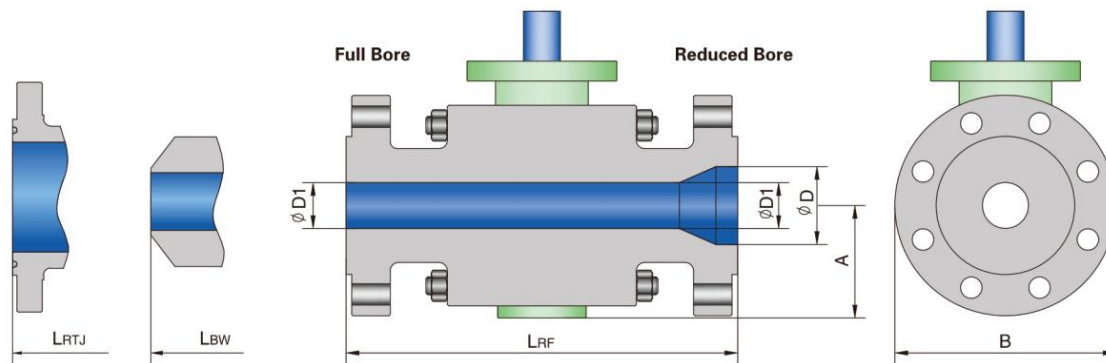
ITEM	NAME	STANDARD MATERIALS			
		CARBON STEEL	ALLOY STEEL	STAINLESS STEEL	DUPLEX STEEL
1	Body	A105/A350 LF2	A182 F11	A182 F316	A182 F51
2	Closure	A105/A350 LF2	A182 F11	A182 F316	A182 F51
3	Stem	A182 F6a/F304/F316/F51		A182 F316/F51	A182 F51/F53/F55
4	Seat Ring	A350 LF2+ENP/A105+ENP/A182F6a/F304/F316/F51		A182 F316/F51	A182 F51/F53/F55
5	Ball	A350 LF2+ENP/A105+ENP/A182F6a/F304/F316/F51		A182 F316/F51	A182 F51/F53/F55
6	Seat Insert	PTFE RPTFE NYLON DEVLON PEEK			
7	Trunnion Mounting	A105 + ENP / A182 F11 / A350 LF2		A182 F316	A182 F51
8	Stuffing Box	A105 + ENP / A350 LF2		A182 F316	A182 F51
9	Connection Plate	A105 + ENP / A350 LF2		A182 F316	A182 F51
10	Stem O-Ring	VITON / NBR / HNBR / FVMQ			
11	Stem O-Ring	VITON / NBR / HNBR / FVMQ			
12	Gland O-Ring	VITON / NBR / HNBR / FVMQ			
13	Seat O-Ring	VITON / NBR / HNBR / FVMQ			
14	Seat Subseal	VITON / NBR / HNBR / FVMQ / GRAPHITE			
15	Closure O-Ring	VITON / NBR / HNBR / FVMQ			
16	Trunnion O-Ring	VITON / NBR / HNBR / FVMQ			
17	Backup Ring	PTFE / NYLON			
18	Gland Gasket	SS + GRAPHITE / SS + PTFE			
19	Closure Gasket	SS + GRAPHITE / SS + PTFE			
20	Trunnion O-Ring	VITON / NBR / HNBR / FVMQ			
21	Stem Packing	PTFE / GRAPHITE			
22	Seat Spring	17-7PH / INCONELX-750			
23	Bearing	SS + PTFE / SS + NITRIDING			
24	Thrust Washer	PTFE / RPTFE / DEVLON			
25	Sealant Fitting	CARBON STEEL		STAINLESS STEEL	
26	Screw	L7	A193 B16	A193 B8(M)	
27	Screw	L7	A193 B16	A193 B8(M)	
28	Stud	L7	A193 B16	A193 B8(M)	
29	Nut	L7M	A194 4	A194 8(M)	
30	Grounding Ball	STAINLESS STEEL			
31	Grounding Spring	STAINLESS STEEL			
32	Stem Key	AISI 1045			
33	Positioning Pin	CARBON STEEL		STAINLESS STEEL	
34	Vent Plug	CARBON STEEL		STAINLESS STEEL	
35	Drain Plug	CARBON STEEL		STAINLESS STEEL	
36	Connection Plate	A105 / A350 LF2	A105 / A182 F11	A182 F316	A182 F51
37	Gear	DUCTILE IRON, CARBON STEEL			
38	Handwheel	DUCTILE IRON, CARBON STEEL			

