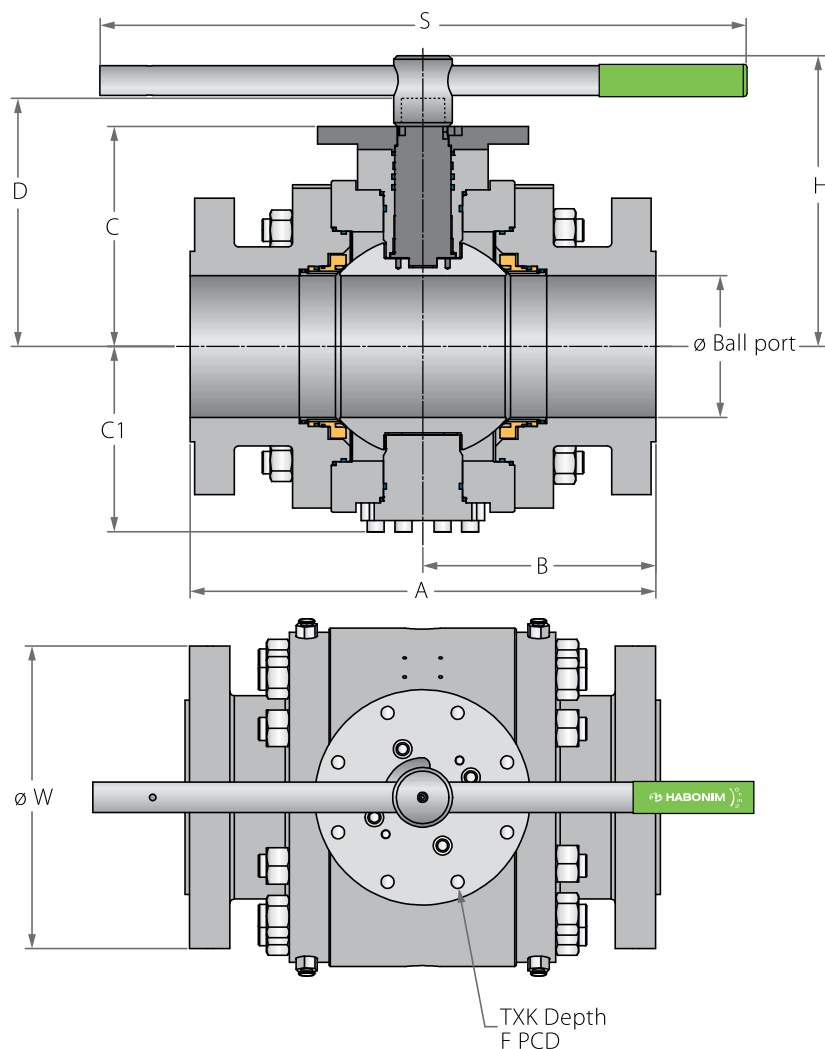
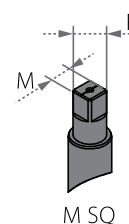


Trunnion Mounted Ball 3 Piece

Valve dimensions



Preparation for actuation

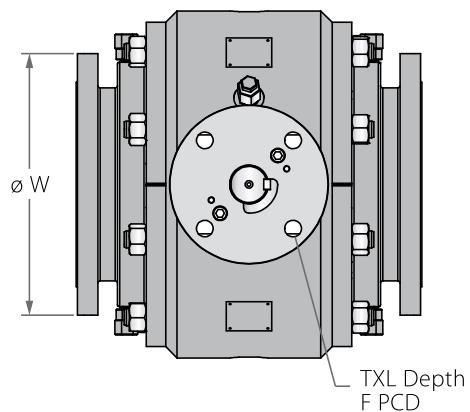
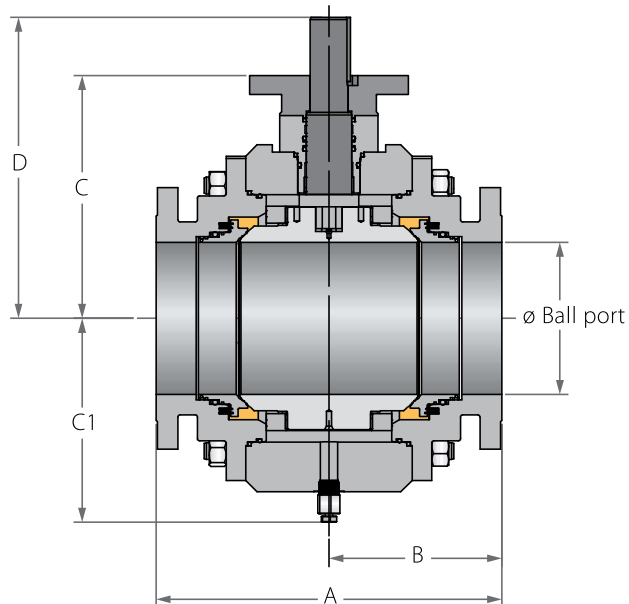


