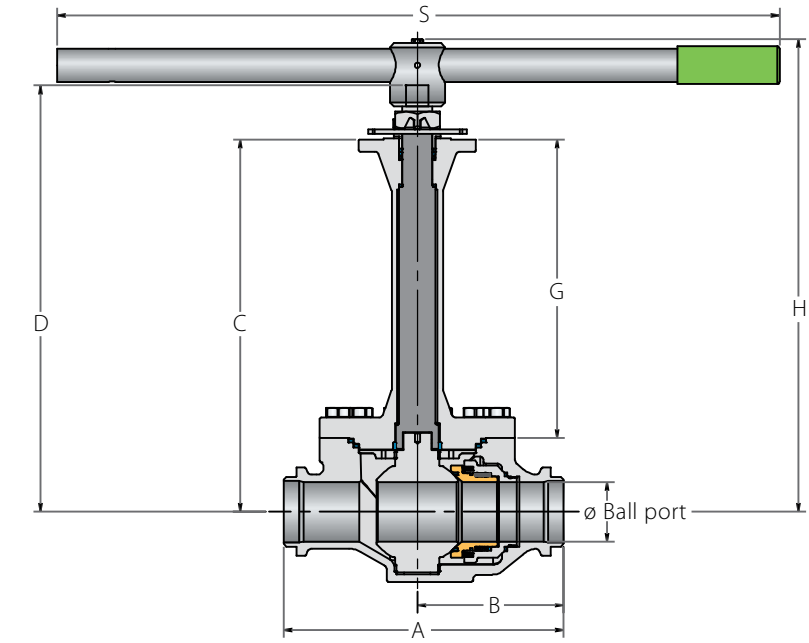
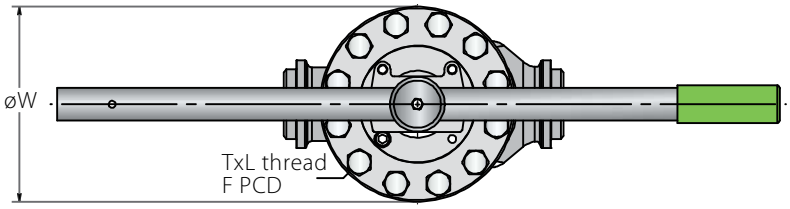
Cryogenic Top Entry Trunnion Mounted Ball Valve

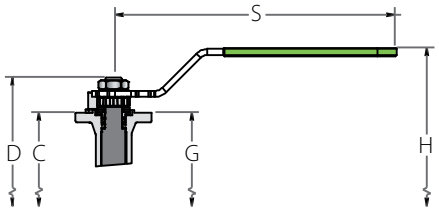
PATENT PENDING

Valve dimensions





Handle type for sizes ½" - 1"



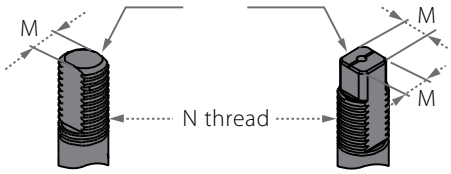
Standard stem tops

DD Type
for sizes ½" - 1½"

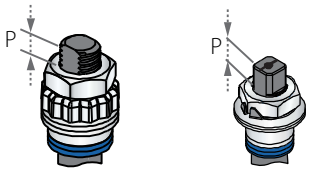
Stem flats
show valve
ball position

Square Type
for sizes 2" - 6"

