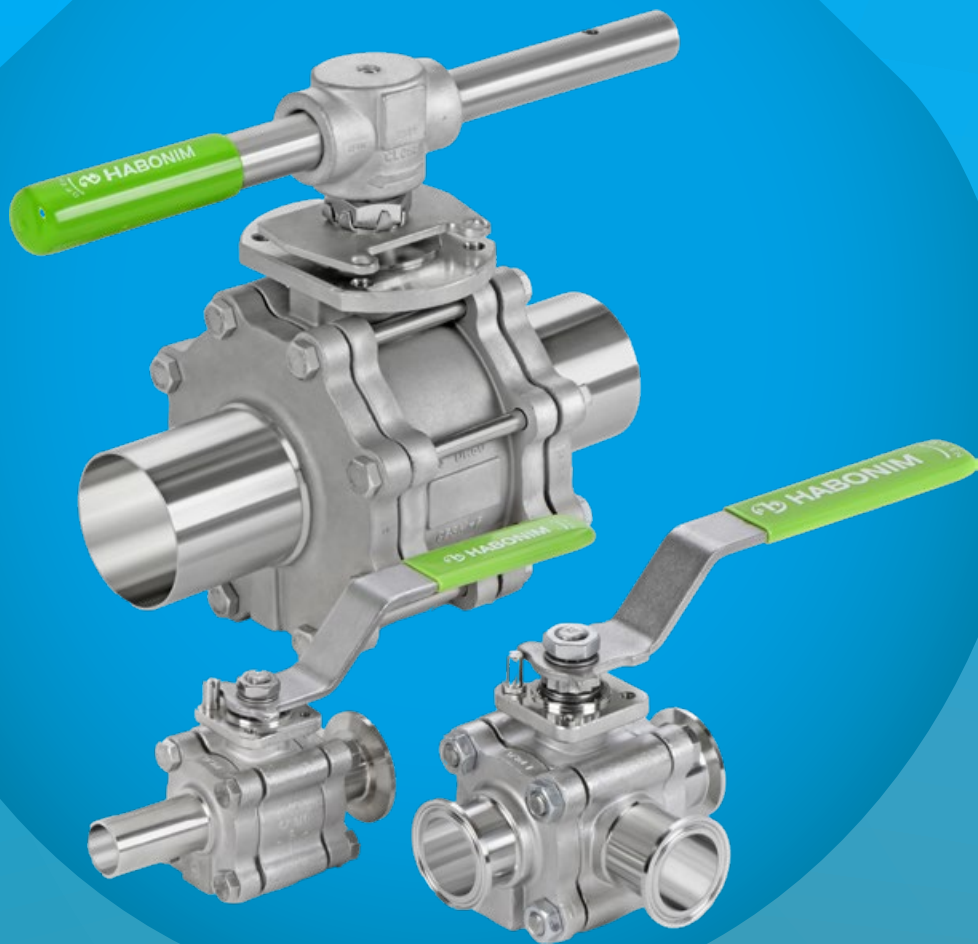


# HABONIM

## 48 Series Sanitary Ball Valves

 **HABONIM**



**FLOWTEKNIK**  
SCANDINAVIA APS





# SANITARY VALVES

Habonim sanitary ball valves are in service by the thousands for decades in leading biopharmaceutical, pharmaceutical, food and beverages manufacturing and processing facilities around the globe and by the leading companies of these industries.

A wide range of ball valves are offered by Habonim to support ASME BPE, European Sanitary Tubing, FDA and 3A standards and certifications, and are all fully tested and certified for fugitive-emission, fire-safe, PED, ATEX and other required standards that are mandatory in sanitary industry systems.

## 3A Certified

A specially designed product line certified for the Food & Beverages industry with a 3A mark (#3828)



## Features

### Standardized designs:

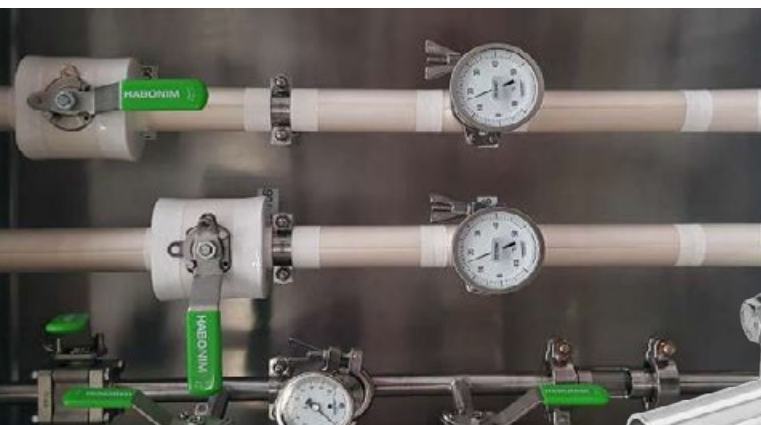
- ASME BPE fully compliant series.
- 3A 68-00 #3828 certified valve series.
- Valves ends per ISO 1127 and DIN EN 10357 (DIN 11850) available.
- HermetiX stem sealing – fugitive emission certified for ISO 15848-1 and API 641.
- Clean Fire-Safe construction – no graphite contamination to media design.
- Non-graphite construction available.

### Materials:

- 316L Stainless Steel as forge, cast or bar with controlled sulfur and ferrite levels for body and end connections.
- Mix of cast body and forge end connections is available as standard.
- 316L Stainless Steel for Ball & Stem, bolts, nuts and handle.
- FDA and USP Class VI compliant polymers or elastomers only.
- Hasteloy-C22 castings, AL6XN, Alloy 20, other exotic alloys – upon request.

### Sanitary & Cleaning features – available upon request:

- Cavity filler.
- Self-flush body, self-flush ball for Clean-In-Place and in-line cleaning.



**Surface finish:**

- All body, ball, seat retainer and end connections are polished internally.
- Bar-stock made valves are externally polished.
- Standard polishing level is 0.625 μ-m (25 μ-in) Ra max, Up to 0.375 μ-m (15 μ-in) Ra max level is available.
- Mechanical or electro-polishing is used.

