

C47

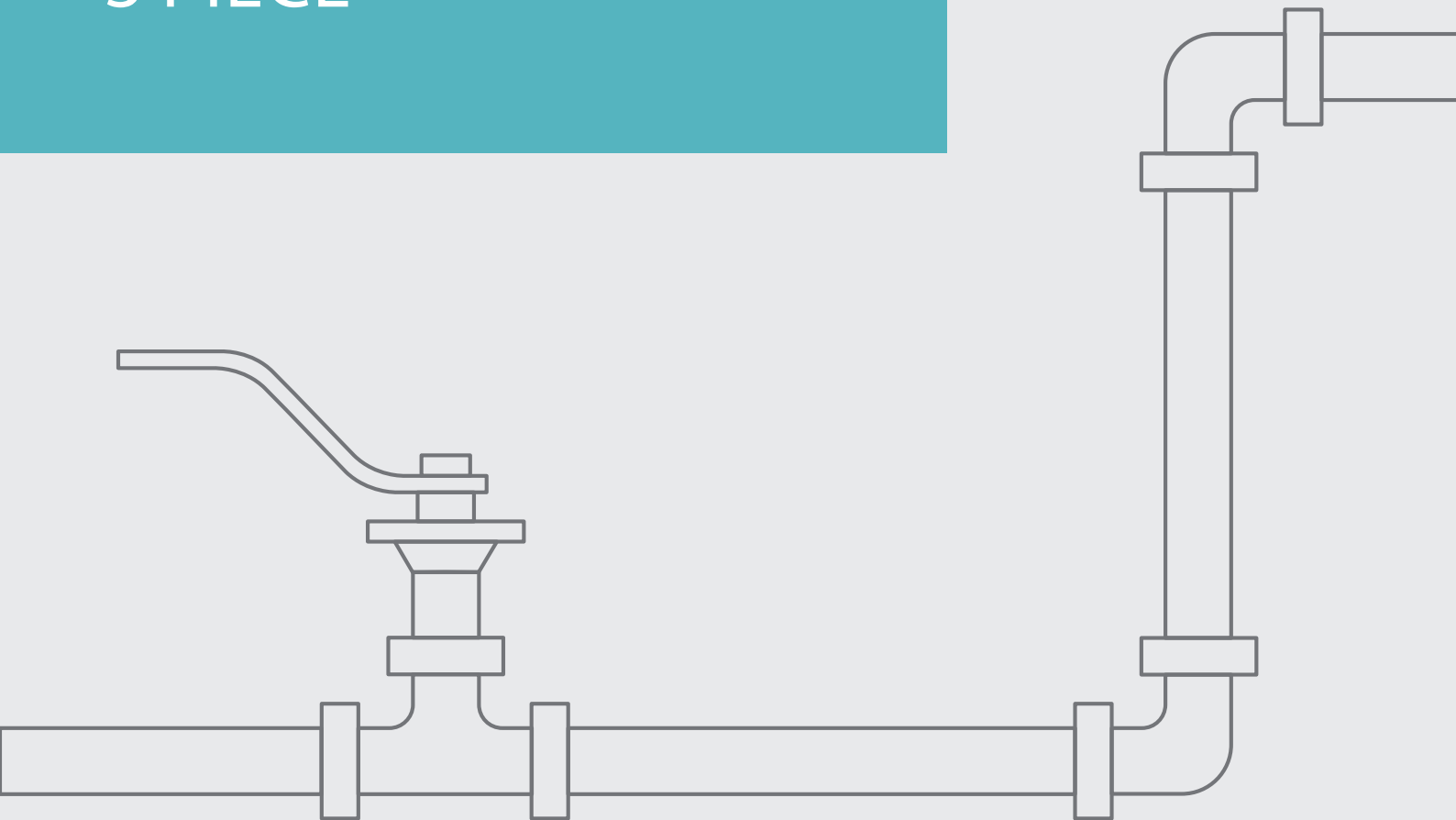
C26



Cryogenic Valves

FLOATING BALL

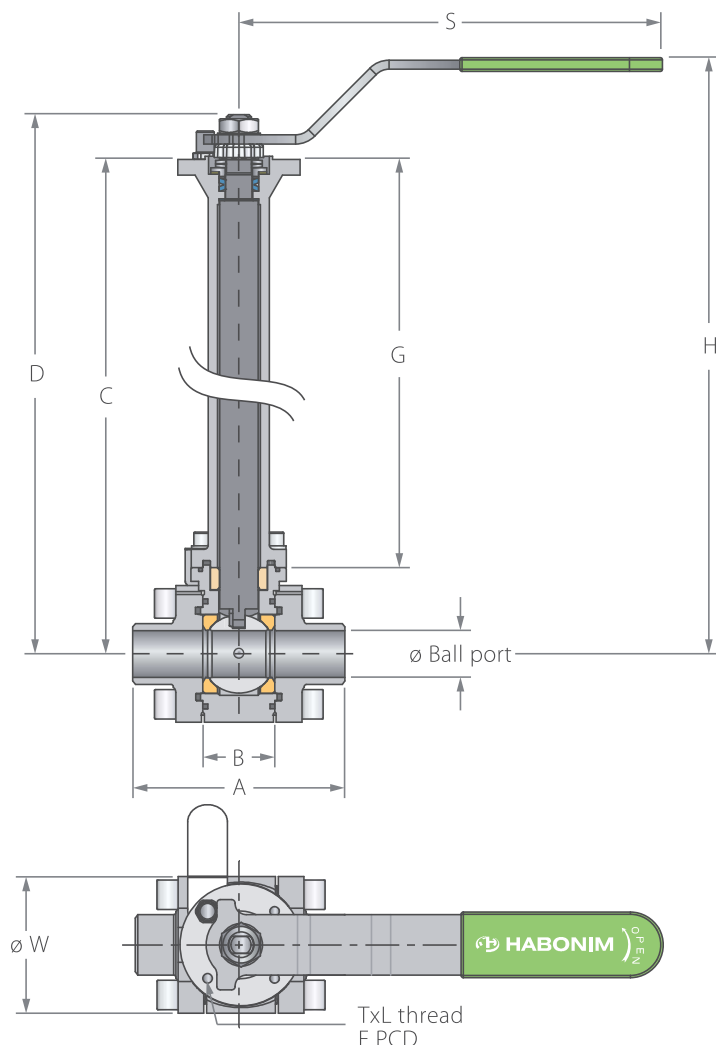
3 PIECE



Cryogenic Floating Ball 3 Piece; BD - Bidirectional

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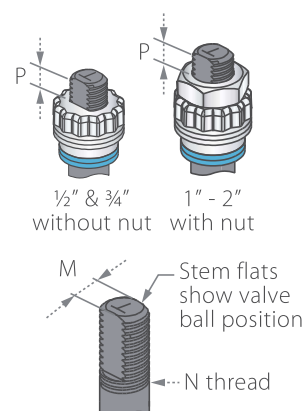
Valve dimensions



Bidirectional Cryogenic floating ball Valve

- Cryogenic floating ball valves with bidirectional sealing capability allows it to be used on a bidirectional loading and offloading single pipeline as well as a shutoff valve for a storage tank, developing back pressure to the downstream side while empty without upstream line pressure.