Stem groove
shows valve
ball position



Preparation for actuation



½" - 1"
with nut

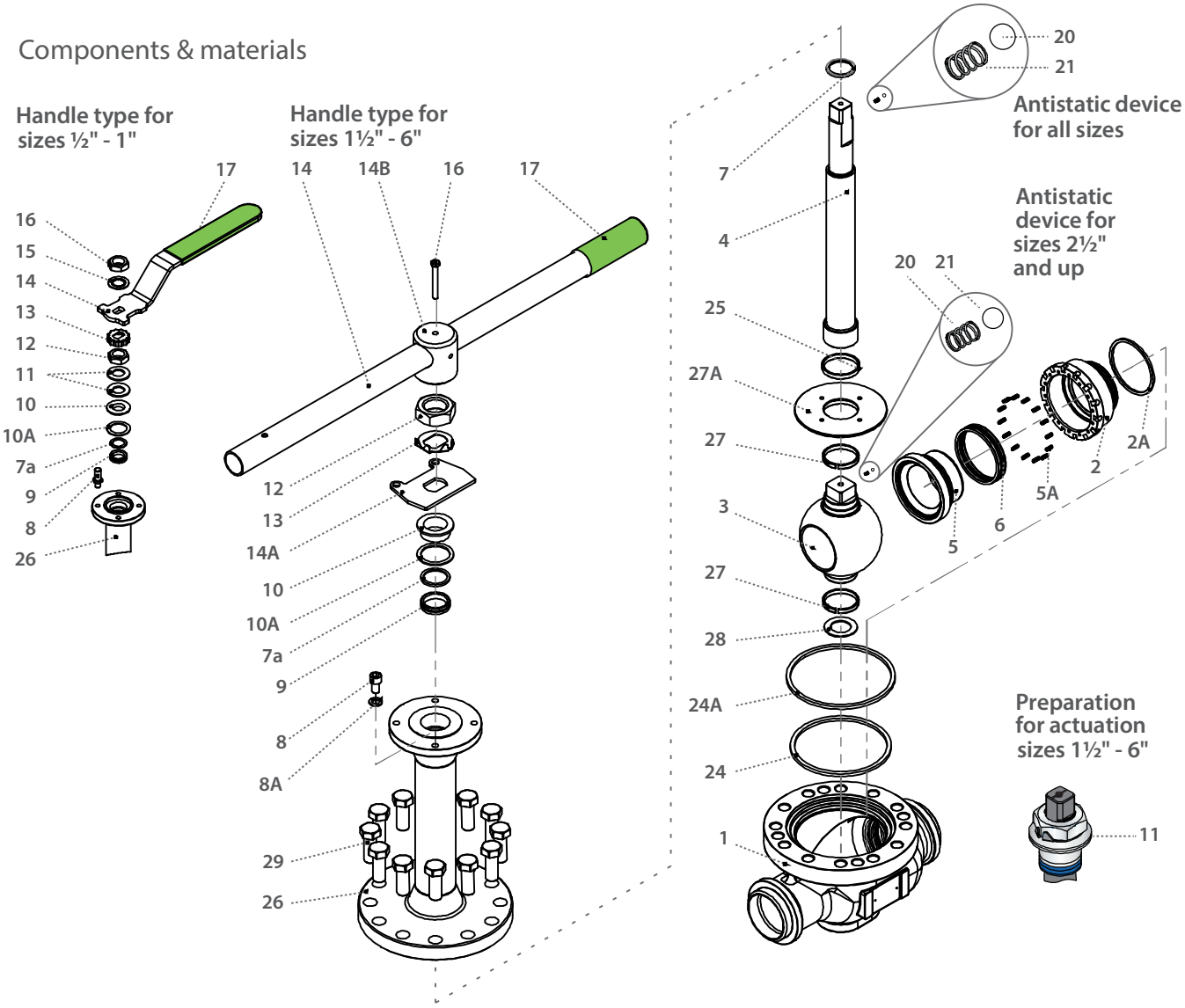
1½" - 6"