CM Series Trunnion –Class 150, Full Bore – Dimensions and Weights



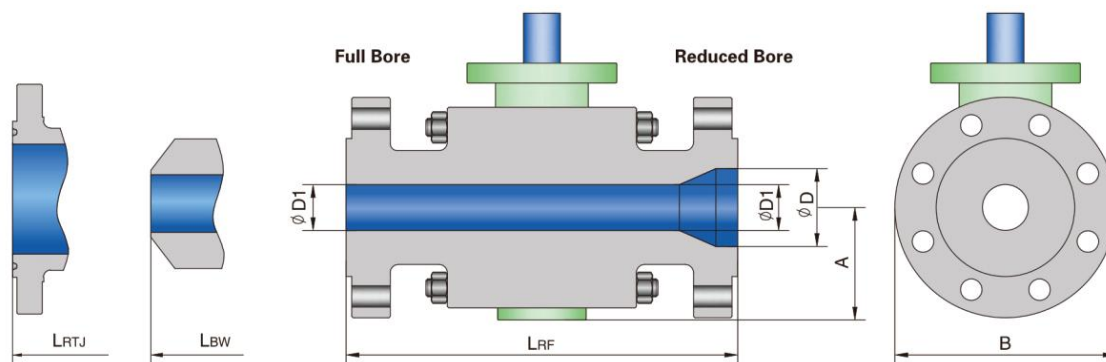
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.94	1.94	7	7.5	8.5	3.4	5.9	40	35
50	49	49	178	191	216	86	150	18	16
2.5	2.44	2.44	7.5	8	9.5	3.9	7.3	62	55
65	62	62	190	203	241	100	185	28	25
3	2.94	2.94	8	8.5	11.12	4.9	7.8	73	66
80	74	74	203	216	282	125	198	33	30
4	3.94	3.94	9	9.5	12	5.2	9	110	99
100	100	100	229	242	305	132	230	50	45
6	5.94	5.94	15.5	16	18	7.2	12.6	286	271
150	150	150	394	407	457	184	320	130	123
8	7.94	7.94	18	18.5	20.5	9	15.7	506	484
200	201	201	457	470	521	228	398	23	220
10	9.94	9.94	21	21.5	22	10.6	19.1	847	770
250	252	252	533	546	559	268	485	358	350
12	11.94	11.94	24	24.5	25	12.9	22.2	1342	1232
300	303	303	610	623	635	327	565	610	560
14	13.19	13.19	27	27.5	30	14.8	14	1760	1703
350	334	334	686	699	762	375	610	800	774
16	15.19	15.19	30	30.5	33	16	27.9	2640	2420
400	385	385	762	775	838	405	708	1200	1100
18	17.19	17.19	34	34.5	36	18.3	30.1	3388	3124
450	436	436	864	877	914	465	765	1540	1420
20	19.19	19.19	36	36.5	39	21.7	34.3	4048	3850
500	487	487	914	927	991	550	870	1840	1750
22	21.19	21.19	39	39.5	43	22.5	37	4928	4774
550	538	538	991	1004	1092	572	940	2240	2170
24	23.19	23.19	42	42.5	45	24	40.4	6820	6006
600	589	589	1067	1080	1143	610	1026	3100	2730
26	24.94	24.94	45		49	24.8	43.7	8030	7524
650	633	633	1143		1245	630	1110	3650	3420
28	26.94	26.94	49		53	27	46.3	9636	9064
700	684	684	1245		1346	685	1175	4380	4120
30	28.94	28.94	51		55	28	49.8	11814	10780
750	735	735	1295		1397	710	1265	5370	4900
32	30.69	30.69	54		60	30.3	53.1	13310	12716
800	779	779	1372		1524	770	1350	6050	5780
34	32.69	32.69	58		64	31.3	55.1	15180	14146
850	830	830	1473		1626	795	1400	5900	6430
36	34.44	34.44	60		68	35.6	58.3	18920	16720
900	874	874	1524		1727	905	1480	8600	7600
40	38.44	38.44	70.87		70.87	37	66.9	24200	21340
1000	976	976	1800		1800	940	1740	11000	9700
42	40.19	40.19	74.8		74.8	38.4	66.9	31900	24816
1050	1020	1020	1900		1900	95	1700	14500	11280
48	45.94	45.94	82.68		82.68	42.7	76.4	39600	35420
1200	1166	1166	2100		2100	1085	1940	18000	16100

CM Series Trunnion –Class 150, Reduced Bore – Dimensions and Weights



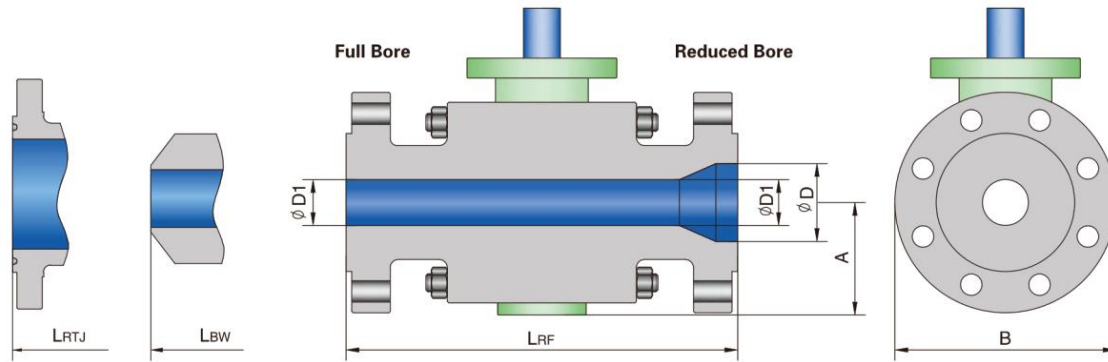
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5	1.94	1.5	7	7.5	8.5	3.3	5.9	33	26
50 x 40	49	38	178	191	216	86	150	15	12
2.5 x 2	2.44	1.94	7.5	8	9.5	3.3	7.1	49	42
65 x 50	62	49	190	203	241	86	180	22	19
3 x 2	2.94	1.94	8	8.5	11.12	3.3	7.5	55	48
80 x 50	74	49	203	216	282	86	190	25	22
4 x 3	3.94	2.94	9	9.5	12	4.9	9.1	9	81
100 x 80	100	74	229	242	305	125	230	44	37
6 x 4	5.94	3.94	15.5	16	18	5.5	11	154	147
150 x 100	150	100	394	407	457	140	280	70	67
8 x 6	7.94	5.94	18	18.5	20.5	7.2	13.6	436	414
200 x 150	201	150	457	470	521	184	345	198	188
10 x 8	9.94	7.94	21	21.5	22	9	1.6	715	671
250 x 200	252	201	533	546	559	228	405	325	305
12 x 10	11.94	9.94	24	24.5	25	10.6	19.1	913	843
300 x 250	303	252	610	623	635	268	485	415	383
14 x 10	13.19	9.94	27	27.5	30	10.6	21	1151	1104
350 x 250	334	252	686	699	762	268	535	523	502
16 x 12	15.19	11.94	30	30.5	33	12.9	23.4	1639	1551
400 x 300	385	303	762	775	838	327	595	745	705
18 x 14	17.19	13.19	34	34.5	36	14.8	25	2288	2002
450 x 350	436	385	864	877	914	375	635	1040	910
20 x 16	19.19	15.19	36	36.5	39	15.9	27.6	2574	2134
500 x 400	487	385	914	927	991	405	700	1170	970
24 x 20	23.19	19.19	42	42.5	45	21.7	34.3	4213	4026
600 x 400	589	487	1067	1080	1143	550	870	1915	1830
30 x 24	28.94	23.19	51		55	24	40.4	8052	7744
750 x 600	735	589	1295		1397	610	1026	3660	3520
36 x 30	34.44	28.94	60		68	28	49.8	13420	12760
900 x 750	874	735	1524		1727	710	1265	6100	5800