- This valves are equipped with all the benefits of the standard cryogenic ball valve on top of the simplicity and flow capabilities of a floating ball design.
- Full Δp
- ASME Class 300
- Special "Piston Effect" at seat design to prevent pressure buildup in the cavity.

Preparation for actuation



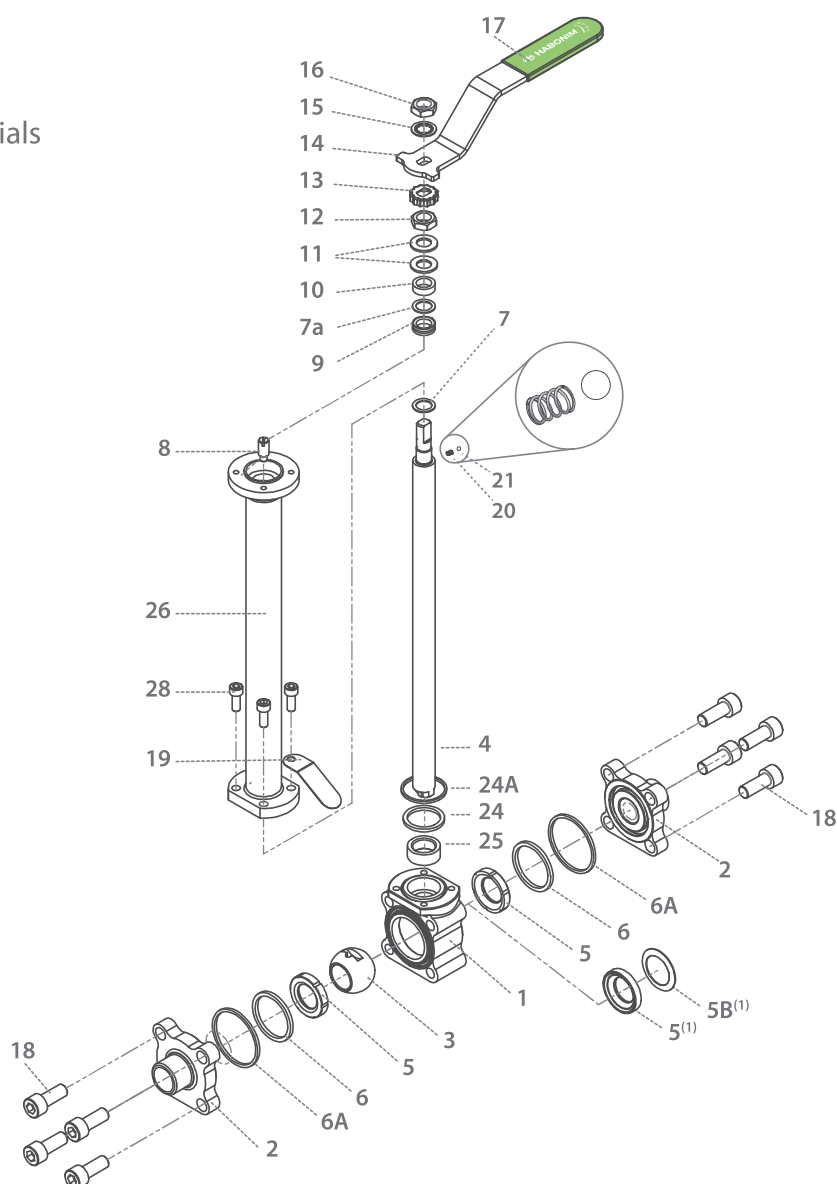
Valve Face To Face sizes are according to Habonim catalog data only, for Extended-weald/Flanged/Tri-clamp end see Face To Face sizes page.