Full Port	Units	Ball port	A	B	C	D	G	H	S (1)	W	M	N	P	F		TxL	Weight kg/lb	KV CV
DN15	mm	14	165	88	340	357.4	301	383.2	187	105	7.5	7/16"-20 UNF	6.4	F04	42	M5x7	5.3	20
½"	inch	0.55	6.5	3.46	13.39	147	11.85	159	7.36	4.13	0.30		0.25		1.65		11.68	23
DN20	mm	20	190	100	353	382.5	309	407.5	237	121	8.7	9/16"-18 UNF	8.5	F05	50	M6x8	7.5	31
¾"	inch	0.79	7.48	3.94	13.9	156	12.17	164	9.33	4.76	0.34		0.33		1.97		16.53	36
DN25	mm	25.4	216	113	358	387.5	309	412.5	237	131	8.7	9/16"-18 UNF	8.5	F05	50	M6x8	9	61
1"	inch	1	8.5	4.45	149	15.26	12.17	16.24	9.33	5.16	0.34		0.33		1.97		19.84	70
DN40	mm	38.2	241	129	389	430.6	330.4	456.6	401	173	13.9	M20x2.5	15.2	F07	70	M8x9	17	164
1½"	inch	1.5	9.49	58	15.31	16.95	131	17.98	15.79	6.81	0.55		0.6		2.76		37.48	190
DN50	mm	50.8	292	151	428	474.5	353	514	610	198	18.9	1"-14 UNS	16.6	F10	102	M10x15	32	327
2"	inch	2	11.5	5.94	16.85	18.68	13.9	20.24	242	7.80	0.74		0.65		42		70.55	378
DN65	mm	65	330	166	454.4	523.5	373.4	582.6	916	207	28.45	1½"-12 UNF	26.2	F12	125	M12x15	48	668
2½"	inch	2.56	12.99	6.54	17.89	20.61	14.7	22.94	366	8.15	1.12		13		4.92		105.82	772
DN80	mm	76	356	186	473	542.1	379	601.2	916	248	28.45	1½"-12 UNF	26.2	F12	125	M12x15	58	823
3"	inch	2.99	142	7.32	18.62	21.34	14.92	23.67	366	9.76	1.12		13		4.92		127.87	951
DN100	mm	100	432	224	490.4	559.5	378.4	619.3	916	305	28.45	1½"-12 UNF	26.2	F12	125	M12x15	85	1678
4"	inch	3.94	171	8.82	19.31	223	14.9	24.38	366	121	1.12		13		4.92		187.39	1940
DN150	mm	150	559	285	553	665.7	404	729.7	916	392	35.9	2"-8 UN	40	F14	140	M16x20	193	4199
6"	inch	5.91	221	11.22	21.77	26.21	15.91	28.73	366	15.43	1.41		1.57		5.51		425.49	4854

(1) Manual gear or actuation recommended, when the operation force on the handle overcomes 360N

Cryogenic Top Entry Trunnion Mounted Ball Valve

Components & materials



Item	Description	Material specifications	Qty.
1	Body	Acc. Ordering Code	1
2*	Seat Housing	S. Steel	1
2A*	Housing Seal	S. Steel	1
3	Ball	Acc. Ordering Code	1
4	Stem	Acc. Ordering Code	1
5*	Hybrid seat	A479 316/316L + TFM, CF PTFE, PCTFE	1
5A*	Seat spring	Inconel X750	6-18
6*	Lip seal	V-PTFE + UNS R30003	2
7*	Stem thrust seal	PCTFE, TFM	1
7a*	Anti-abrasion ring	PCTFE, TFM	1
8	Stop screw	EN 3506-1 A4-80	1
8A	Spring washer	S. Steel	1
9*	Stem seal	TFM	1
10	Follower	S. Steel	1
10A*	Slide bearing	S. Steel	1
11	Disc spring	S. Steel	2
12	Stem nut	S. Steel	1
13	Locking clip (Tab lock washer for 1.5" and up)	S. Steel	1

Item	Description	Material specifications	Qty.
14**	Handle	S. Steel	1
14A	Stop plate	S. Steel	1
14B	Wrench head	S. Steel	1
15	Serrated washer	S. Steel	1
16	Handle nut (Wrench bolt for 1.5" and up)	S. Steel	1
17	Sleeve	PVC	1
20	Anti-static spring	S. Steel	1-2
21	Anti-static plunger	S. Steel	1-2
23	Tag (not shown)	S. Steel	1
24*	Bonnet primary seal	TFM	1
24A*	Bonnet secondary seal	Graphite	1
25*	Stem bearing	TFM	1
26	Bonnet	S. Steel	1
27*	Ball radial bearing	316L + PTFE	2
27A	Centering plate	A479 316/316L	1
28*	Lower thrust washer	DIN 127 A2	1
29	Bonnet bolt	A193 B8M, DIN 3506 A2-70	12