CM Series Trunnion –Class 300, Full Bore – Dimensions and Weights



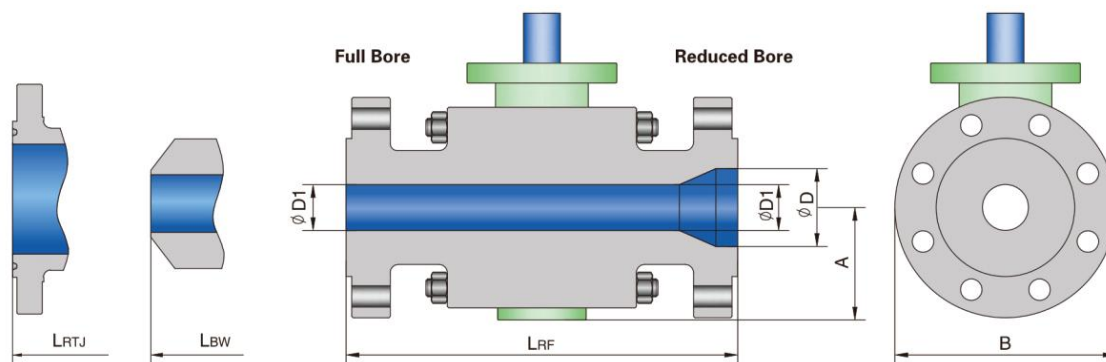
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.94	1.94	8.5	9.12	8.5	3.6	6.5	62	51
50	49	49	216	232	216	91	165	28	23
2.5	2.44	2.44	9.5	10.12	9.5	3.7	7.3	99	92
65	62	62	241	257	241	95	185	45	42
3	2.94	2.94	11.12	11.74	11.12	5	8.3	123	92
80	74	74	282	298	282	126	210	56	42
4	3.94	3.94	12	12.62	12	5.2	10	172	132
100	100	100	305	321	305	132	255	78	60
6	5.94	5.94	15.88	16.5	18	7.4	13	396	308
150	150	150	403	419	457	189	330	180	140
8	7.94	7.94	19.75	20.37	20.5	9	15.7	647	539
200	201	201	502	518	521	228	398	294	245
10	9.94	9.94	22.38	23	22	10.6	19.1	869	726
250	252	252	568	584	559	268	485	95	330
12	11.94	11.94	25.5	26.12	25	12.9	23.2	1463	1232
300	303	303	648	664	635	327	590	665	56
14	13.19	13.19	30	30.62	30	15.2	24.9	2178	1892
350	334	334	762	778	762	385	630	990	860
16	15.19	15.19	33	33.62	33	15.9	28.2	2829	227
400	385	385	838	854	838	405	716	1286	1035
18	17.19	17.19	36	36.62	36	18.9	31.5	3520	3080
450	436	436	914	930	914	480	800	1600	1400
20	19.19	19.19	29	39.75	39	21.7	34.3	4268	3872
500	487	487	991	1010	991	550	870	1940	1760
22	21.19	21.19	43	43.88	43	22.6	37.8	5390	4840
550	538	538	1092	1114	1092	575	960	2450	2200
24	23.19	13.19	45	45.88	45	24	40.6	6622	6336
600	589	589	1143	1165	1143	610	1030	3010	2880
26	24.94	24.94	49	50	49	24.8	43.1	8404	7810
650	633	633	1245	1270	1245	630	1095	3820	3550
28	26.94	26.94	53	54	53	27.6	46.9	10604	9372
700	684	684	1346	1371	1346	700	1190	4820	4260
30	28.94	28.94	55	56	55	28	49.8	12320	11330
750	735	735	1397	1422	1397	710	1265	5600	5150
32	30.69	30.69	60	61.12	60	30.7	53.1	14190	12430
800	779	779	1524	1552	1524	780	1350	6450	5650
34	32.69	32.69	64	65.12	64	31.9	47.8	15510	14190
850	830	830	1626	1654	1626	810	1215	7050	6450
36	34.44	34.44	68	69.12	68	35.6	58.3	19800	18480
900	874	874	1727	1755	1727	905	1480	9000	8400
40	38.44	38.44	76.77		76.77	37	65	24200	22660
1000	976	976	1950		1950	940	1650	11000	10300
42	40.19	40.19	82.68		82.68	38.2	66.9	31900	29920
1050	1020	1020	210		2100	970	1700	14500	13600
48	45.94	45.94	85.43		85.43	44.1	77.4	39600	37620
1200	1166	1166	2170		2170	1120	1965	18000	17100