Std. port	Full port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb		Kv	
						C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
	DN8	mm	11.15	65.8	20.6	333	341.9	304	366	181.4	190.3	152.4	214.4	150.0	4.6	5.5	3/8"	7.20	(F03)	36.0	M5X7	1.60	1.28	2.6
	1/4"	inch	0.44	2.59	0.81	13.11	13.46	11.97	14.41	7.14	7.49	6.0	8.44	5.91	1.81	0.22	UNF	0.28		1.42		3.53	2.82	3.0
DN15	DN10	mm	11.15	65.8	20.6	333.0	341.9	304.0	366.0	181.4	190.3	152.4	214.4	150.0	46.0	5.5	3/8"	7.20	(F03)	36.0	M5X7	1.6	1.28	7
1/2"	3/8"	inch	0.44	2.59	0.81	13.11	13.46	11.97	14.41	7.14	7.49	6.0	8.44	5.91	1.81	0.22	UNF	0.28		1.42		3.53	2.82	8
DN20	DN15	mm	14.3	70.55	24.55	335.4	344.3	304.0	368.0	183.8	192.7	152.4	216.4	150.0	52.0	5.5	3/8"	7.20	(F03)	36.0	M5X7	1.8	1.48	10
3/4"	1/2"	inch	0.56	2.78	0.97	13.2	13.56	11.97	14.49	7.24	7.59	6.0	8.52	5.91	2.05	0.22	UNF	0.28		1.42		3.97	3.26	12
DN25	DN20	mm	20.6	93.65	31.75	342.15	359.65	304.0	383.0	190.55	208.05	152.4	231.4	187.0	60.5	7.54	7/16"	7.20	(F04)	42.0	M5X7	3.0	2.65	28
1"	3/4"	inch	0.81	3.69	1.25	13.47	14.16	11.97	15.08	7.50	8.19	6.0	9.11	7.32	2.38	0.3	UNF	0.28		1.65		6.61	5.84	32
DN32	DN25	mm	25.4	108.25	41.25	346.65	364.15	304.0	388.0	195.05	212.55	152.4	236.4	187.0	69.0	7.54	7/16"	7.2	(F04)	42.0	M5X10	3.7	3.35	37
1 1/4"	1"	inch	1.0	4.25	1.62	13.65	14.34	11.97	15.28	7.68	8.37	6.0	9.31	7.32	2.72	0.30	UNF	0.28		1.65		8.16	7.39	43
DN40	DN32	mm	31.8	115.45	48.25	347.55	377.05	304.0	400.0	195.95	225.45	152.40	248.40	237.0	79.20	8.71	9/16"	8.0	(F05)	50.0	M6X8	5.2	4.65	70
1 1/2"	1 1/4"	inch	1.25	4.55	1.90	13.68	14.84	11.97	15.75	7.71	8.88	6.0	9.78	9.29	3.12	0.34	UNF	0.31		1.97		11.46	10.25	81
DN50	DN40	mm	38.1	127.10	56.3	352.25	381.75	304.0	405.0	200.65	230.15	152.4	253.4	237.0	90.7	8.71	9/16"	8.5	(F05)	50.0	M6X8	6.1	5.53	103
2"	1 1/2"	inch	1.5	5.0	2.22	13.87	15.03	11.97	15.94	7.9	9.06	6.0	9.98	9.29	3.57	0.34	UNF	0.33		1.97		13.45	12.19	208



Components & materials

Note: for C47



Item	Description	Material specifications	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
5B	Upstream seat spring	Inconel 718	1
6*	Inner seal	TFM	2
6A*	Outer seal	Acc. Ordering Code	2
7*	Stem thrust seal	PCTFE	1
7a*	Anti-abrasion ring	PCTFE	1
8	Stop pin	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	S. Steel	1

Item	Description	Material specifications	Qty.
14	Handle	S. Steel	1
15	Serrated washer	S. Steel	1
16	Handle nut	S. Steel	1
17	Sleeve	PVC	1
18	Body bolt	S. Steel	8
20	Anti-static spring	S. Steel	1
21	Anti-static plunger	S. Steel	1
22	Arrow flow	S. Steel	2
23	Tag (not shown)	S. Steel	1
24*	Bonnet inner seal	TFM	1
24A*	Bonnet outer seal	Acc. Ordering Code	1
25*	Stem bearing	PTFE	1
26	Bonnet	S. Steel	1
28	Bolt	S. Steel	4
30	Dog tag	S. Steel	1

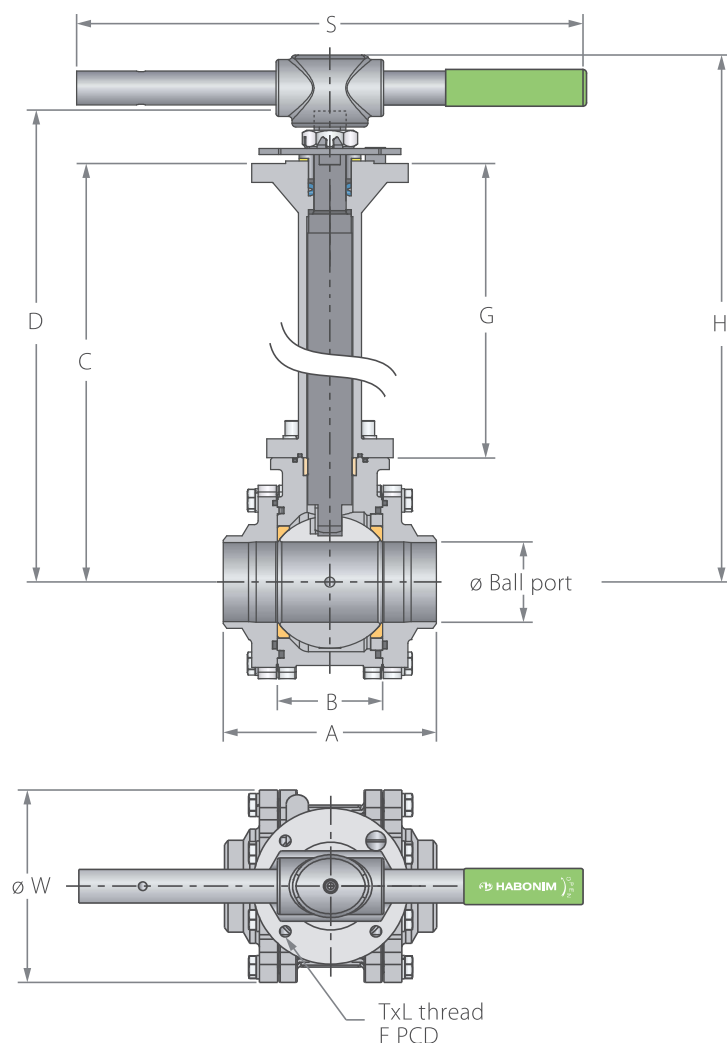
* Repair kit components

⁽¹⁾ Optional Dynamic seat design

Cryogenic Floating Ball 3 Piece ; BD - Bidirectional

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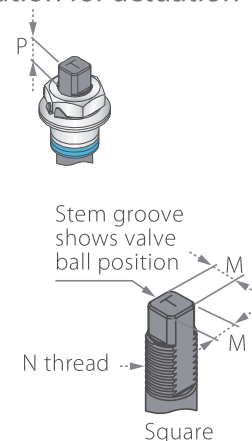
Valve dimensions



Bidirectional Cryogenic floating ball Valve

- Cryogenic floating ball valves with bidirectional full Δp sealing capability allows it to be used on a bidirectional loading and offloading single pipeline as well as a shutoff valve for a storage tank, developing back pressure to the downstream side while empty without upstream line pressure.
- This valves are equipped with all the benefits of the standard cryogenic ball valve on top of the simplicity and flow capabilities of a floating ball design.
- Full Δp
- ASME Class 150
- Special "Piston Effect" at seat design to prevent pressure buildup in the cavity.