Std. port	Unit	Ball port	A		B		C		C1		D		W		Msq	Psq	H	S	F		TxL	Weight kg/lb		Kv / Cv	
			600	900	600	900	600	900	600	900	600	900	600	900								600	900	600	900
DN50	mm	49.00	292.00	368.00	131.00	184.00	144.00	148.50	119.00	263.00	168.50	182.50	165.00	215.00	22.00	28.00	219.50	401.00	(F12)	125.00	13X15	49	72	329	294
2"	inch	1.93	11.50	14.49	5.16	7.24	5.67	5.85	4.69	10.35	6.63	7.19	6.50	8.46	0.87	1.10	8.64	15.79		4.92	(4 holes)	108	159	380	340
DN80	mm	74.00	356.00	381.00	161.00	190.50	191.00	214.00	160.00	152.70	215.00	237.50	210.00	240.00	22.00	28.00	266.00	610.00	(F14)	140.00	22x24	103	146	874	822
3"	inch	2.91	14.02	15.00	6.34	7.50	7.52	8.43	6.30	6.01	8.46	9.35	8.27	9.45	0.87	1.10	10.47	24.02		5.51	(4 holes)	227	322	1010	950
DN100	mm	100.00	432.00	457.00	216.00	228.50	217.00	193.00	184.00	184.00	246.50	259.00	275.00	290.00	27.00	36.00	316.50	916.00	(F16)	165.00	22x25	166	232	1557	1471
4"	inch	3.94	17.01	17.99	8.50	9.00	8.54	7.60	7.24	7.24	9.70	10.20	10.83	11.42	1.06	1.42	12.46	36.06		6.50	(4 holes)	366	511	1800	1700
DN150	mm	150.00	559.00	610.00	278.00	305.00	282.50	368.00	214.50	224.00	320.50	463.00	355.00	380.00	36.00	48.20	385.00	916.00	(F16)	165.00	22x25	342	495	3893	3823
6"	inch	5.91	22.01	24.02	10.94	12.01	11.12	14.49	8.44	8.82	12.62	18.23	13.98	14.96	1.42	1.90	15.16	36.06		6.50	(8 holes)	754	1091	4500	4420