CM Series Trunnion –Class 300, Reduced Bore – Dimensions and Weights



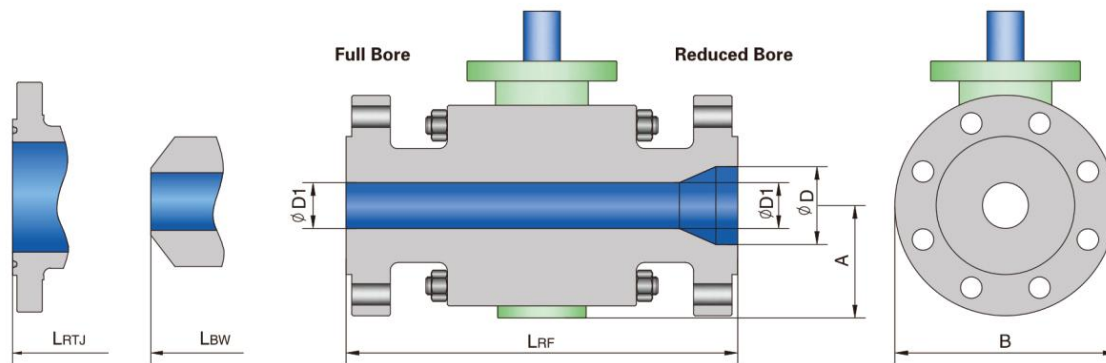
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5 50 x 40	1.94 49	1.5 38	8.5 216	3.5 90	8.5 216	3.5 90	6.5 165	40 18	26 12
2.5 x 2 65 x 50	2.44 62	1.94 49	9.5 241	3.6 91	9.5 241	3.6 91	6.5 165	57 26	48 22
3 x 2 80 x 50	2.94 74	1.94 49	11.12 282	3.6 91	11.12 282	3.6 91	8.3 210	70 32	51 23
4 x 3 100 x 80	3.94 100	2.94 74	12 305	5 128	12 305	5 128	10 255	119 54	90 41
6 x 4 150 x 100	5.94 150	3.94 100	15.88 403	6.3 160	18 457	6.3 160	12.6 32	220 100	165 75
8 x 6 200 x 150	7.94 201	5.94 150	19.75 502	7.5 190	20.5 521	7.5 190	15 380	495 225	451 205
10 x 8 250 x 200	9.94 252	7.94 201	22.38 568	9 228	22 559	9 228	17.5 445	803 365	748 340
12 x 10 300 x 250	11.94 303	9.94 252	25.5 648	10.6 268	25 635	10.6 268	20.5 520	1320 600	1239 563
14 x 10 350 x 250	13.19 334	9.94 252	30 762	10.6 268	30 762	10.6 268	23 585	1430 650	1327 603
16 x 12 400 x 300	15.19 385	11.94 303	33 838	12.9 327	33 838	12.9 327	25.6 650	1782 810	1586 721
18 x 14 450 x 350	17.19 436	13.19 385	36 915	15.2 385	36 914	15.2 385	28 710	3300 1500	312 1410
20 x 16 500 x 400	19.19 487	15.19 385	39 991	16 405	39 991	16 405	30.5 775	4290 1950	3630 1650
24 x 20 600 x 400	23.19 589	19.19 487	45 1143	21.7 550	45 1143	21.7 550	36 915	5500 2500	4950 2250
30 x 24 750 x 600	28.94 735	23.19 589	55 1397	24 610	55 1397	24 610	42.9 1090	9350 4250	8492 3860
36 x 30 900 x 750	34.44 874	28.94 735	68 1727	28 710	68 1727	28 710	50 1270	13900 6350	12892 5860