**Valve Styles:**

- 3 pieces straight.
- Diverters & mixing bottom or side entry.
- Flush tank.
- Multi-ball manifolds.

CompAct actuators tailored to sanitary systems with special painting, coating & material selection.

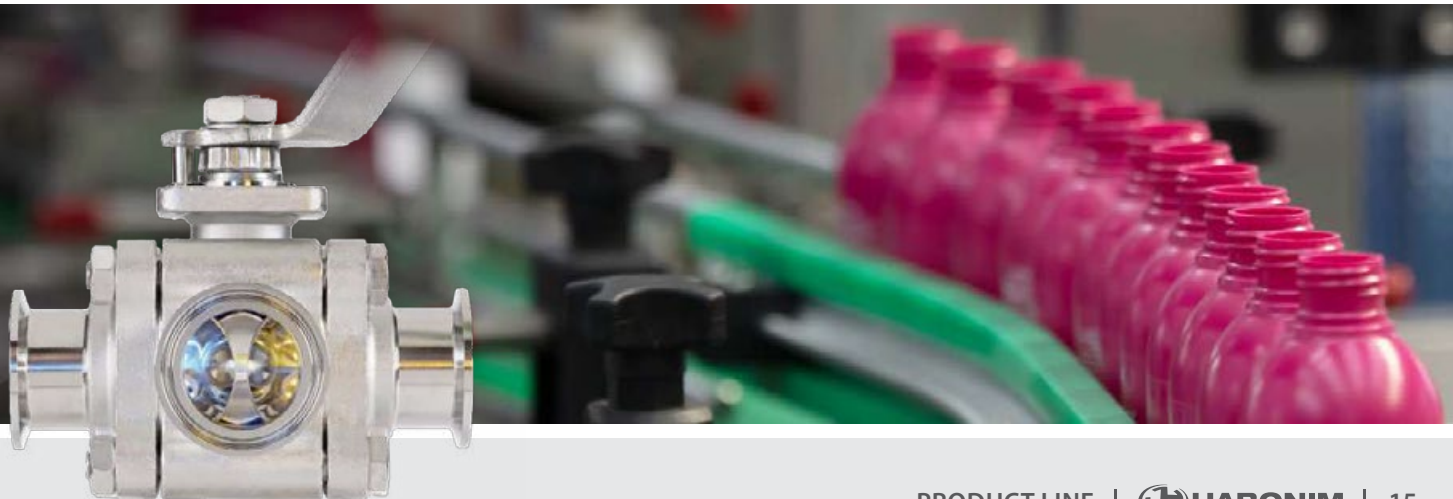
Testing & acceptance criteria for 48 series - inspection according to ASME –BPE: 2016.

Total Hermetix™ | **Port:**  Standard Port  Full Port  Tube Size | **End Connections:**  Threaded  Flanged  Welded

		Valve Size (Inches)											
		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6
Temperature: -60°C - +260°C (-76 °F ÷ +500 °F)	Floating Ball	3 Piece	48	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300				150
			Y47	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	900			400	
			L47	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300				
	Flush tank	R48		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300				150

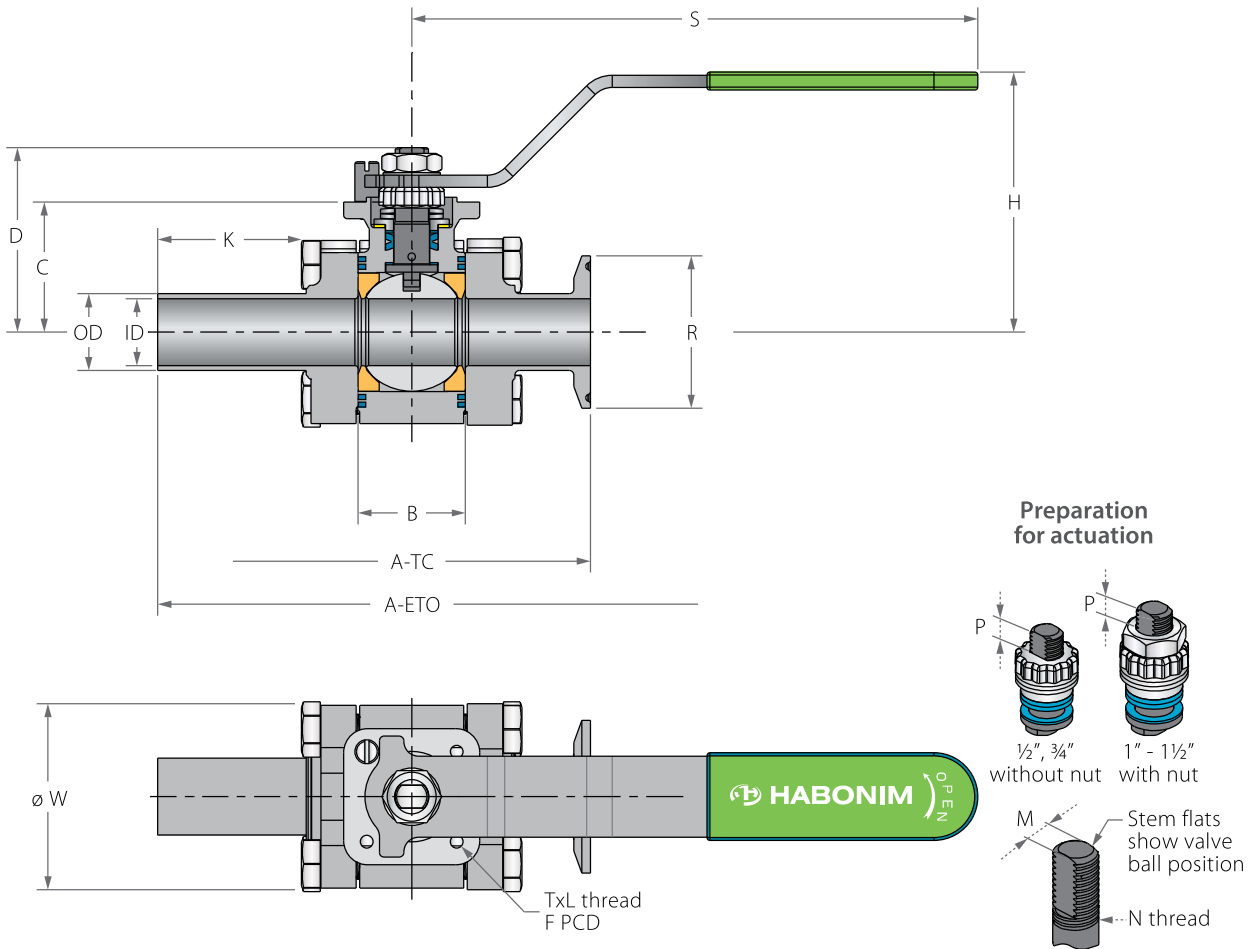
ASME Class	150 300 600 900 1500 2500 6000									
Pressure Bar	-1*	0	16	20	50	100	150	250	400	1000
Pressure psi	-14*	0	290	290	725	1450	2175	3600	5800	15000