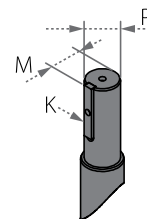


Trunnion Mounted Ball 3 Piece

Valve dimensions



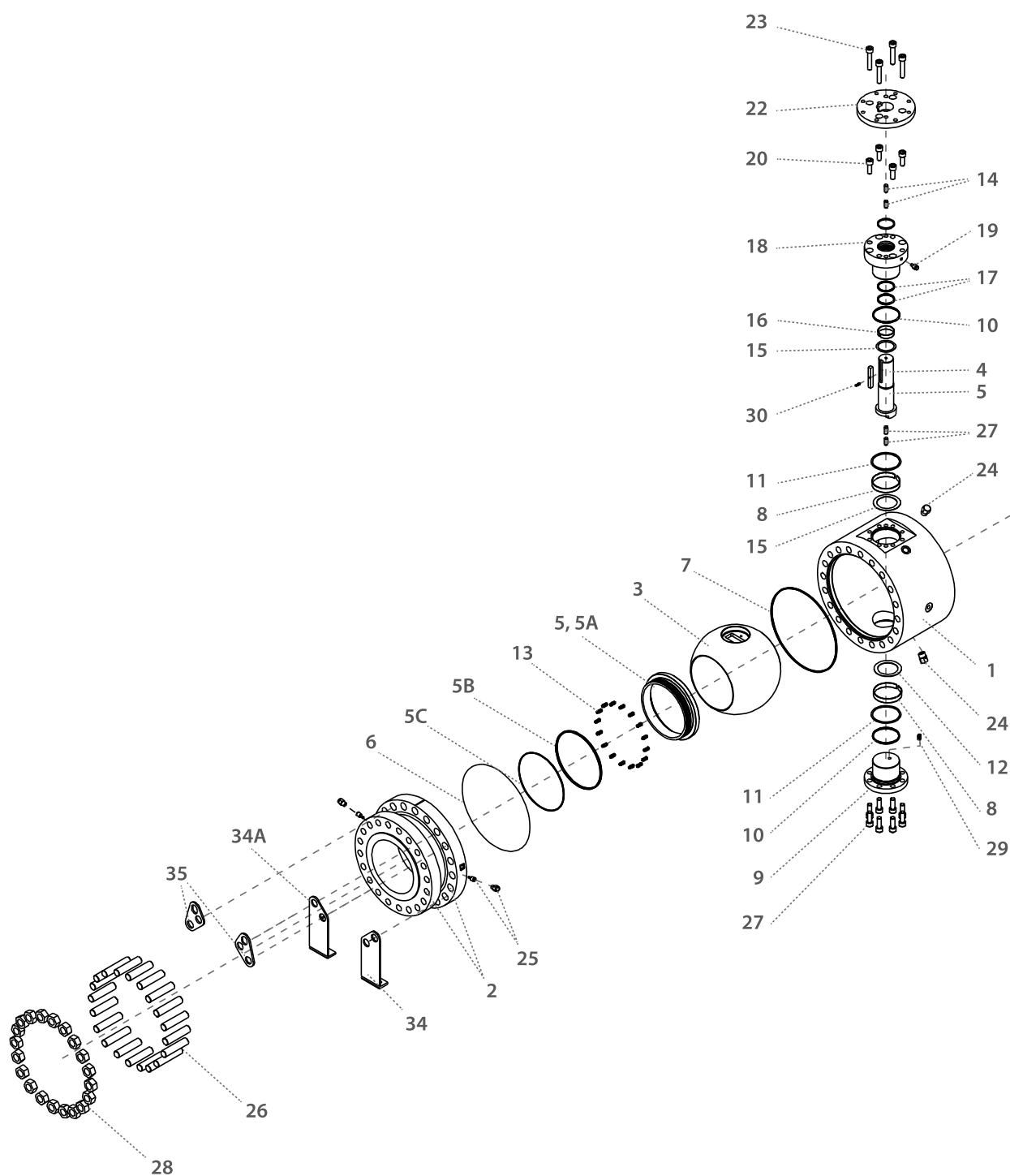
Preparation for actuation



Std. port	Unit	Ball port	A		B		C		C1		D		W		P	M	K	F		TxL	Weight kg/lb		Kv / Cv							
			600	900	600	900	600	900	600	900	600	900	600	900							600	900	600	900	600	900	600	900	600	900
DN200	mm	201.00	660.00	737.00	330.00	368.50	312.00	307.00	263.00	263.00	409.00	403.00	420.00	470.00	72.00	76.50	20.00	(F25)	254.00	18x25	577	836	7742	7344						
8"	inch	7.91	25.98	29.02	12.99	14.51	12.28	12.09	10.35	10.35	16.10	15.87	16.54	18.50	2.83	3.01	0.79		10.00	(8 holes)	1272	1843	8950	8490						
DN250	mm	252.00	787.00	838.00	400.00	419.00	374.00	384.00	310.00	326.00	489.50	499.00	510.00	545.00	72.00	76.50	20.00	(F25)	254.00	18x25	931	1301	12543	12110						
10"	inch	9.92	30.98	32.99	15.75	16.50	14.72	15.12	12.20	12.83	19.27	19.65	20.08	21.46	2.83	3.01	0.79		10.00	(8 holes)	2052	2868	14500	14000						
DN300	mm	303.00	838.00	965.00	419.00	482.50	402.00	419.00	344.00	361.00	517.00	544.00	560.00	610.00	72.00	76.50	20.00	(F25)	254.00	18x35	1126	1576	19809	18598						
12"	inch	11.93	32.99	37.99	16.50	19.00	15.83	16.50	13.54	14.21	20.35	21.42	22.05	24.02	2.83	3.01	0.79		10.00	(8 holes)	2482	3474	22900	21500						
DN350	mm	334.00	889.00	1029.00	444.50	514.50	435.00	503.00	412.00	433.00	565.00	633.00	605.00	640.00	80.00	87.00	22.00	(F30)	298.00	22x35	1638	2293	24739	23528						
14"	inch	13.15	35.00	40.51	17.50	20.26	17.13	19.80	16.22	17.05	22.24	24.92	23.82	25.20	3.15	3.43	0.87		11.73	(8 holes)	3611	5055	28600	27200						
DN400	mm	385.00	991.00	1130.00	515.00	565.00	500.00	604.00	442.00	520.00	636.00	734.00	686.00	705.00	98.00	104.00	28.00	(F30)	298.00	22x350	2258	3116	33735	32438						
16"	inch	15.16	39.02	44.49	20.28	22.24	19.69	23.78	17.40	20.47	25.04	28.90	27.01	27.76	3.86	11.00	1.10		11.73	(8 holes)	4978	6870	39000	37500						

