

# Diverter valves



# Floating Ball Valves

Diverter valves

General

3 Piece

Flanged

Ordering code system

## Introduction

### Diverter valves

Diverter valves are primarily used to split or combine process flows, or to switch medium among different pieces of process equipment such as pumps, filters, or whole pipelines.

Diverter valves provide reliable high flow rates in the most severe operating conditions including vacuum conditions. They can also handle highly viscous media without the need for constant back-flushing.

The diverter valves are available with different ball designs to accommodate a wide range of flow patterns. These flexible flow combinations reduce the number of valves in a system, thereby saving costs and facilitating easier control. Because the body Face-to-Face dimensions of diverter valves are identical to those of standard two-way valves, changeover between the two configurations is relatively easy.

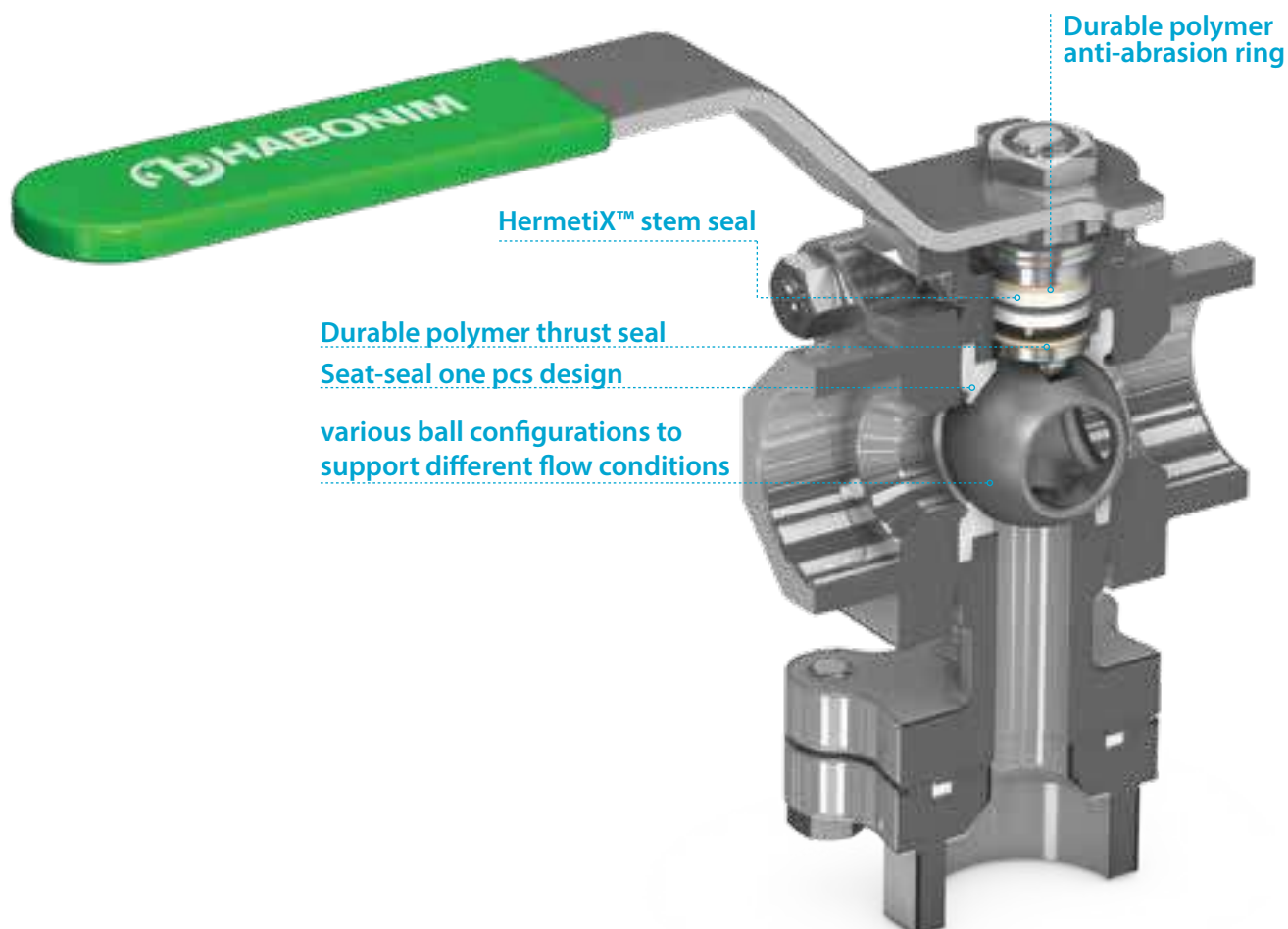
## Technical summary

<b>D47/S47 series</b>	Bottom or side entry, 3-piece diverter valve (standard and full port)
<b>Size range</b>	½"- 2" (DN15 - DN50)
<b>Pressure range</b>	ANSI Class 600   Vacuum 10 <sup>-6</sup> Tor to 103 bar (1500 psi)
<b>Size range</b>	2½"-6" (DN65 - DN150)
<b>Pressure range</b>	ANSI Class 300   Vacuum 10 <sup>-6</sup> Tor to 50 bar (725 psi)
<b>End connections</b>	Threaded, welded, Flanged
<b>D31/D32/S31/S32 series</b>	Bottom or side entry, diverter Flanged valve (standard port)
<b>Size range</b>	½"- 8" (DN15 - DN200)
<b>Pressure range</b>	ANSI Class 150/300   Vacuum 10 <sup>-6</sup> Tor to 20 bar/50 bar (290 psi /725 psi)
<b>End connections</b>	Flanged
<b>Temperature range</b>	-60 °C to +230 °C (-76 °F to +446 °F)
<b>Materials</b>	Stainless steel A351 CF8M/CF3M,A479 316/316L, Alloy C22, alloy C276 and more
<b>Operation</b>	Lever or gear operated, pneumatic or electric actuated
<b>Service</b>	Chemical, petrochemical, oil and gas, energy, pharmaceutical, food & beverage

## Standards of compliance

<b>Factory certification</b>	ISO 9001-2015	Quality management system
<b>Valve design &amp; tests</b>	ASME B16.34 :2013	Valve design
	API 6D / ISO14313 :2007	
	ISO17292 :2004	
	ANSI B1.20.1:2013	NPT - National Pipe Taper thread