\* Vacuum 10<sup>-6</sup> Tor



# ASME BPE Floating Ball 3 Piece

## Valve dimensions



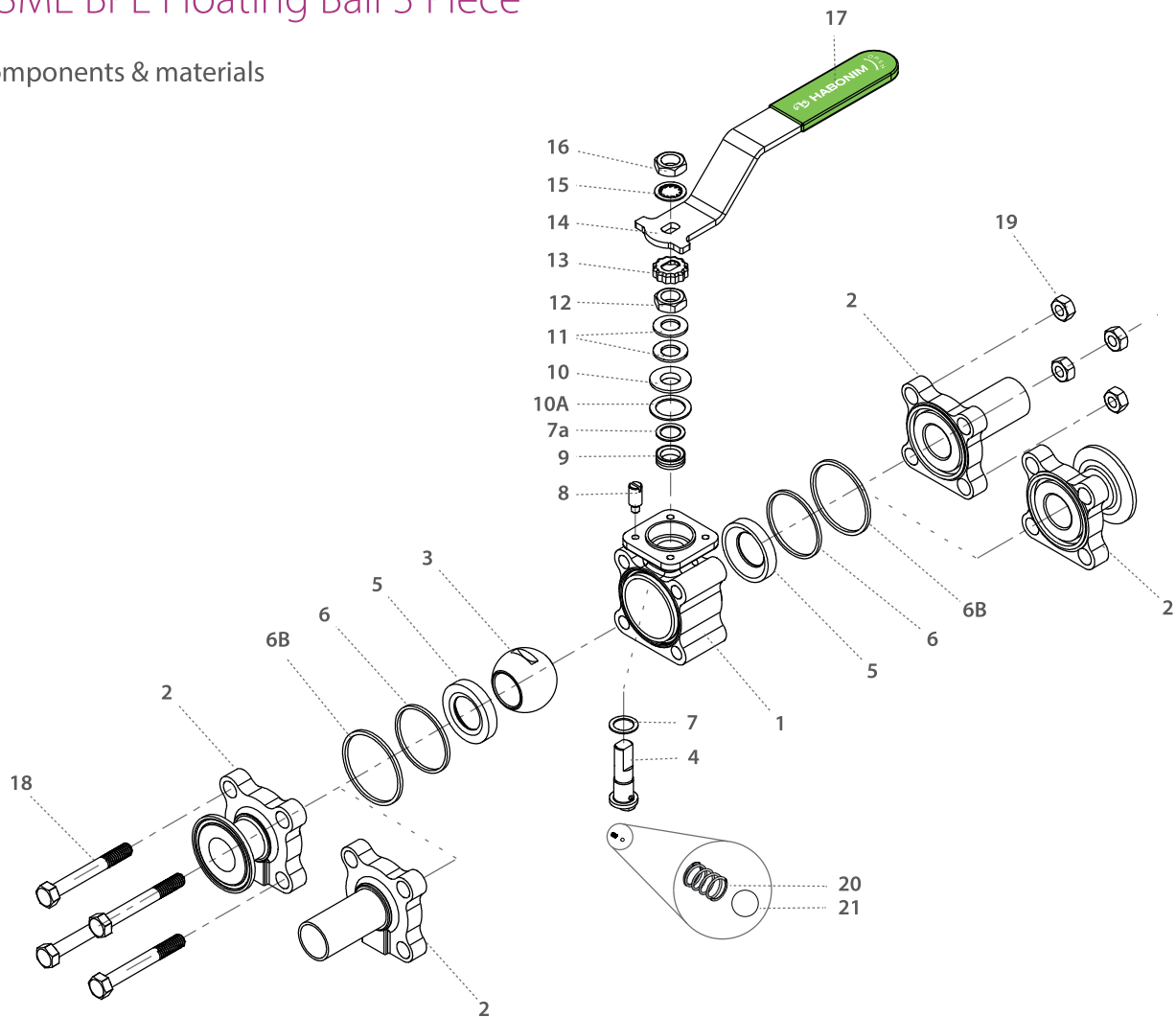
## Valve dimensions - TuBore™ size

TuBore™ size	Unit	OD	ID	A ETD	A TCD	B	C	D	H	K	S	W	R TCD	M	N	P	F	TxL	Weight kg/lb	Kv Cv
DN15	mm	12.70	9.40	137.00	89.00	20.60	29.00	38.00	61.60	41.50	150.00	45.75	25.20	5.54	3/8"	6.65 (F03)	36.00	M5X10	0.90	8
1/2"	inch	0.50	0.37	5.39	3.50	0.81	1.14	1.50	2.42	1.63	5.91	1.80	0.99	0.22	UNF	0.26	1.42	M5X10	2.00	9
DN20	mm	19.05	15.75	147.00	102.00	24.60	36.00	45.00	67.90	43.90	150.00	52.10	25.20	5.54	3/8"	6.65 (F03)	36.00	M5X10	1.00	29
3/4"	inch	0.75	0.62	5.79	4.00	0.97	1.42	1.77	2.67	1.73	5.91	2.05	0.99	0.22	UNF	0.26	1.42	M5X10	2.10	34
DN25	mm	25.40	22.10	168.00	118.00	35.50	43.50	61.00	84.80	43.90	187.00	60.45	50.40	7.54	7/16"	7.40 (F04)	42.00	M5X10	1.70	53