Preparation for actuation



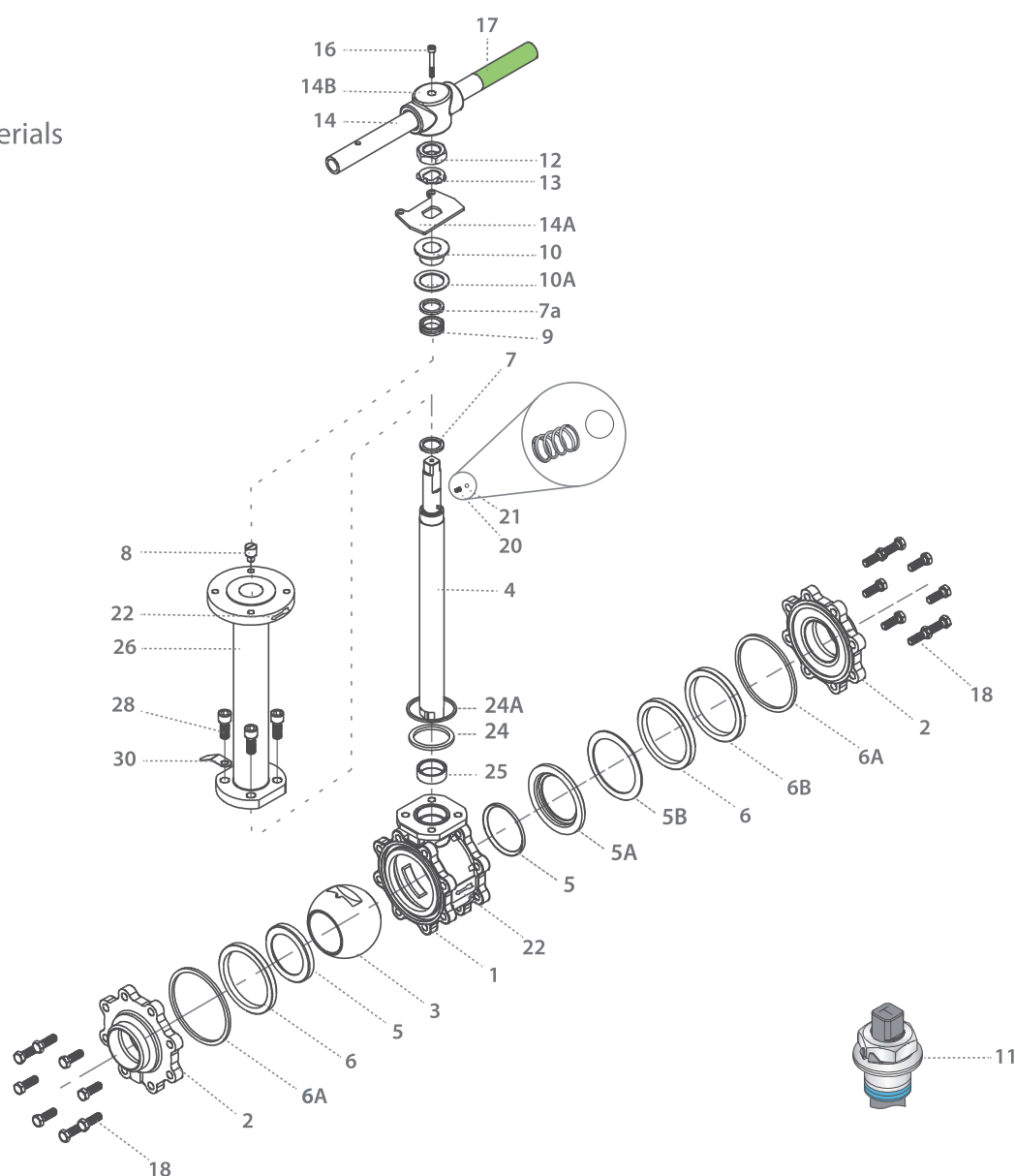
Valve Face To Face sizes are according to Habonim catalog data only, for Extended-weald/Flanged/Tri-clamp end see Face To Face sizes page.