	EN 10226-1:2004, ISO 7-1:2007, JIS B0203:1999	BSPT - British Standard Pipe Taper thread
	DIN3852:2014	BSPP
	ANSI B16.11:2016, EN 12760:2016	Socket weld end connection
	ASME B16.25-2017, EN12627:1999	Buttweld end connection (Schedule 5, 10, 40, 80)
	ASME B16.5:2017, EN 1092 -1:1997	Flanged dimensions
	ASME B16.10:2017, EN 558:2017	Face-to-Face dimensions
	NACE MR-0175:2015 /ISO 15156 -1:2015	Materials for use in H <sub>2</sub> S-containing environments in oil and gas production
	NACE MR0103/ISO 17945:2015	Metallic materials resistant to sulfide stress cracking in corrosive petroleum refining environments
	EN 12266-1, API 598	Testing of metallic valves - Pressure tests, test procedures and acceptance criteria.
API 607:2016, ISO 10497:2010	Testing of valves - fire type-testing requirements	
ISO 15848-1:2015	Industrial valves - measurement, test and qualification procedures for fugitive emissions	
<b>Certifications</b>	PED 2014/68/EU Module H	Pressure equipment directive
	ATEX 2014/34/EU	Equipment and protective systems intended for use in potentially explosive atmospheres (optional for actuated unit only)
	IEC 61508-2/3:2010 SIL2/3	Safety integrity level - Functional safety of electrical/electronic/programmable electronic safety-related systems (optional for actuated unit only)
<b>Documentation</b>	EN 10204:2004 2.2/3.1/3.2	Metallic materials - types of inspection documents

## Design features



### Body

- Three piece design
- Forged or cast body
- Full compliance with ASME B16.34 (wall thickness)
- Easy in-line serviceable with swing-out body
- Large range of end connections for full or standard port valves
- Rugged top mounting platform compliant with ISO 5211 for easy mounting of actuator and other accessories

### Ball

- various configurations
- Mirror polished solid ball
- High flow capacity with low pressure drop at full opening
- Floating ball concept for positive shutoff

### Stem

- One piece solid stem
- Blowout proof design
- Antistatic device

### Stem seal

- HermetiX™ ISO 15848-1 certified
- High endurance up to 500 thousand cycles
- Anti-abrasion mechanism
- Live loaded

### Seats and seals

- Seats and seals
- one piece integral design
- Low torque
- Rate A leakage tightness