CM Series Trunnion –Class 600, Full Bore – Dimensions and Weights



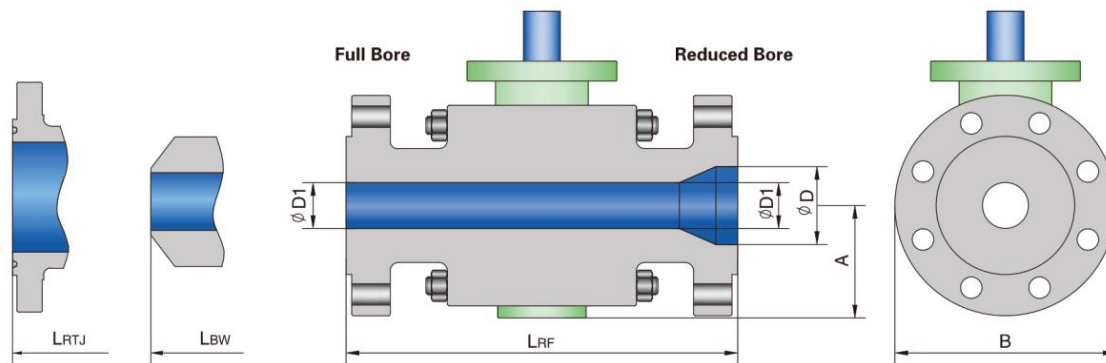
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.94	1.94	11.5	11.62	11.5	3.7	6.5	73	62
50	49	49	292	295	292	95	165	33	28
2.5	2.44	2.44	13	13.12	13	3.9	7.7	119	106
65	62	62	330	333	330	100	195	54	48
3	2.94	2.94	14	14.12	14	5	8.3	150	110
80	74	74	354	359	356	128	210	68	50
4	3.94	3.94	17	17.12	17	5.8	11.6	242	209
100	100	100	432	435	432	148	295	110	95
6	5.94	5.94	22	22.12	22	7.7	14	528	444
150	150	150	559	562	559	195	355	240	202
8	7.94	7.94	26	26.12	26	9.6	16.5	796	638
200	201	201	660	663	660	245	420	362	290
10	9.94	9.94	31	31.12	31	11.4	20	1166	898
250	252	252	787	790	787	290	510	530	408
12	11.94	11.94	33	33.12	33	14.2	22.8	1727	1430
300	303	303	838	841	838	360	580	785	650
14	13.19	13.19	35	35.12	35	15.6	25	2376	2002
350	334	334	889	891	889	395	635	1080	910
16	15.19	15.19	39	39.12	39	16.7	28.3	3564	3080
400	385	385	991	994	991	425	720	1620	1400
18	17.19	17.19	43	43.12	43	19.3	32.3	3982	3630
450	436	436	1092	4095	1092	490	820	1810	1650
20	19.19	19.19	47	47.25	47	22.6	36.2	5522	4814
500	487	487	1194	1200	1194	575	920	2500	2190
22	21.19	21.19	51	51.38	51	23.2	37.8	6270	5544
550	538	538	1295	1305	1295	590	960	2850	2520
24	23.19	13.19	55	55.38	55	23.8	41	8492	7612
600	589	589	1397	1407	1397	605	1043	3860	3460
26	24.94	24.94	57	57.5	57	25.6	43.9	9504	8470
650	633	633	1448	1460	1448	650	1115	4320	3850
28	26.94	26.94	61	61.5	61	26.8	48	12848	11660
700	684	684	1549	1562	1549	680	1220	5840	5300
30	28.94	28.94	65	65.5	65	29.9	51.8	15686	14080
750	735	735	1651	1664	1651	760	1315	7130	6400
32	30.69	30.69	70	70.62	70	31.1	55.5	20240	18260
800	779	779	1778	1794	1778	790	1410	9200	8300
34	32.69	32.69	76	76.62	76	33.1	56.3	22660	20900
850	830	830	1930	1946	1930	840	1480	10300	9500
36	34.44	34.44	82	82.62	82	35	60.9	25740	23100
900	874	874	2083	2099	2083	890	1546	11700	10500
40	38.44	38.44	80.71		80.71	37.8	65.6	31460	29172
1000	976	976	2050		2050	960	1665	14300	13260
42	40.19	40.19	82.68		82.68	40.9	72.8	36080	33660
1050	1020	1020	2100		2100	1040	1850	16400	15300
48	45.94	45.94	94.49		94.49	46.9	78.3	49940	46200
1200	1166	1166	2400		2400	1190	1990	22700	21000

CM Series Trunnion –Class 600, Reduced Bore – Dimensions and Weights



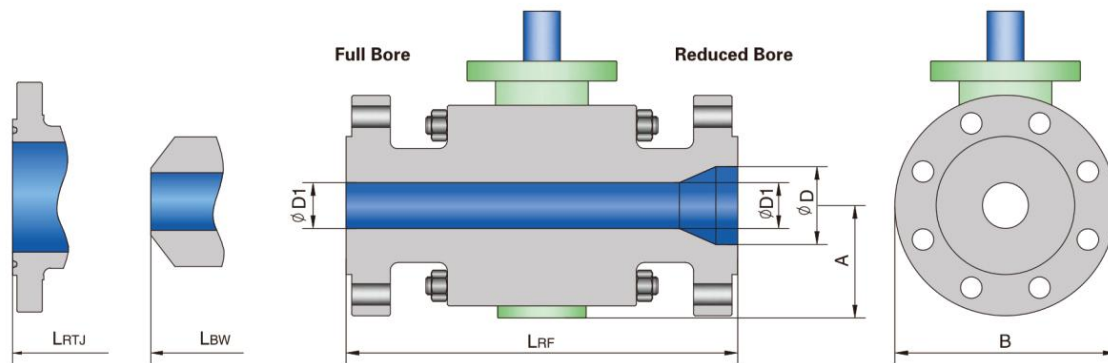
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5 50 x 40	1.94 49	1.5 38	11.5 292	11.62 295	11.5 292	3.7 94	6.5 165	48 22	35 16
2.5 x 2 65 x 50	2.44 62	1.94 49	13 330	13.12 333	13 330	3.7 95	7.5 190	64 29	55 25
3 x 2 80 x 50	2.94 74	1.94 49	14 356	14.12 359	14 356	3.7 95	8.3 210	81 37	55 25
4 x 3 100 x 80	3.94 100	2.94 74	17 432	17.12 435	17 432	5.4 138	10.8 275	163 74	110 50
6 x 4 150 x 100	5.94 150	3.94 100	22 559	22.12 562	22 559	7 178	14 355	330 150	187 85
8 x 6 200 x 150	7.94 201	5.94 150	26 660	26.12 663	26 660	8.3 210	16.5 420	638 290	528 240
10 x 8 250 x 200	9.94 252	7.94 201	31 787	31.12 790	31 787	9.6 245	20 510	1067 485	880 400
12 x 10 300 x 250	11.94 303	9.94 252	33 838	33.12 841	33 838	11.4 290	22 560	1463 665	1100 500
14 x 10 350 x 250	13.19 334	9.94 252	35 889	35.12 892	35 889	11.4 290	23.8 605	2266 1030	2002 910
16 x 12 400 x 300	15.19 385	11.94 303	39 991	39.12 994	39 991	14.1 360	27 685	2530 1150	2200 1000
18 x 14 450 x 350	17.19 436	13.19 385	43 1092	43.12 1095	43 1092	15.6 395	29.3 745	3630 1650	2860 1300
20 x 16 500 x 400	19.19 487	15.19 385	47 1194	47.25 1200	47 1194	16.7 425	32 815	5632 2560	4620 2100
24 x 20 600 x 400	23.19 589	19.19 487	55 1397	55.38 1407	55 1397	22.6 575	37 940	6710 3050	5720 2600
30 x 24 750 x 600	28.94 735	23.19 589	65 1651	65.5 1664	65 1651	23.8 605	42.9 1090	10780 4900	9240 4200
36 x 30 900 x 750	34.44 874	28.94 735	82 2083	82.62 2099	82 2083	35 890	60.9 1546	20020 9100	17600 8000