Std. port	Full port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	F	TxL	Weight kg/lb		Kv
						C	D	G	H	C	D	G	H									Std.	6.0"	
DN65	DN50	mm	50.80	157.95	72.55	397.5	439.1	327.5	464	222.4	264	152.4	288.9	401	108	13.9	13.9	M20x2.5	13.15 (F07)	70	M8x8	12	10.6	205
2½"	2"	inch	2	6.22	2.86	15.65	17.29	12.89	18.27	8.76	10.39	6.00	11.37	15.79	4.25	0.55	0.55		0.52	2.76		26.46	23.37	240
DN80	DN65	mm	63.5	169.35	83.25	441.8	488.4	343.5	528	250.7	297.3	152.4	336.9	401	153	18.9	15.9	1"-14	16.7 (F10)	102	M10x15	20	18.8	385
3"	2½"	inch	2.5	6.67	3.28	17.39	19.23	13.52	20.79	9.87	11.7	6.00	13.26	15.79	6.02	0.74	0.63	UNS-2A	0.66	4.02		44.09	41.45	450
DN100	DN80	mm	82.6	213.6	108.8	457.6	504.2	343.5	544	266.5	313.1	152.4	352.9	610	191.5	18.9	15.9	1"-14	16.7 (F10)	102	M10x15	30.5	29.3	615
4"	3"	inch	3.25	8.41	4.28	18.02	19.85	13.52	21.42	10.49	12.33	6.00	13.89	24.02	7.54	0.74	0.63	UNS-2A	0.66	4.02		67.24	64.6	720
	DN100	mm	100	239	123	466.8	513.4	343.5	555	275.7	322.3	152.4	363.9	610	217	18.9	15.9	1"-14	16.7 (F10)	102	M10x15	37.3	36.1	744
	4"	Inch	3.94	9.41	4.84	18.38	20.21	13.52	21.85	10.85	12.69	6.00	14.33	24.02	8.54	0.74	0.63	UNS-2A	0.66	4.02		82.23	79.59	870
DN150		mm	111.1	346.1	146.1	542.4	611.9	385	665	309.8	379.3	152.4	432.4	916	266	28.45	23.75	1½"-12	26.2 (F12)	125	M12x15	75	71	872
6"		inch	4.37	13.63	5.75	21.35	24.09	15.16	26.18	12.2	14.93	6.00	17.02	36.06	10.47	1.12	0.94	UNS-1A	1.03	4.92		165.35	156.53	1020
	DN150	mm	150	322	180	564	633.5	385	686.6	331.4	400.9	152.4	545	916	328	28.45	23.75	1½"-12	26.2 (F12)	125	M12x15	106	104	23.75
	6"	inch	5.91	12.68	7.09	22.20	24.94	15.16	27.03	13.05	15.78	6.00	17.87	36.06	12.91	1.12	0.94	UNS-1A	1.03	4.92		233	229	0.94



Components & materials

Note: for C47



Item	Description	Material specifications	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 housing	S. Steel	1
5B	Upstream seat spring	Inconel 718	1
6*	Inner seal	TFM	2
6A*	Outer seal	Acc. Ordering Code	2
6B	Support ring	S. Steel	1
7*	Stem thrust seal	TFM, PCTFE	1
7a*	Anti-abrasion ring	TFM, PCTFE	1
8	Stop pin	S. Steel	1
9*	Stem seal	TFM, Graphite	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	Tab lock washer	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
16	Wrench bolt	S. Steel	1
17	Sleeve	PVC	1
18	Body bolt	S. Steel	8
20	Anti-static spring	S. Steel	2
21	Anti-static plunger	S. Steel	2
22	Arrow flow	S. Steel	2
23	Tag (not shown)	S. Steel	1
24*	Bonnet inner seal	TFM	1
24A*	Bonnet outer seal	Acc. Ordering Code	1
25*	Stem bearing	PTFE	1
26	Bonnet	S. Steel	1
28	Bolt	S. Steel	4
30	Dog tag	S. Steel	1

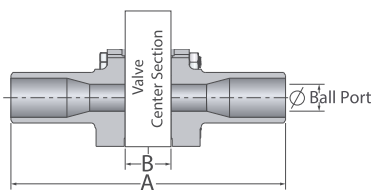
* Repair kit components

Face To Face Sizes

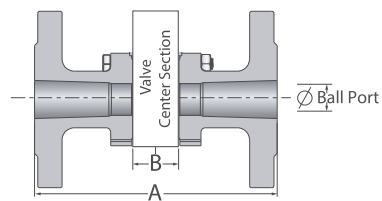
Valve Size	Unit	B		A-XBW		A-ETO	A-Flanged CLASS 150 FTF CLASS 300		A-Flanged CLASS 300 FTF CLASS 300		A-Flanged CLASS 600 FTF CLASS 600		A-Flanged DIN F1		A-TC
		Std. port	Full port	Std. port	Full port	Std. port	Std. port	Full port	Std. port	Full port	Std. port	Full port	Std. port	Full port	Full port
DN10	mm	20.6	20.6	140.6	143	108.6									
3/8"	inch	0.8	0.8	5.5	5.6	4.3									
DN15	mm	20.6	24.6	140.6	147	137	140	140	140	140	165	140*	130	130	88.8
1/2"	inch	0.8	1	5.5	5.8	5.4	5.5	5.5	5.5	5.5	6.5	5.5*	5.1	5.1	3.5
DN20	mm	24.6	31.7	147	168.7	147	152	152	152	152	152*	152*	150	150	101.6
3/4"	inch	1	1.2	5.8	6.6	5.8	6	6	6	6	6*	6*	5.9	5.9	4
DN25	mm	31.7	41.3	168.7	179.3	164.1	165.1	165.1	165.1	165.1	216	165.1*	160	160	114.3
1"	inch	1.2	1.6	6.6	7.1	6.5	6.5	6.5	6.5	6.5	8.5	6.5*	6.3	6.3	4.5
DN32	mm	41.3	48.4	179.3	189.4	179.3	178.1	178.1	178.1	178.1	178.1*	178.1*	180	180	
1 1/4"	inch	1.6	1.9	7.1	7.5	7.1	7	7	7	7	7*	7*	7.1	7.1	
DN40	mm	48.4	56.3	189.4	200.3	184	190	190	190	190	241	190*	200	200	139.8
1 1/2"	inch	1.9	2.2	7.5	7.9	7.2	7.5	7.5	7.5	7.5	9.5	7.5*	7.9	7.9	5.5
DN50	mm	56.3	72.6	200.3	232.6	193.5	216.1	216.1	216.1	216.1	292	216.1*	230	230	158.9
2"	inch	2.2	2.9	7.9	9.2	7.6	8.5	8.5	8.5	8.5	11.5	8.5*	9	9	6.3
DN65	mm	72.6	83.4	232.6	283.4	222.6	241	241	241	241	330	241*	290	290	213
2 1/2"	inch	2.9	3.3	9.2	11.2	8.8	9.5	9.5	9.5	9.5	13	9.5*	11.4	11.4	8.4
DN80	mm	83.4	108.8	283.4	348.8	250.4	282	282	282	282	356	356	310	310	215.8
3"	inch	3.3	4.3	11.2	13.7	9.9	11.1	11.1	11.1	11.1	14	14	12.2	12.2	8.5
DN100	mm	108.8	123	348.8	390	348.8	305	305	305	305	432	432	350	350	245.4
4"	inch	4.3	4.8	13.7	15.4	13.7	12	12	12	12	17	17	13.78	13.78	9.7
DN150	mm	146.1	180	444.1	420	444.1	403.1	403.1	403.1	403.1	559	559	480	480	146.1
6"	inch	5.8	7.1	17.5	16.5	17.5	15.9	15.9	15.9	15.9	22	22	18.9	18.9	5.8