# Floating Ball Valves

Diverter valves

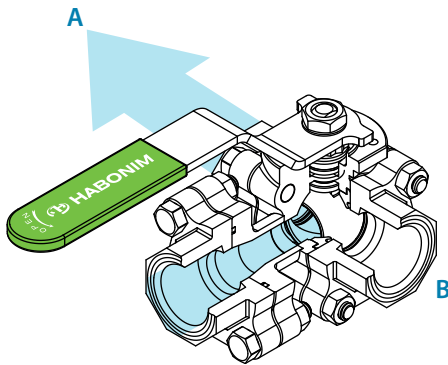
General

3 Piece

Flanged

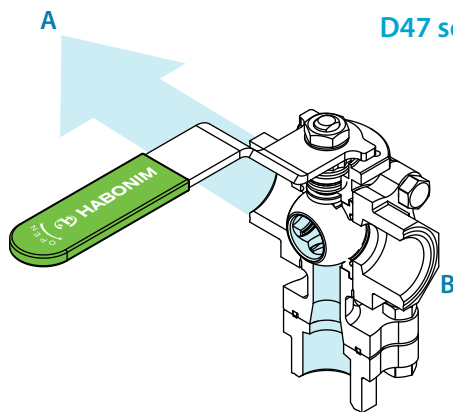
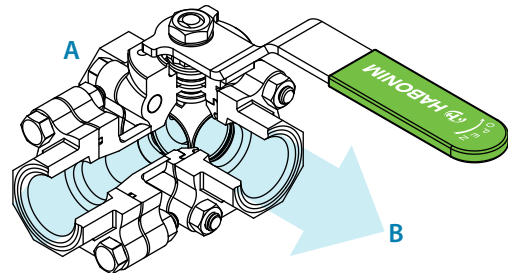
Ordering code system

## Three piece



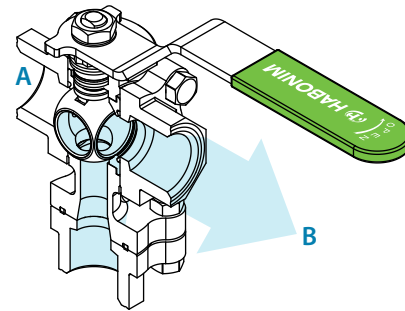
S47 series - Side Entry

Rotation: 90°



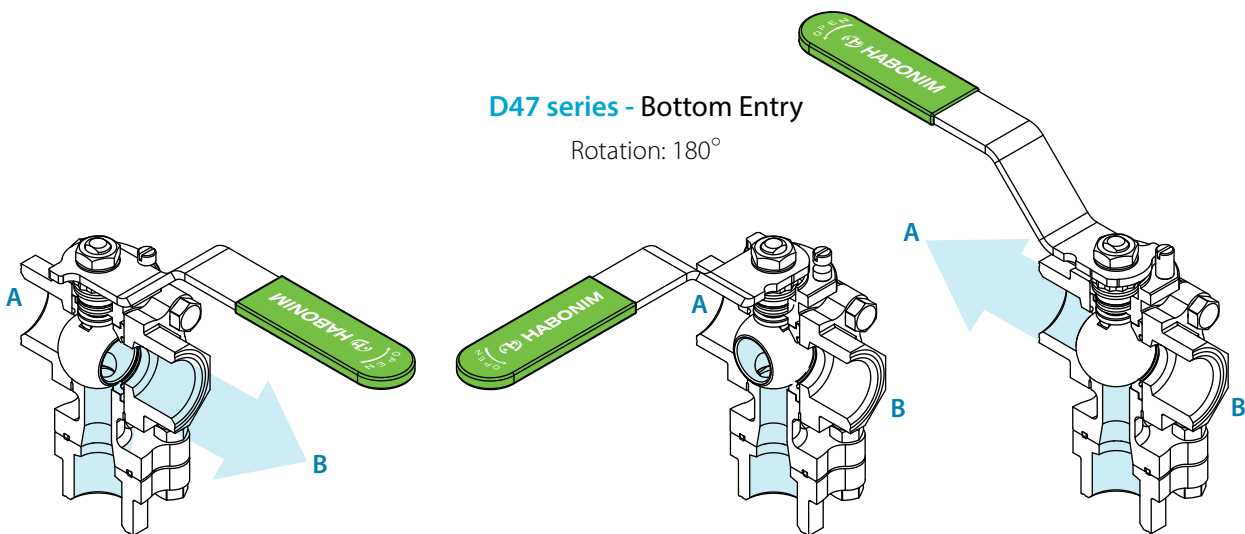
D47 series - Bottom Entry

Rotation: 90°



D47 series - Bottom Entry

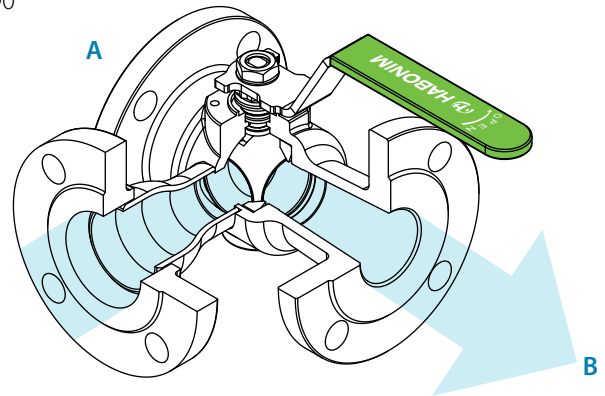
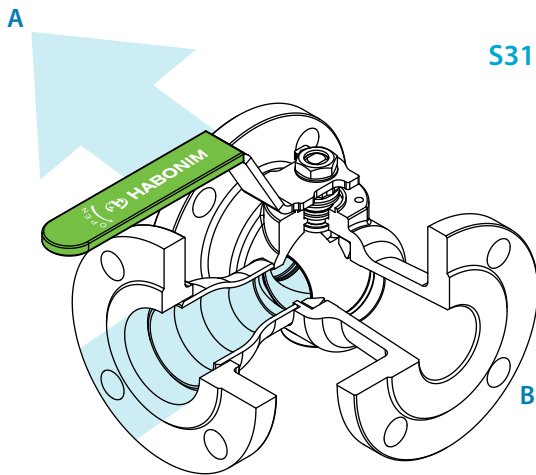
Rotation: 180°