CM Series Trunnion –Class 900, Full Bore – Dimensions and Weights



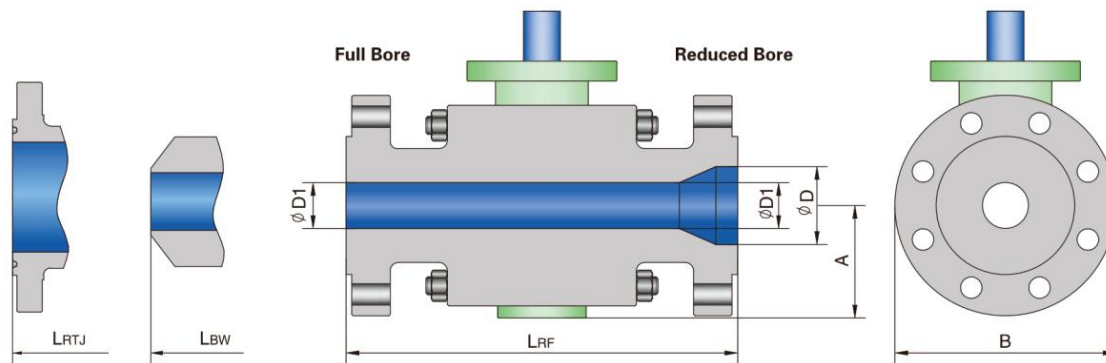
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.94	1.94	14.5	14.62	14.5	4.3	8.5	128	75
50	49	49	368	371	3668	108	215	58	34
2.5	2.44	2.44	16.5	16.62	16.5	4.7	9.4	165	123
65	62	62	419	422	419	120	240	75	56
3	2.94	2.94	15	15.12	15	4.8	9.6	183	152
80	74	74	381	384	381	123	245	83	69
4	3.94	3.94	18	18.12	18	5.7	11.4	356	319
100	100	100	457	460	457	145	290	162	145
6	5.94	5.94	24	24.12	24	7.3	15	715	517
150	150	150	610	613	610	185	380	325	235
8	7.94	7.94	29	29.12	29	7.7	18.5	1047	772
200	201	201	737	740	737	295	470	476	351
10	9.94	9.94	33	33.12	33	13.8	21.5	1969	1650
250	252	252	838	841	838	350	545	895	750
12	11.94	11.94	38	38.12	38	14.6	24	2519	2189
300	303	303	965	968	965	370	610	1145	995
14	12.69	12.69	40.5	40.88	40.5	16.9	26.2	3278	2519
350	322	322	1029	1039	1029	430	665	1490	1145
16	14.69	14.69	44.5	44.88	44.5	17.7	29.5	4092	3190
400	373	373	1130	1039	1130	450	750	1860	1450
18	16.69	16.69	48	48.5	48	19.3	32.3	5841	4550
450	423	423	1219	1232	1219	490	820	2655	2070
20	18.56	18.56	52	52.5	52	23.2	36.5	6952	5357
500	471	471	1321	1334	1321	590	928	3160	2435
24	22.44	22.44	61	61.75	61	24.8	41.7	11220	8360
600	570	570	1549	1568	1549	630	1060	51000	3800
26	24.31	24.31	65	65.87	65	26.8	45.7	14850	11968
650	617	617	1651	1672	1651	680	1160	6750	5440
30	28.06	28.06	74	74.87	74	31.5	53.5	25300	21340
750	712	712	1880	1901	1880	800	1360	11500	9700