* Comply with class 300 FTF

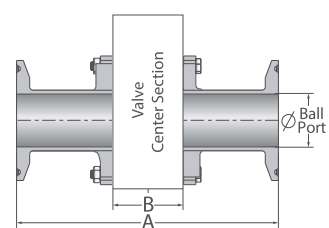
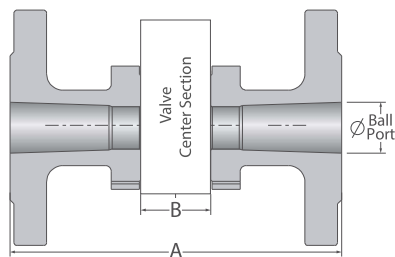
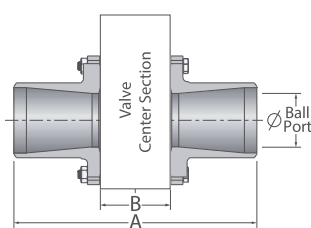
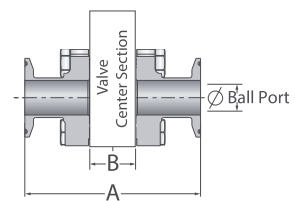
XBW / ETO



Flanged



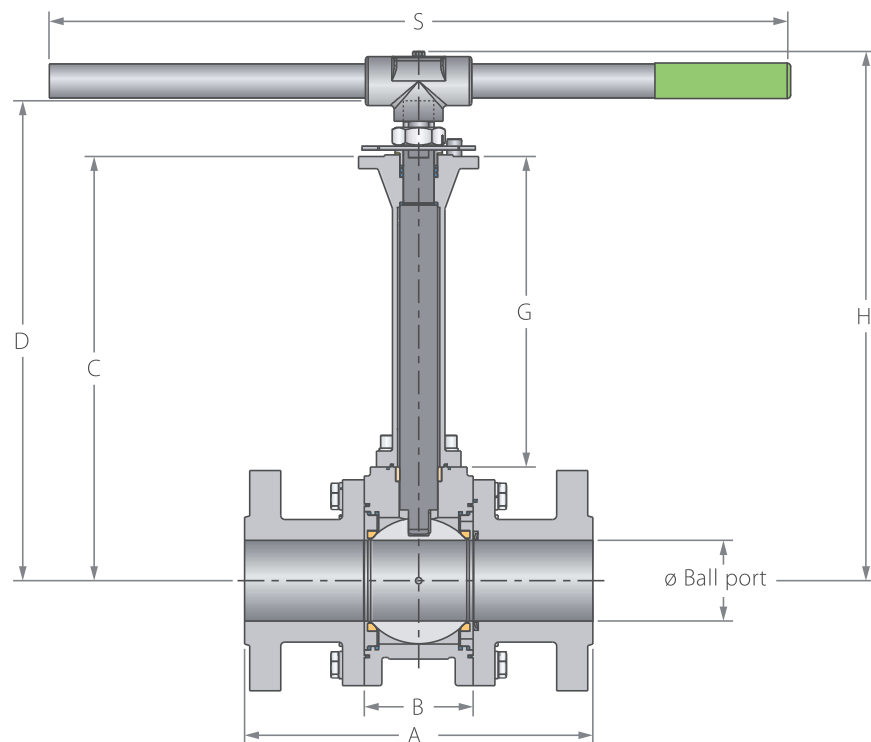
TC



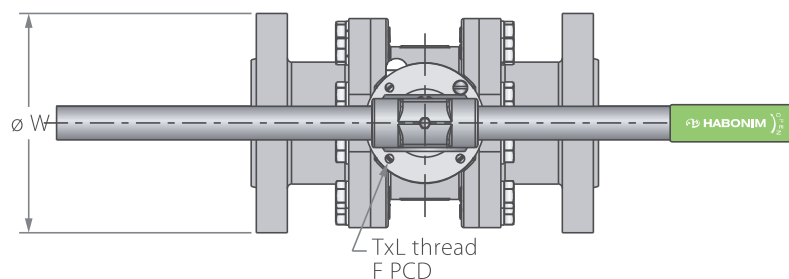
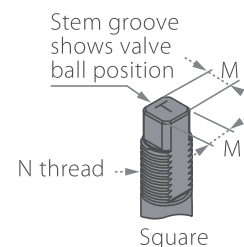
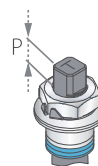