1"	inch	1.00	0.87	6.61	4.65	1.40	1.71	2.41	3.34	1.73	7.36	2.38	1.98	0.30	UNF	0.29	1.65	M5X10	3.80	62
DN40	mm	38.10	34.80	186.00	141.00	50.00	55.50	85.00	107.10	44.00	236.00	79.15	50.40	8.71	9/16"	8.50 (F05)	50.00	M6X12	3.50	150
1 1/2"	inch	1.50	1.37	7.31	5.57	1.97	2.19	3.35	4.22	1.73	9.29	3.12	1.98	0.34	UNF	0.33	1.97	M6X12	7.70	175



## ASME BPE Floating Ball 3 Piece

### Components & materials



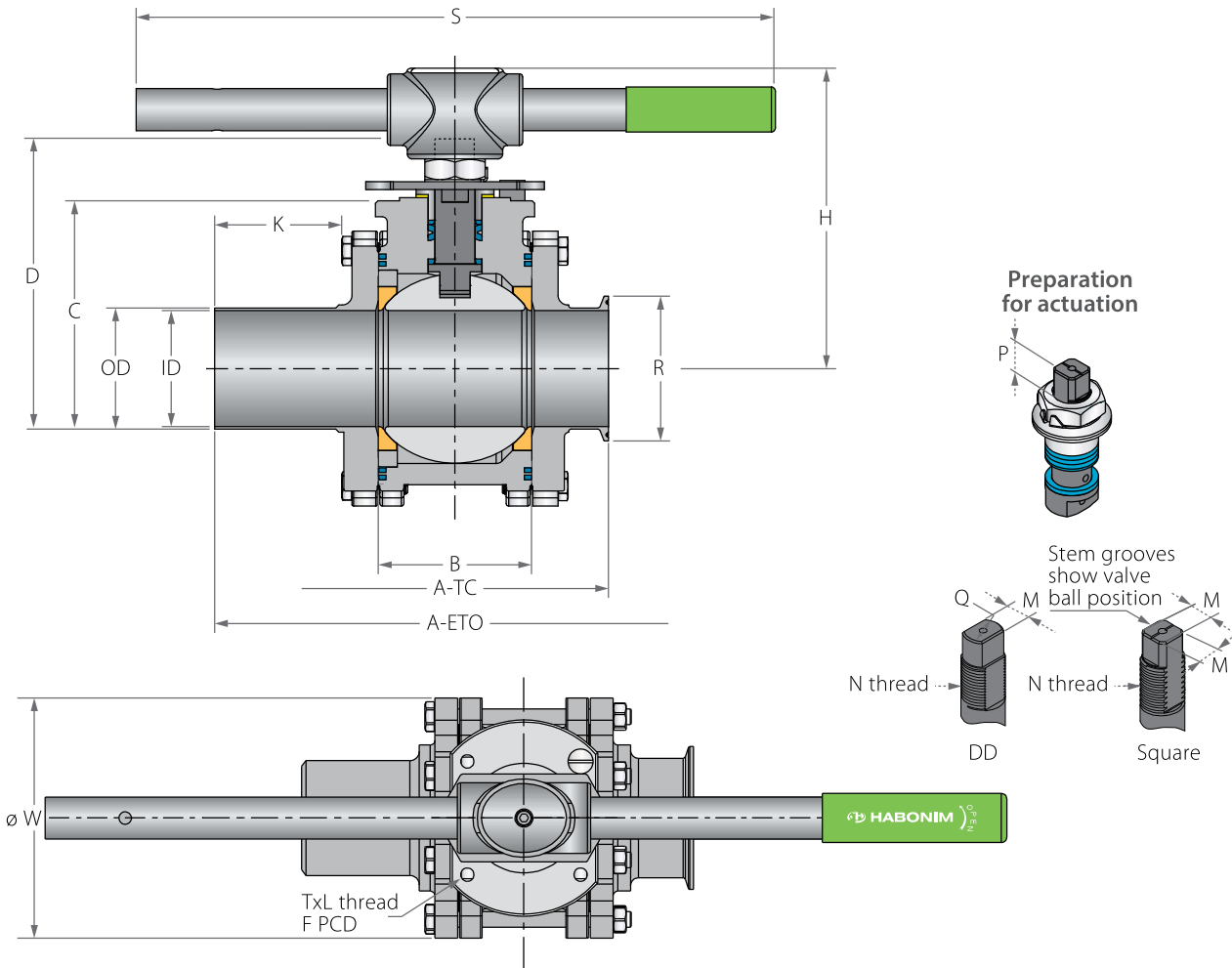
Item	Description	Material specification	Qty.
1	Body	Acc. Ordering Code	1
2	Ends	Acc. Ordering Code	2
3	Ball	Acc. Ordering Code	1
4	Stem	Acc. Ordering Code	1
5*	Seat	Acc. Ordering Code	2
6*	Body Inner Seal	PTFE	2
6B*	Body Outer Seal	Acc. Ordering Code	2
7*	Stem Thrust Seal	Virgin PEEK	1
7a*	Anti-Abrasion Ring	Virgin PEEK	1
8	Stop Pin	S. Steel	1
9*	Stem Seal	TFM	1
10	Follower	S. Steel	1
10A*	Slide Bearing	S. Steel	1