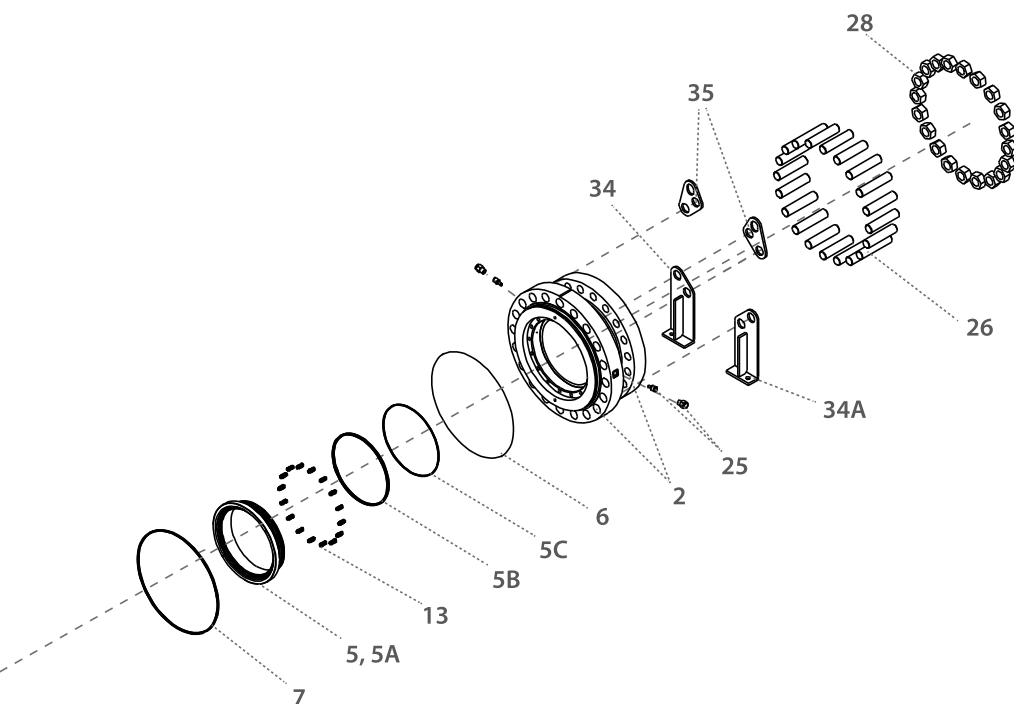
Trunnion Mounted Ball 3 Piece

Components & materials





Trunnion Mounted Ball 3 Piece



Item	Description	Material specification	Qty.
1	Body	Acc. Ordering Code	1
2	End	Acc. Ordering Code	2
3	Ball	Acc. Ordering Code	1
4	Stem	Acc. Ordering Code	1
5*	Seat	Acc. Ordering Code	2
5A	Seat insert	Acc. Ordering Code	2
5B	Seat seal	HNBR, VITON	2-4
5C	Seat fire safe seal	Graphite	2
6*	Body fire safe seal	Graphite	1
7*	Body seal	HNBR, VITON	1
8	Ball bearing	316L+PTFE	2
9	External trunnion	A350 LF2+ENP, A479 316L	1
10*	Gland plate & external trunnion fire safe seal	Graphite	2
11*	Gland plate & external trunnion seal	HNBR, VITON	2
12	Lower thrust washer	316L+PTFE	1
13	Seat spring	Inconel X750	10-26