Cryogenic Floating Ball 3 Piece

Valve dimensions



Preparation for actuation

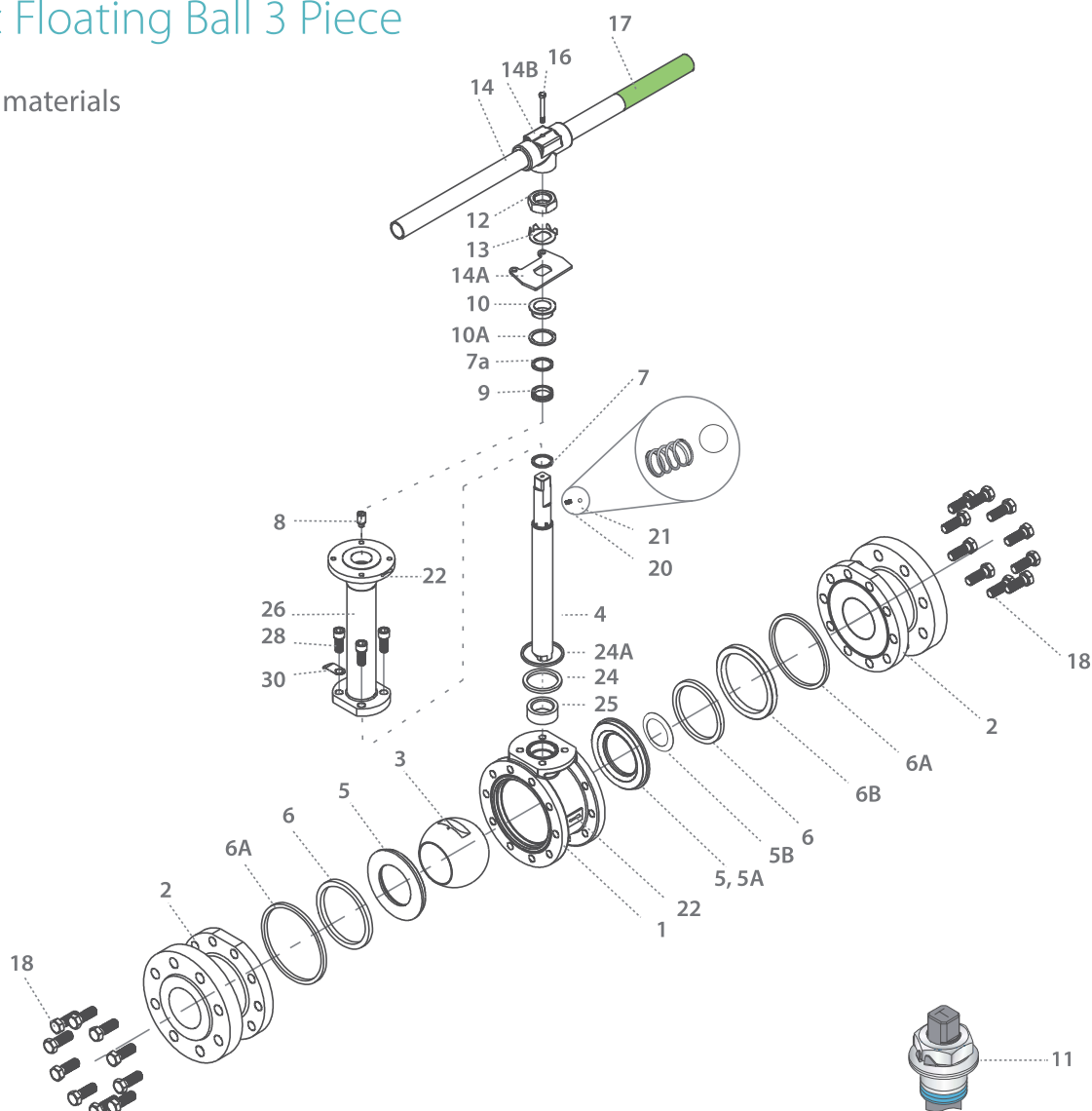


Full Port	Unit	Ball port	A		B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	F	TxL	Weight Kg/lb (Welded)		Kv	
			Welded	#600		C	D	G	H	C	D	G	H									Std.	6.0"		
																								C	
DN50	mm	51.05	200	292	75	432.5	479.1	345	431	239.9	286.5	152.4	238.4	401	165	18.9	15.9	1" - 14	16.7	(F10)	102	M10X15	25	22	421
2"	inch	2.01	7.87	11.5	2.95	17.03	18.86	13.58	16.97	9.44	11.28	6	9.39	15.79	6.5	0.74	0.63	UNS-2A	0.66		4.02		55	48	492
DN80	mm	80	356	356	110	511.5	580.6	385	632	278.9	348	152.4	399.4	916	210	28.45	23.75	1-½"	26.2	(F12)	125	M12X15	50	45	983
3"	inch	3.15	14.02	14.02	4.33	20.14	22.86	15.16	24.88	10.98	13.7	6	15.72	36.06	8.27	1.12	0.94	UNF-2A	1.03		4.92		110	99	1150
DN100	mm	100	400	432	135	527.3	596.4	385	646.5	294.7	363.8	152.4	413.9	916	275	28.45	23.75	1-½"	26.2	(F12)	125	M12X15	75	70	1807
4"	inch	3.94	15.75	17.01	5.31	20.76	23.48	15.16	25.45	11.6	14.32	6	16.3	36.06	10.83	1.12	0.94	UNF-2A	1.03		4.92		165	154	2114
DN150	mm	150	490	559	190	579	691.65	385	-	346.4	459.05	152.4	-	-	355	35.92	35.92	2"	40	(F14)	140	M16X20	155	140	4310
6"	inch	5.91	19.29	22.01	7.48	22.8	27.23	15.16	-	13.64	18.07	6	-	-	13.98	1.41	1.41	UN-2A	1.57		5.51		341	308	5043
DN200	mm	200	500	660	275	630	785	385	-	397.4	510.05	152.4	-	-	420	45.9	45.9	2-¾"	50	(F16)	165	M20X30	400	380	7970
8"	inch	7.87	19.69	25.98	10.83	24.8	30.9	15.16	-	15.65	20.08	6	-	-	16.54	1.81	1.81	UN-2A	1.97		6.5		880	836	9325



Cryogenic Floating Ball 3 Piece

Components & materials



Item	Description	Material specifications	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 housing	S. Steel	2
5B	Upstream seat spring	Inconel 718	1
6*	Inner seal	TFM	2
6A*	Outer seal	Acc. Ordering Code	2
6B	Support ring	S. Steel	1
7*	Stem thrust seal	PCTFE	1
7a*	Anti-abrasion ring	PCTFE	1
8	Stop pin	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

Item	Description	Material specifications	Qty.
13	Tab lock washer	S. Steel	1
14**	Handle	S. Steel	1
14A	Stop plate	S. Steel	1
14B	Wrench head	S. Steel	1
16	Wrench bolt	S. Steel	1
17	Sleeve	PVC	1
18	Body bolt	S. Steel	20-32
20	Anti-static spring	S. Steel	2
21	Anti-static plunger	S. Steel	2
22	Arrow flow	S. Steel	2
23	Tag (not shown)	S. Steel	1
24*	Bonnet inner seal	TFM	1
24A*	Bonnet outer seal	Acc. Ordering Code	1
25*	Stem bearing	PTFE	1
26	Bonnet	S. Steel	1
28	Bolt	S. Steel	4
30	Dog tag	S. Steel	1