Item	Description	Material specification	Qty.
11	Disc Spring	S. Steel	2
12	Stem Nut	S. Steel	1
13	Locking Clip	S. Steel	1
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	4
19	Body Nut	S. Steel	4
20	Anti-Static Spring	S. Steel	1
21	Anti-Static Plunger	S. Steel	1
23	Tag (not shown)	S. Steel	1

\* Repair kit components

## ASME BPE Floating Ball 3 Piece

### Valve dimensions



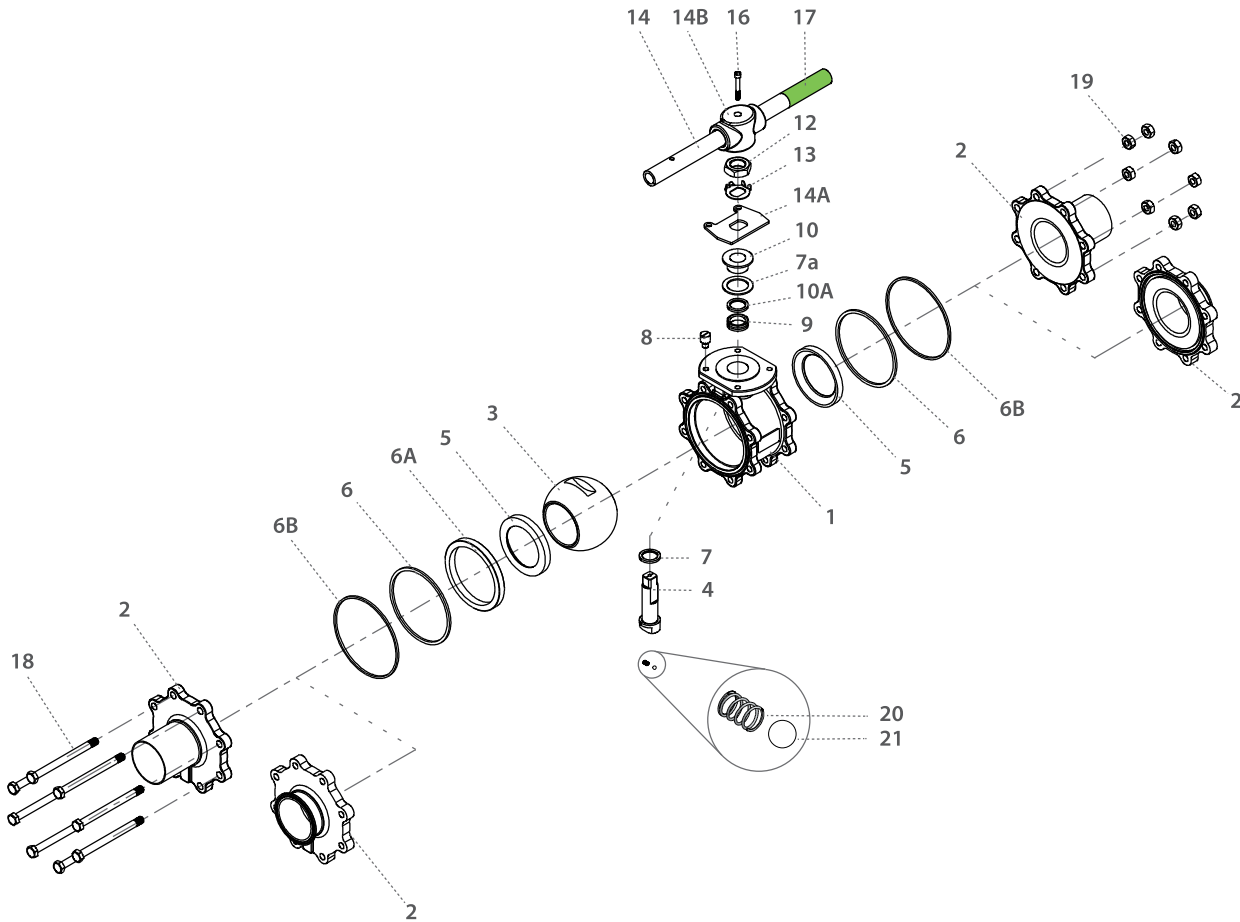
TuBore™ size	Unit	OD	ID	A ETO	A TC	B	C	D	H	K	S	W	RTC	M	M-DD	N	P	F	TxL	Weight kg/lb	Kv Cv
DN50	mm	50.80	47.50	223.00	184.00	72.70	70.00	112.10	143.10	45.00	256.00	108.00	64.20	-	13.90	M20x2.5	14.60 (F07)	70.00	M8x12	9.40	410
2"	inch	2.00	1.87	8.77	7.23	2.86	2.76	4.41	5.63	1.77	10.08	4.25	2.53	-	0.55		0.57	2.76		20.80	480
DN65	mm	63.50	60.20	250.40	169.10	83.35	98.30	144.90	185.10	57.20	401.00	153.10	77.40	18.90	15.90	1" -14 UNS-2A	16.70 (F10)	102.00	M10x20	13.70	581
2½"	inch	2.50	2.37	10.00	6.66	3.28	3.87	5.70	7.29	2.25	15.79	6.03	3.05	0.74	0.63		0.66	4.02		30.30	680
DN80	mm	76.20	72.90	302.00	193.00	96.40	105.50	152.20	192.40	70.00	401.00	172.80	90.90	18.90	15.90	1" -14 UNS-2A	16.70 (F10)	102.00	M10x20	17.70	748
3"	inch	3.00	2.87	11.90	7.60	3.80	4.15	5.99	7.57	2.75	15.79	6.80	3.58	0.74	0.63		0.66	4.02		39.10	875
DN100	mm	101.60	97.38	317.50	236.20	123.00	124.00	170.60	210.80	61.00	619.00	216.80	118.90	18.90	15.90	1" -14 UNS-2A	16.70 (F10)	102.00	M10x20	31.30	1333
4"	inch	4.00	3.83	12.50	9.30	4.84	4.88	6.71	8.30	2.40	24.37	8.54	4.68	0.74	0.63		0.66	4.02		69.20	1560
DN150	mm	152.40	146.86	460.00	328.00	180.00	179.00	248.50	303.00	82.00	916.50	326.80	166.50	28.45	23.75	1½"-12 UNF-1A	26.20 (F12)	125.00	M12x20	78.00	3218
6"	inch	6.00	5.78	18.11	12.91	7.09	7.05	9.78	11.93	3.23	36.08	12.87	6.56	1.12	0.94		1.03	4.92		172.00	3765