CM Series Trunnion –Class 900, Reduced Bore – Dimensions and Weights



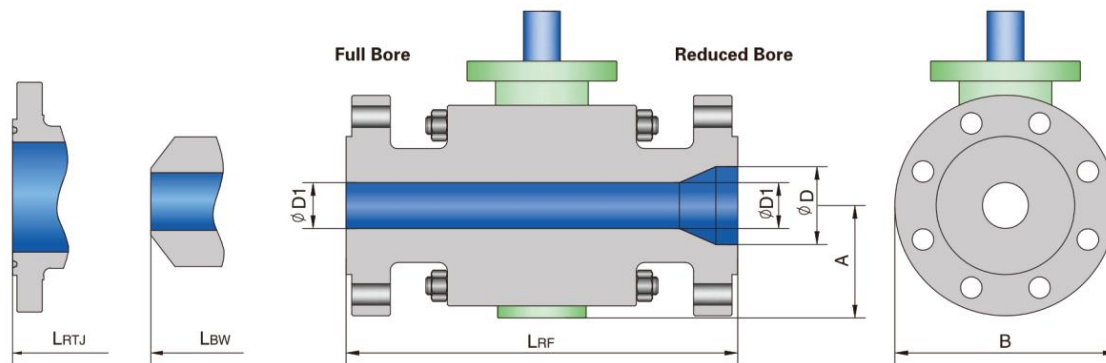
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5 50 x 40	1.94 49	1.5 38	14.5 368	14.62 371	14.5 368	4.3 108	8.5 215	99 45	55 25
2.5 x 2 65 x 50	2.44 62	1.94 49	16.5 419	16.62 422	16.5 419	4.3 108	9.6 245	123 56	81 37
3 x 2 80 x 50	2.94 74	1.94 49	15 381	15.12 384	15 381	4.3 108	9.4 240	143 65	110 50
4 x 3 100 x 80	3.94 100	2.94 74	18 457	18.12 460	18 457	5.7 145	11.4 290	238 108	172 78
6 x 4 150 x 100	5.94 150	3.94 100	24 610	24.12 613	24 610	7.5 190	15 380	462 210	330 150
8 x 6 200 x 150	7.94 201	5.94 150	29 737	29.12 740	29 737	9.3 235	18.5 470	715 325	528 240
10 x 8 250 x 200	9.94 252	7.94 201	33 838	33.12 841	33 838	11.3 295	21.5 545	902 410	638 290
12 x 10 300 x 250	11.94 303	9.94 252	38 965	38.12 968	38 965	13 330	24 610	2420 1100	1936 880
14 x 10 350 x 250	12.69 322	9.94 252	40.5 1029	40.88 1039	40.5 1029	13 33	25.2 640	3190 1450	2816 1280
16 x 12 400 x 300	14.69 373	11.94 303	44.5 1130	44.88 1140	44.5 1130	14.6 370	27.7 705	3608 1640	2970 1350
18 x 14 450 x 350	16.69 423	12.69 322	48 1219	48.5 1232	48 1219	16.9 430	30.9 785	5280 2400	4290 1950
20 x 16 500 x 400	18.56 471	14.69 373	52 1321	52.5 1334	52 1321	17.7 450	33.7 855	6292 2860	4730 2150
24 x 20 600 x 400	22.44 570	18.56 471	61 1549	61.75 1568	61 1549	23.2 590	40.9 1040	9240 4200	6336 2880
30 x 24 750 x 600	28.06 712	22.44 570	74 1880	74.87 1901	74 1880	24.8 630	48.4 1230	15620 7100	12760 5800

CM Series Trunnion –Class 1500, Full Bore – Dimensions and Weights



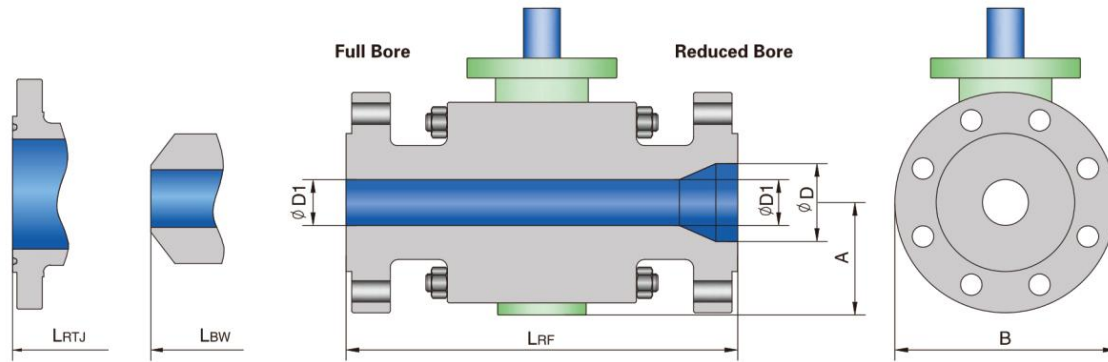
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.94	1.94	14.5	14.62	14.5	4.3	8.5	128	75
50	49	49	368	371	3668	108	215	58	34
2.5	2.44	2.44	16.5	16.62	16.5	4.8	9.6	174	136
65	62	62	419	422	419	123	245	79	62
3	2.94	2.94	18.5	18.62	18.5	5.5	10.4	216	154
80	74	74	470	473	470	140	265	98	70
4	3.94	3.94	21.5	21.62	21.5	6.5	12.2	365	317
100	100	100	546	549	546	165	310	166	144
6	5.69	5.69	27.75	28	27.75	9.6	16.3	1030	834
150	144	144	705	711	705	219	415	468	379
8	7.56	7.56	32.75	33.13	32.75	11.6	19.1	1478	964
200	192	192	832	842	832	295	485	672	438
10	9.44	9.44	39	39.38	39	14.2	23.6	2222	1716
250	239	239	991	1001	991	36	600	1010	780
12	11.31	11.31	44.5	45.12	44.5	15.7	27.2	3388	242
300	287	287	1130	1146	1130	400	692	1540	1100
14	12.44	12.44	49.5	50.25	49.5	19.3	30.7	6820	5280
350	315	315	1257	1276	1257	490	780	3100	2400
16	14.19	14.19	54.5	55.38	54.5	24.8	35.5	9900	6072
400	360	360	1384	1406	1384	629	900	4500	2760
18	16	16	60.5	61.38	60.5	25.2	39.4	13420	10670
450	406	406	1537	1559	1537	640	1000	6100	4850
20	17.88	17.88	65.5	66.38	65.5	25.6	41.9	16720	12540
500	454	454	1664	1686	1664	650	1065	7600	5700
24	21.5	21.5	76.5	77.62	76.5	29.9	50.2	21120	15840
600	546	546	1943	1971	1943	760	1275	9600	7200