* Repair kit components

** Gear operator should be used for size 6" DN150 and above (handle components are not included)



Cryogenic Floating Ball 3 Piece; BD - Bidirectional - 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	C	4	7	W	-	6	6	6	M	A	A	G	/	B	W			-				
Size		Features				Series		Design		Body material	Ends material	Ball material	Stem material	Seat material	Inner Seal	Outer Seal		End connection				Special features				

Size (1-2)		
Code	inch	mm
02	¼"	8
03	⅜"	10
05	½"	15
07	¾"	20
10	1"	25
12	1¼"	32
15	1½"	40
20	2"	50
25	2½"	65
30	3"	80
40	4"	100
60	6"	150
Features (3-6)		
F	Fire safe	
C	Cryogenic design	
B	Full port	
N	Control service	

Series (7-8)	
47	3 Piece Floating
Design (9)	
W	Total HermetiX Integrity package
Body material (11)	
6	CF8M
1	Bronze
7	Monel
End material (12)	
6	CF3M
1	Bronze
7	Monel
Ball material (13)	
6	S. Steel
1	Bronze
7	monel
Stem material (14)	
M	High Strength S. Steel
6	S. Steel
Z	Inconel
Seat material (15)	
A	TFM
C	PCTFE
P	CF PTFE
Inner Seal Material (16)	
A	TFM
G	Expanded graphite
Outer Seal Material (17)	
G	Expanded graphite
A	TFM

End connections (19-22)	
Welded	
BW10	Buttweld schd. 10
BW	Buttweld schd. 40
XBW10	Extended buttweld schd. 10
XBW	Extended buttweld schd. 40
BW5	Buttweld schd. 5
BW80	Buttweld schd. 80
BWO *	Buttweld tube OD
BWD	Buttweld DIN 11860
BWI	buttweld ISO
SW	Socket weld
SWO *	Socket weld tube OD
XBW80	Extended Buttweld 80
XSW	Extended socket weld
ETO *	Extended tube OD
ETI	Extended buttweld ISO
ETD	Extended buttweld DIN

* Std. port only

Threaded	
NPT	ASME B1.20.1 - National Pipe Taper thread
MNPT	Male NPT
BSPT	EN 10226 - Pipe Taper thread
MBSPT	Male BSPT
BSPP	ISO228-1, DIN3852 - Pipe parallel thread
DIN3852	DIN3852 - Pipe Parallel thread
AS5202	SAE internal straight thread

Flanged	
150	ASME B16.5 #150 RF
300	ASME B16.5 #300 RF
600	ASME B16.5 #600 RF
900	ASME B16.5 #900 RF
PN16	EN1092 PN16 RF
PN40	EN1092 PN40 RF
PN63	EN1092 PN63 RF
PN100	EN1092 PN100 RF
PN160	EN1092 PN160 RF

Clamp	
GR	Grayloc® compatible hub (Grayloc® is a registered trademark of Grayloc Products, L.L.C.)
TC *	Tri-Clamp
LL *	Compression fitting (Imperial) - No nuts & Ferrules
LM *	Compression fitting (metric) - No nuts & Ferrules
LL-NF *	Compression fitting (Imperial) - with nuts & Ferrules
LM-NF *	Compression fitting (metric) - with nuts & Ferrules

* Std. port only

Special Features (24-30)	
SPR	Spring loaded seat, valve 2½" Full port and up
SPR	Spring loaded seat, up to 2½" std. port
6.0	Short bonnet
BD	Bi-Directional Design
RJT	Ring Type Joint
B	Body made from rolled bar
EP	Electropolished
Vxx	V port, xx=angle
G...	Internal surface finish (G24, G32)
VBxx	Characterized control ball, xx=angle
FF	Flat face



Cryogenic Floating 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	C		2	6		-	6	6	6	M	F	A	G	/	B	W			-				
Size		Features				Series		Design		Body material	Ends material	Ball material	Stem material	Seat material	Inner Seal	Outer Seal	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
Features (3-6)		
F	Fire safe	
C	Cryogenic design	
N	Control	

Series (7-8)	
26	3 Piece Floating
Body material (11)	
6	S. Steel
1	Bronze
End material (12)	
6	S. Steel
1	Bronze
Ball material (13)	
6	S. Steel 316L
Stem material (14)	
M	High Strength S. Steel
Z	Inconel

Seat material (15)	
F	Hybrid Seat (info in special features)
Inner Seal Material (16)	
A	TFM
G	Expanded graphite
Outer Seal Material (17)	
G	Expanded graphite
A	TFM

End connections (19-22)	
Welded	
BW *	Buttweld schd. 40
BW10	Buttweld schd. 10
BW80	Buttweld schd. 80
SW	Socket weld
XBW10	Extended buttweld schd. 10
XBW	Extended buttweld schd. 40
XSW	Extended socket weld

* Up to 4" only

Flanged	
150	ASME B16.5 #150 RF
300	ASME B16.5 #300 RF
600	ASME B16.5 #600 RF
PN16	EN1092 PN16 RF
PN40	EN1092 PN40 RF
PN63	EN1092 PN63 RF
PN100	EN1092 PN100 RF

Flanged RTJ	
600RTJ	ASME B16.5 #600 RTJ

Clamp	
GR	Grayloc® compatible hub (Grayloc® is a registered trademark of Grayloc Products, L.L.C.)

Special Features (24-30)	
6.0	Short bonnet
Vxx	V port
VBxx	Characterized control ball

Hybrid Seats (24-27)

Insert material	Upstream/ Downstream		Insert Shape	Seal Type	
A	TFM	0	Hybrid seats on upstream and downstream, spring loaded	5	Seal 1: TFM; Seal 2: Expanded graphite
P	CF PTFE				
C	PCTFE			6	Seal 1: TFM