# ASME BPE Floating Ball 3 Piece

## Components & materials



Item	Description	Material specification	Qty.
1	Body	Acc. Ordering Code	1
2	Ends	Acc. Ordering Code	2
3	Ball	Acc. Ordering Code	1
4	Stem	Acc. Ordering Code	1
5*	Seat	Acc. Ordering Code	2
6*	Body Seal	PTFE	2
6A	Support Ring	S. Steel	1
6B*	Body Outer Seal	Acc. Ordering Code	2
7*	Stem Thrust Seal	Virgin PEEK	1
7a*	Anti-Abrasion Ring	Virgin PEEK	1
8	Stop Pin	S. Steel	1
9*	Stem Seal	TFM	1
10	Follower	S. Steel	1
10A*	Slide Bearing	S. Steel	1

Item	Description	Material specification	Qty.
11	Disc Spring	S. Steel	2
12	Stem Nut	S. Steel	1
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	8-12
19	Body Nut	S. Steel	8-12
20	Anti-Static Spring	S. Steel	1
21	Anti-Static Plunger	S. Steel	1
23	Tag (not shown)	S. Steel	1

\* Repair kit components

## ASME BPE Floating Ball 3 Piece

Valve dimensions - DIN 11850 sizes

DIN 11850 sizes	Unit	OD	ID	A	ETD	A	TCD	B	C	D	H	K	S	W	RTCD	M	N	P	F1	F2	TxL	Weight kg/lb	Kv Cv
DN10 3/8"	mm	13.00	10.00	100.00	90.00	20.60	29.00	38.00	46.30	41.50	115.00	69.00	34.00	5.54	3/8" UNF	7.20	-	32.00	M5X6		1.00	9	
	Inch	0.51	0.39	3.94	3.54	0.81	1.14	1.50	1.82	11.63	4.53	2.72	1.34	0.22							0.28	-	1.26
DN15 1/2"	mm	19.00	16.00	110.00	95.00	24.60	36.00	45.00	49.40	44.00	115.00	69.00	34.00	5.54	3/8" UNF	7.20	15.00	34.00	M5X6		1.30	30	
	Inch	0.75	0.63	4.33	3.74	0.97	1.42	1.77	1.94	1.73	4.53	2.72	1.34	0.22							0.28	0.59	1.34
DN20 3/4"	mm	23.00	20.00	120.00	110.00	31.70	36.00	45.00	61.00	44.00	146.00	79.00	34.00	5.54	3/8" UNF	7.20	20.00	36.00	M5X8		2.20	48	
	Inch	0.91	0.79	4.72	4.33	1.25	1.42	1.77	2.40	1.73	5.75	3.11	1.34	0.22							0.28	0.79	1.42
DN25 1"	mm	29.00	26.00	180.00	130.00	41.30	43.50	61.00	85.00	44.00	187.00	94.00	50.50	7.54	7/16" UNF	7.20	29.70	29.70	M5X8		2.80	97	
	Inch	1.14	1.02	7.09	5.12	1.63	1.71	2.41	3.35	1.73	7.36	3.70	1.99	0.30							0.28	1.17	1.17
DN32 1 1/4"	mm	35.00	32.00	190.00	140.00	48.40	55.50	85.00	99.00	46.00	237.00	99.00	50.50	7.54	7/16" UNF	8.00	35.35	35.35	M6X10		4.40	145	
	Inch	1.38	1.26	7.48	5.51	1.91	2.19	3.35	3.90	1.73	9.33	3.90	1.99	0.30							0.31	1.39	1.39
DN40 1 1/2"	mm	41.00	38.00	200.00	150.00	56.30	48.25	77.75	103.00	46.00	237.00	109.00	50.50	8.71	9/16" UNF	8.00	35.35	35.35	M6X10		8.00	168	
	Inch	1.61	1.50	7.87	5.91	2.22	1.90	3.05	4.06	1.73	9.33	4.29	1.99	0.34							0.31	1.39	1.39

DIN 11850 sizes	Unit	OD	ID	A	ETD	A	TCD	B	C	D	H	K	S	W	RTCD	M	M-DD	N	P	F1	F2	TxL	Weight kg/lb	Kv Cv
DN50 2"	mm	53.00	50.00	100.00	90.00	72.70	70.00	112.10	129.30	45.00	401.00	139.00	64.00	-	13.90	M20X2.5		14.60	70.00	49.50	M8X12		12	385
	Inch	2.09	1.97	3.94	3.54	2.86	2.76	4.41	5.09	1.77	15.79	5.47	2.52	-	0.57								0.57	2.76
DN65 2 1/2"	mm	70.00	66.00	110.00	95.00	83.40	98.30	144.90	169.20	57.20	401.00	164.00	91.00	18.90	15.90	1"-14 UNS-2A		16.70	102.00	100.00	M10X20		19	581
	Inch	2.76	2.60	4.33	3.74	3.28	3.87	5.70	6.66	2.25	15.79	6.46	3.58	0.74	0.63								0.66	4.02
DN80 3"	mm	85.00	81.00	120.00	110.00	112.00	105.50	152.20	184.50	70.00	401.00	199.00	106.00	18.90	15.90	1"-14 UNS-2A		16.70	102.00	120.00	M10X20		30	1060
	Inch	3.35	3.19	4.72	4.33	4.41	4.15	5.99	7.26	2.75	15.79	7.83	4.17	0.74	0.63								0.66	4.02
DN100 4"	mm	104.00	100.00	180.00	130.00	123.00	179.00	248.50	193.50	61.00	401.00	224.00	119.00	18.90	15.90	1"-14 UNS-2A		16.70	102.00	140.00	M10X20		40	1402
	Inch	4.09	3.94	7.09	5.12	4.84	7.05	9.78	7.62	2.40	15.79	8.82	4.69	0.74	0.63								0.66	4.02