CM Series Trunnion –Class 1500, Reduced Bore – Dimensions and Weights



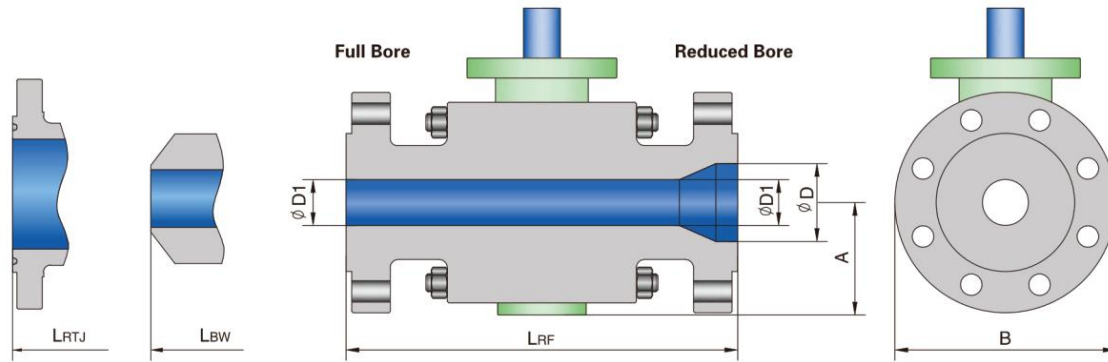
Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5	1.94	1.5	14.5	14.62	14.5	4.3	8.5	95	48
50 x 40	49	38	368	371	368	108	215	43	22
2.5 x 2	2.44	1.94	16.5	16.62	16.5	4.3	9.6	141	92
65 x 50	62	49	419	422	419	108	245	64	42
3 x 2	2.94	1.94	18.5	18.62	18.5	4.3	10.6	165	106
80 x 50	74	49	470	473	470	108	265	75	48
4 x 3	3.94	2.94	21.5	21.62	21.5	6.1	12.2	286	167
100 x 80	100	74	546	549	546	155	310	130	76
6 x 4	5.69	3.94	27.75	28	27.75	7.8	15.6	605	374
150 x 100	144	100	705	711	705	198	395	275	170
8 x 6	7.56	5.69	32.75	33.13	32.75	9.6	19.1	1320	924
200 x 150	192	144	832	842	832	243	485	600	420
10 x 8	9.44	7.56	39	39.38	39	11.6	23	1848	1078
250 x 200	239	192	991	1001	991	295	585	840	490
12 x 10	11.31	9.44	44.5	45.12	44.5	14.2	26.6	2750	1760
300 x 250	287	239	113	1146	1130	360	675	1250	800
14 x 10	12.44	9.44	49.5	50.25	49.5	14.2	29.5	3630	2970
350 x 250	315	239	1257	1276	1257	360	750	1650	1350
16 x 12	14.19	11.31	54.5	55.38	54.5	15.7	32.5	4517	3520
400 x 300	360	287	1384	1406	1384	400	825	2053	1600
18 x 14	16	12.44	60.5	61.38	60.5	18.7	36	10956	8690
450 x 350	406	315	1537	1559	1537	475	915	4980	3950
20 x 16	17.88	14.19	65.5	66.38	65.5	24.8	38.8	12188	9350
500 x 400	454	360	1664	1686	1664	629	985	5540	4250
24 x 20	21.5	17.88	76.5	77.62	76.5	25.6	46.1	24200	18920
600 x 400	546	454	1943	1971	1943	650	1170	11000	8600

CM Series Trunnion –Class 2500, Full Bore – Dimensions and Weights



Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2	1.69	1.69	17.75	17.87	17.75	5.5	9.3	260	154
50	42	42	451	454	451	139	235	118	70
2.5	20.6	20.6	20	20.25	20	5.2	10.4	378	275
65	52	52	508	514	508	133	265	172	125
3	2.44	2.44	22.75	23	22.75	6.3	12	484	363
80	62	62	578	584	578	160	305	22	165
4	3.44	3.44	26.5	26.88	26.5	7.4	14	803	715
100	87	87	673	683	673	188	355	365	325
6	5.19	5.19	36	36.5	36	10.8	19.1	1650	1375
150	131	131	914	927	914	275	485	750	625
8	7.06	7.06	40.25	40.87	40.25	15	24.2	4620	3608
200	179	179	1022	1038	1022	380	615	2100	1640
10	8.81	8.81	50	50.88	50	18.9	31.9	6600	5588
250	223	223	1270	1292	1270	480	810	300	2540
12	10.44	10.44	56	56.88	56	19.7	33.9	9240	7700
300	265	265	1422	1444	1422	500	860	4200	3500

CM Series Trunnion –Class 2500, Reduced Bore – Dimensions and Weights



Size In/mm	ØD	ØD1	L			A	B	Weight	
			RF	RTJ	BW			RF/RTJ (lb/kg)	BW (lb/kg)
2 x 2.5	1.69	1.5	17.75	17.87	17.75	4.6	9.3	189	97
50 x 40	42	38	451	454	451	118	235	86	44
2.5 x 2	20.6	1.69	20	20.25	20	5.5	10.4	297	242
65 x 50	52	42	508	514	508	139	264	135	110
3 x 2	2.44	1.69	22.75	23	22.75	5.5	12	341	220
80 x 50	62	42	578	584	578	139	305	155	100
4 x 3	3.44	2.44	26.5	26.88	26.5	7	14	627	374
100 x 80	87	62	673	683	673	178	355	285	170
6 x 4	5.19	3.44	36	36.5	36	9.6	19.1	1254	737
150 x 100	131	87	914	927	914	243	485	570	355
8 x 6	7.06	5.19	40.25	40.87	40.25	10.8	21.7	2332	1914
200 x 150	179	131	1022	1038	1022	275	55	1060	870
10 x 8	8.81	7.06	50	50.88	50	15	26.6	5720	4862
250 x 200	223	179	1270	1292	1270	380	675	2600	2210
12 x 10	10.44	8.81	56	56.88	56	18.9	31.9	8074	6864
300 x 250	265	223	1422	1444	1422	480	810	3670	3120

NOTES:

NOTES:

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