Item	Description	Material specification	Qty.
14	Gland pin	C. Steel, S. Steel	4
15	Stem thrust seal	316L+PTFE	1
16	Gland plate bearing	316L+PTFE	1
17	Stem Seal	HNBR, VITON	2
18	Gland plate	A350 LF2+ENP, A479 316L, A105 +ENP	1
19	Stem grease fitting	S. St	1
20	Lower gland bolts	A320 L7, A193 B8M	2-6
21*	Stem gasket	Graphite	1
22	Iso plate	A350 LF2, A479 316L, A105	1
23	Upper gland bolts	A320 L7, A193 B8M	2-6
24	Plug drain valve	S. Steel	2
25**	Seat grease fitting + Check valve	S. Steel	4
26	Body stud	A320 L7, A193 B8M	4-20
27	External trunnion bolts	A320 L7, A193 B8M	4-12
28	Body nut	A194 GR-7, A193 GR-8M	4-20
29	Antistatic spring	Inconel X750	1
30	stem key	ST.37, H1150D 17-4PH, A182 F6A	1

* Repair kit components

** Available from 6" size only



Trunnion Mounted Ball 3 Piece - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	.	.	30
6	0			F	B	9	1		-	4	6	4	D	V	V	G	/	1	5	0		-				
Size		Features				Series		Design		Body & ends material	Stem material	Ball material	Seat feature	Seat insert material	Inner Seal material	Outer Seal material	End connection				Special features					

Size (1-2)		
Code	inch	mm
20 *	2"	50
30	3"	80
40	4"	100
60	6"	150
80	8"	200
A0	10"	250
A2	12"	300
A4 **	14"	350
A6 **	16"	400

* Full port only

** not available at class 900

Features (3-6)	
F	Fire safe
B	Full port
Series - 3 Piece (7-8)	
91	ASME B16.5 #150 (PN20)
92	ASME B16.5 #300 (PN50)
93	ASME B16.5 #600 (PN100)
94	ASME B16.5 #900 (PN150)
Design (9)	
Blank	(Stands for future designs)
Body & ends material (11)	
4	C. Steel A105
6	S. Steel 316
F	C. Steel A350 LF2
W	Haselloy C-22
D	Duplex
K	Super Duplex
S	254SMO
Stem material (12)	
6 *	S. Steel A479 316\316L
Q **	S. Steel A182 F6A
M ***	High Strength S. Steel
Z	Inconel 718 B637 N07718
W	Haselloy C-22
D	Duplex
K	Super Duplex
S	254SMO

* for 91,92 not for 93, 94

** for 93, not for 94

*** for 94

Ball material (13)	
6	S. Steel A182 F316
4	C. Steel A105+ENP
F	C. Steel A350 LF2+ENP
Seat feature (14)	
D	Double Piston Effect (DPE) (API 6D DIB-1)
S	Single Piston Effect (SPE) (API 6D DBB)
C	DPE & SPE combination (API 6D DIB-2)
Seat insert material (15)	
V	Devlon
P	CF PTFE
K	CF PEEK
Inner Seal material (16)	
V	Viton
H	HNBR
Outer Seal material (17)	
G	Graphite

End Connection (19-22)	
Welded ends	
150	ASME B16.5 #150
300	ASME B16.5 #300
600	ASME B16.5 #600
900	ASME B16.5 #900
PN16	DIN EN 1092-1 PN16
PN40	DIN EN 1092-1 PN40
PN63	DIN EN 1092-1 PN63
PN100	DIN EN 1092-1 PN100
PN160	DIN EN 1092-1 PN160
Flanged RTJ	
600RTJ	ASME B16.5 #600 RTJ
900RTJ	ASME B16.5 #900 RTJ
Welded	
XBW	Extended butt weld sch 40
XBW80	Extended butt weld sch 80
Special Features (24-30)	
L *	seat greasing point
D	Drain & Vent
Blank	Greasing point, Drain & vent is capped
PT **	Basic paint system
P1	Offshore, Temp Ambient up to 93°C (200°F)
P2	Offshore, up to 537°C (1000°F)

* for 6" and up

** colors RAL 1018 or 7036 (other colors upon request)

In some applications the available options above are limited to specific sizes please consult with Habonim for details