## ASME BPE Floating Ball 3 Piece

### Valve dimensions - ISO 1127 sizes

ISO 1127 sizes	Unit	OD	ID	A ETD	A TCD	B	C	D	H	K	S	W	RTCD	M	N	P	F	TxL	Weight kg/lb	Kv Cv
DN10	mm	17.20	14.00	147.00	89.00	24.60	35.30	44.30	67.90	47.00	150.00	54.00	25.00	5.54	3/8"	6.50 (F03)	36.00	M5X6	1.00	9
3/8"	Inch	0.68	0.55	5.79	3.50	0.97	1.39	1.74	2.67	1.85	5.91	2.13	0.98	0.22	UNF	0.26	1.42		2.20	10
DN15	mm	21.30	18.10	164.00	118.00	31.70	38.20	55.70	86.00	49.00	187.00	61.00	50.50	7.50	7/16"	5.50 (F04)	42.00	M5X10	1.75	30
1/2"	Inch	0.84	0.71	6.46	4.65	1.25	1.50	2.19	3.39	1.93	7.36	2.40	1.99	0.30	UNF	0.22	1.65		3.85	35
DN20	mm	26.90	23.70	168.00	118.00	35.50	43.50	61.00	89.00	49.00	187.00	61.00	50.50	7.50	7/16"	7.20 (F04)	42.00	M5X10	2.00	48
3/4"	Inch	1.06	0.90	6.61	4.65	1.40	1.71	2.40	3.50	1.93	7.36	2.40	1.99	0.30	UNF	0.28	1.65		4.40	56
DN25	mm	33.70	29.70	186.00	141.00	50.00	51.50	81.00	105.00	49.00	236.00	80.00	50.50	8.67	9/16"	8.00 (F05)	50.00	M6X12	4.00	98
1"	Inch	1.33	1.17	7.32	5.55	1.97	2.03	3.19	4.13	1.93	9.29	3.15	1.99	0.34	UNF	0.31	1.97		8.80	114
DN32	mm	42.40	38.40	200.00	-	56.30	48.20	77.70	100.00	49.00	236.00	91.00	64.00	8.67	9/16"	8.00 (F05)	50.00	M6X12	5.00	145
1 1/4"	Inch	1.67	1.51	7.87	-	2.22	1.90	3.06	3.94	1.93	9.29	3.58	2.52	0.34	UNF	0.31	1.97		11.00	170

ISO 1127 sizes	Unit	OD	ID	A ETD	A TCD	B	C	D	H	K	S	W	RTCD	M	M-DD	Q	N	P	F	TxL	Weight kg/lb	Kv Cv
DN40	mm	48.30	44.30	223.00	184.00	72.70	70.00	112.10	143.10	45.00	401.00	108.00	64.00	-	13.90	20.00	M20	14.00 (F07)	70.00	M8X10	9.50	168
1 1/2"	inch	1.90	1.74	8.78	7.24	2.86	2.76	4.41	5.63	1.77	15.79	4.25	2.52	-	0.55	0.79		0.55	2.76		20.90	196
DN50	mm	60.30	56.30	250.40	169.10	83.35	98.30	144.90	185.10	57.20	401.00	139.70	77.50	18.90	15.90	22.70	1"-14	16.70 (F10)	102.00	M10X12	14.00	385
2"	inch	2.37	2.22	9.86	6.66	3.28	3.87	5.70	7.29	2.25	15.79	5.50	3.05	0.74	0.63	0.89	UNF-2A	0.66	4.02		30.80	450
DN65	mm	76.10	72.10	302.00	193.00	96.40	105.50	152.20	192.40	70.00	40.10	160.00	91.00	18.90	15.90	22.70	1"-14	16.70 (F10)	102.00	M10X12	17.70	581
2 1/2"	inch	3.00	2.84	11.89	7.60	3.80	4.15	5.99	7.57	2.76	1.58	6.30	3.58	0.74	0.63	0.89	UNF-2A	0.66	4.02		38.94	680
DN80	mm	88.90	84.30	349.00	236.00	108.80	114.10	160.70	200.00	80.00	600.00	177.00	106.00	18.90	15.90	22.70	1"-14	16.70 (F10)	102.00	M10X12	26.00	106
3"	inch	3.50	3.32	13.74	9.29	4.28	4.49	6.33	7.87	3.15	23.62	6.97	4.17	0.74	0.63	0.89	UNF-2A	0.66	4.02		57.20	1240



## ASME BPE 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	25	26	.	30
1	0				F	4	8	G	-	6	6	6	6	A	A	G	/	E	T	O		-					
Size		Features				Series		Design	Body/End material			Ball/Stem material		Seat	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