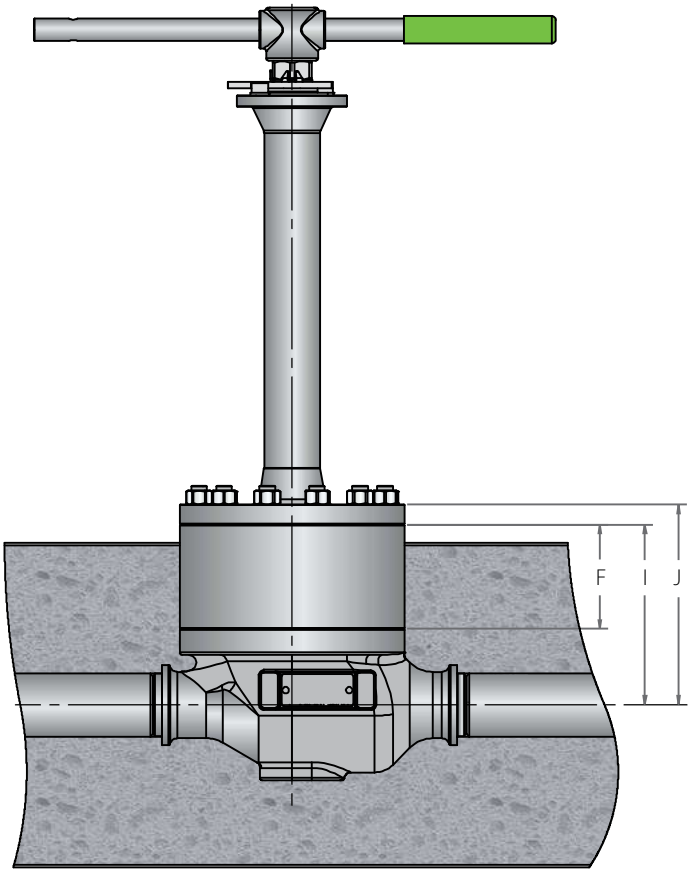
* Repair kit components

** Manual gear or actuation recommended, when the operation force on the handle overcomes 360N

Cryogenic Top Entry Trunnion Mounted Ball Valve

PATENT PENDING

Valve dimensions

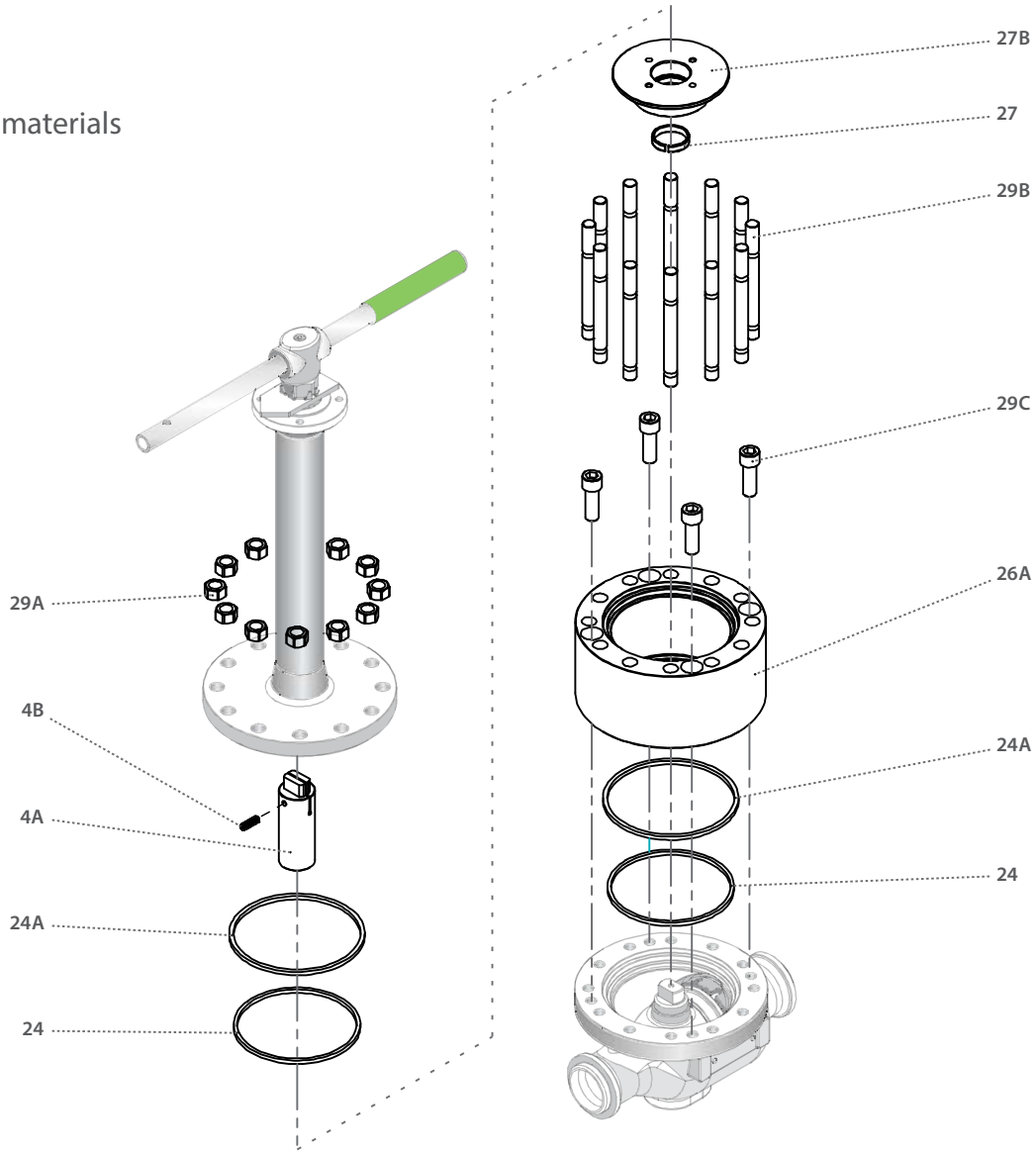


Extended hub

- Extended hub for insulated lines
- Extends valve cover over the insulation boundary
- Allows inner parts access and maintenance without dismantling the insulation
-
- The extended hub is an "add-on" kit to the standard valve.

Size	Unit	Extended Hub			Semi-Extended Hub		
		F(1)	I(2)	J(3)	F(1)	I(2)	J(3)
DN15	mm	-	-	-	25	64	74
½"	inch	-	-	-	0.98	2.52	2.91
DN20	mm	-	-	-	35	79	92
¾"	inch	-	-	-	1.38	3.11	3.62
DN25	mm	-	-	-	45	94	107
1"	inch	-	-	-	1.77	3.7	4.21
DN40	mm	80	139.6	154.6	50	109.6	124.6
1½"	inch	3.15	5.5	69	1.97	4.31	4.91
DN50	mm	85	160	181	50	125	146
2"	inch	3.35	6.3	7.13	1.97	4.92	5.75
DN65	mm	95	176	197	60	141	162
2½"	inch	3.74	6.93	7.76	2.36	5.55	6.38
DN80	mm	95	189	215	-	-	-
3"	inch	3.74	7.44	8.46	-	-	-
DN100	mm	100	212	240	-	-	-
4"	inch	3.94	8.35	9.45	-	-	-
DN150	mm	100	249	284	-	-	-
6"	inch	3.94	9.8	11.18	-	-	-

Components & materials



Item	Description	Material specifications	Qty.
4A	Stem extension (or one piece extended stem - optional)	High Strength S. Steel	1
4B	Clamp screw	S. Steel	1
24*	Bonnet primary seal	TFM	2
24A*	Bonnet secondary seal	Graphite	2
26A	Hub	A479 316/316L/CF8M	1
27*	Ball radial bearing	316L + PTFE	1
27B	Centering plate for extended hub	A479 316/316L	1
29A	Bonnet nut	S. Steel	12
29B	Bonnet stud	S. Steel	12
29C	Hub bolt	S. Steel	2-4

* Repair kit components