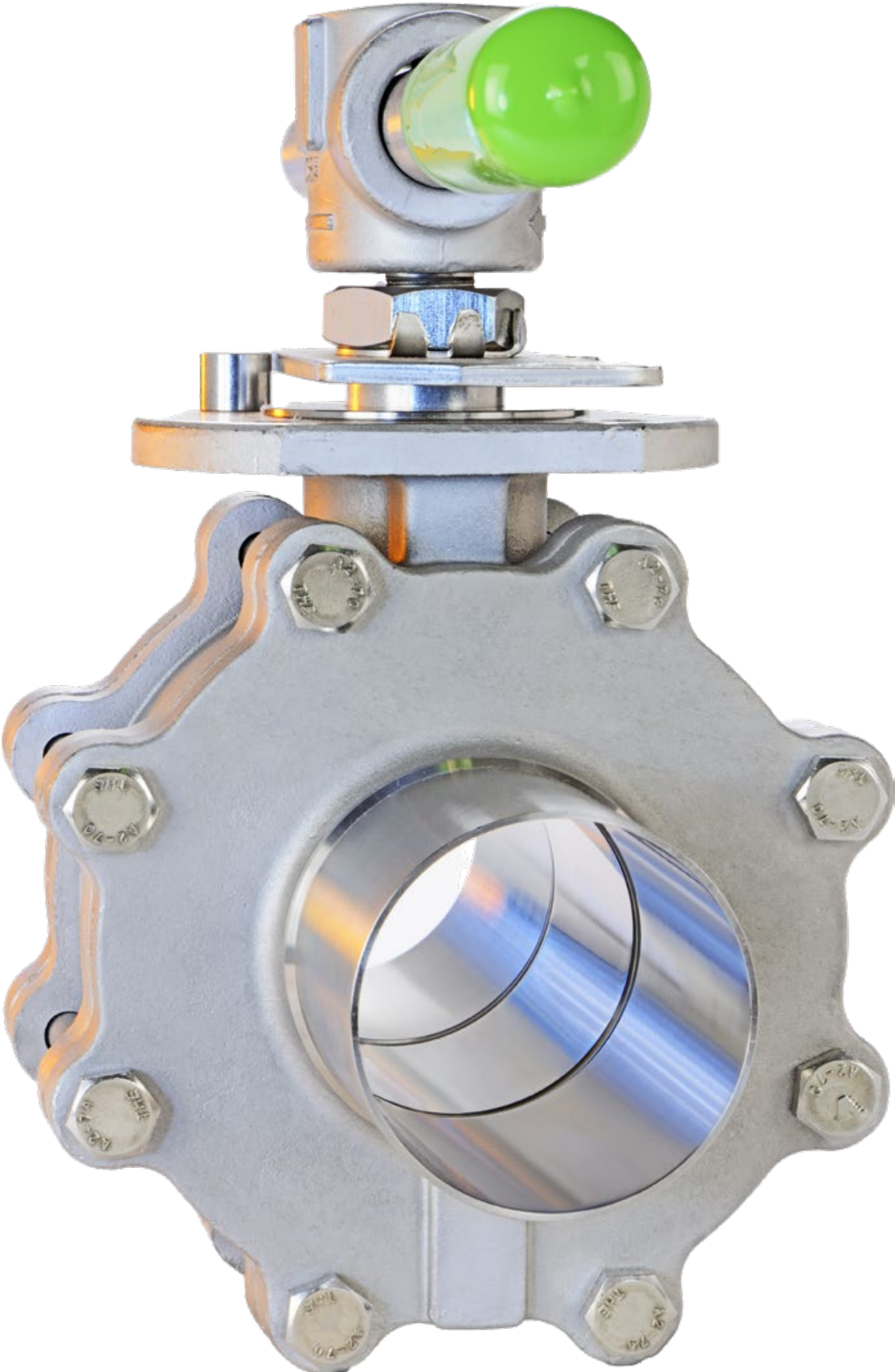
Features (3-6)	
F	Fire Safe
D	Diverter, Bottom entry
S	Diverter, Side entry
Q	Cavity filler seats
Series (7-8)	
48	ASME BPE Clean valves
Design (9)	
G	Total HermetiX Integrity package - FDA compliant
Body/Ends material (11-12)	
6	CF3M
P	S. St. 316L Forged
3	S. St. DIN 1.4435 Forged
W	ALLOY-C22

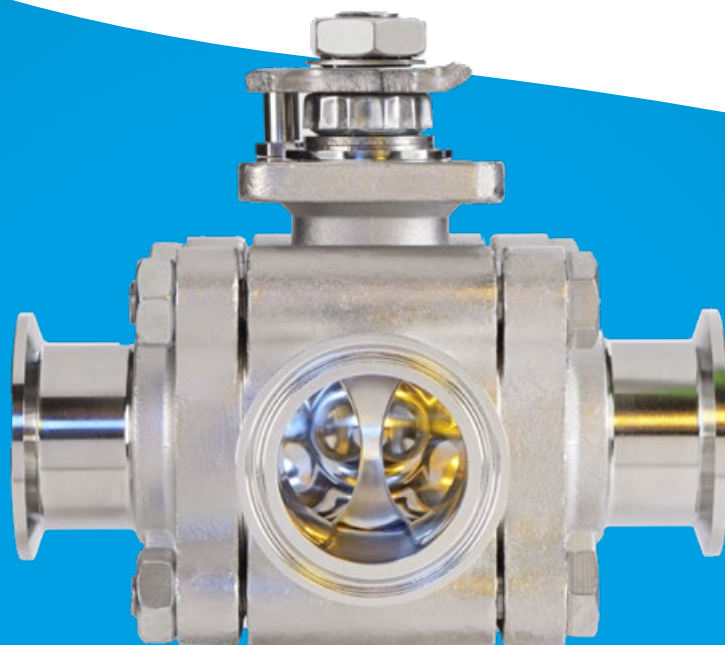
Ball material (13)	
6	ASTM A479 S. Steel316L
W	ALLOY-C22
Stem material (14)	
6	ASTM A479 S. Steel316L
W	ALLOY-C22
Seat material (15)	
A	TFM
L	Virgin PEEK
Inner Seal Material (16)	
A	TFM
Outer Seal Material (17)	
A	TFM
G	Expanded graphite

End connections (19-23)	
Welded	
ETO	Extended tube OD
Clamp	
TC	Tri-Clamp
Special Features (24-30)	
G32	ASME BPE surface designation SF1 - Internal polishing level of 0.51 μ-m, 20 μ-in Ra max.
E24	ASME BPE surface designation SF5 - Internal polishing & EP level of 0.51 μ-m, 20 μ-in Ra max.
E32	ASME BPE surface designation SF4 - Internal polishing & EP level of 0.38 μ-m, 15 μ-in Ra max.
B	Valve made from rolled bar

# HABONIM

## 48 Series





PG FLOWTEKNIK SCANDINAVIA APS - AUTHORIZED RESELLER OF