**D31 & S31 Series**

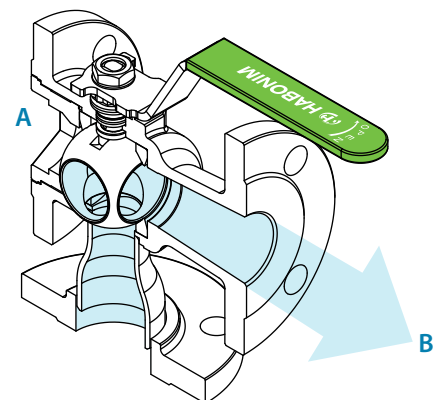
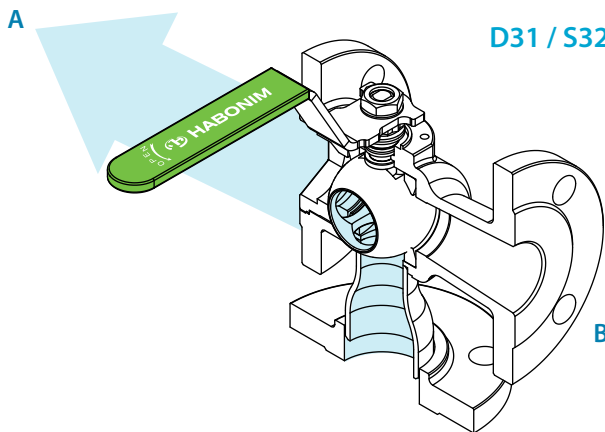
**S31 / S32 series - Side Entry**

Rotation: 90°



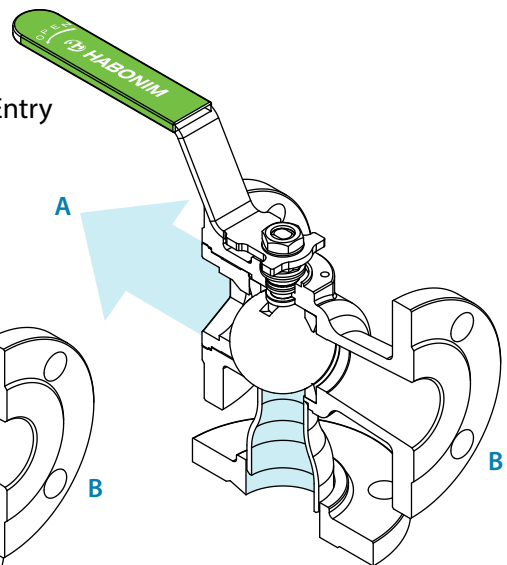
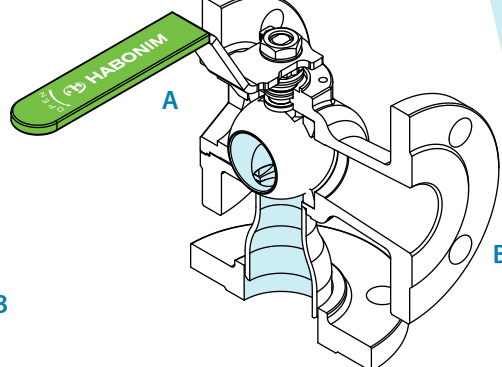
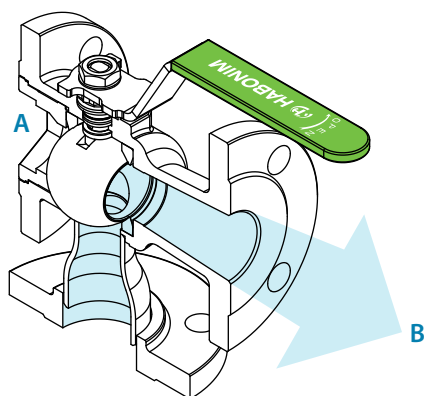
**D31 / S32 series - Bottom Entry**

Rotation: 90°



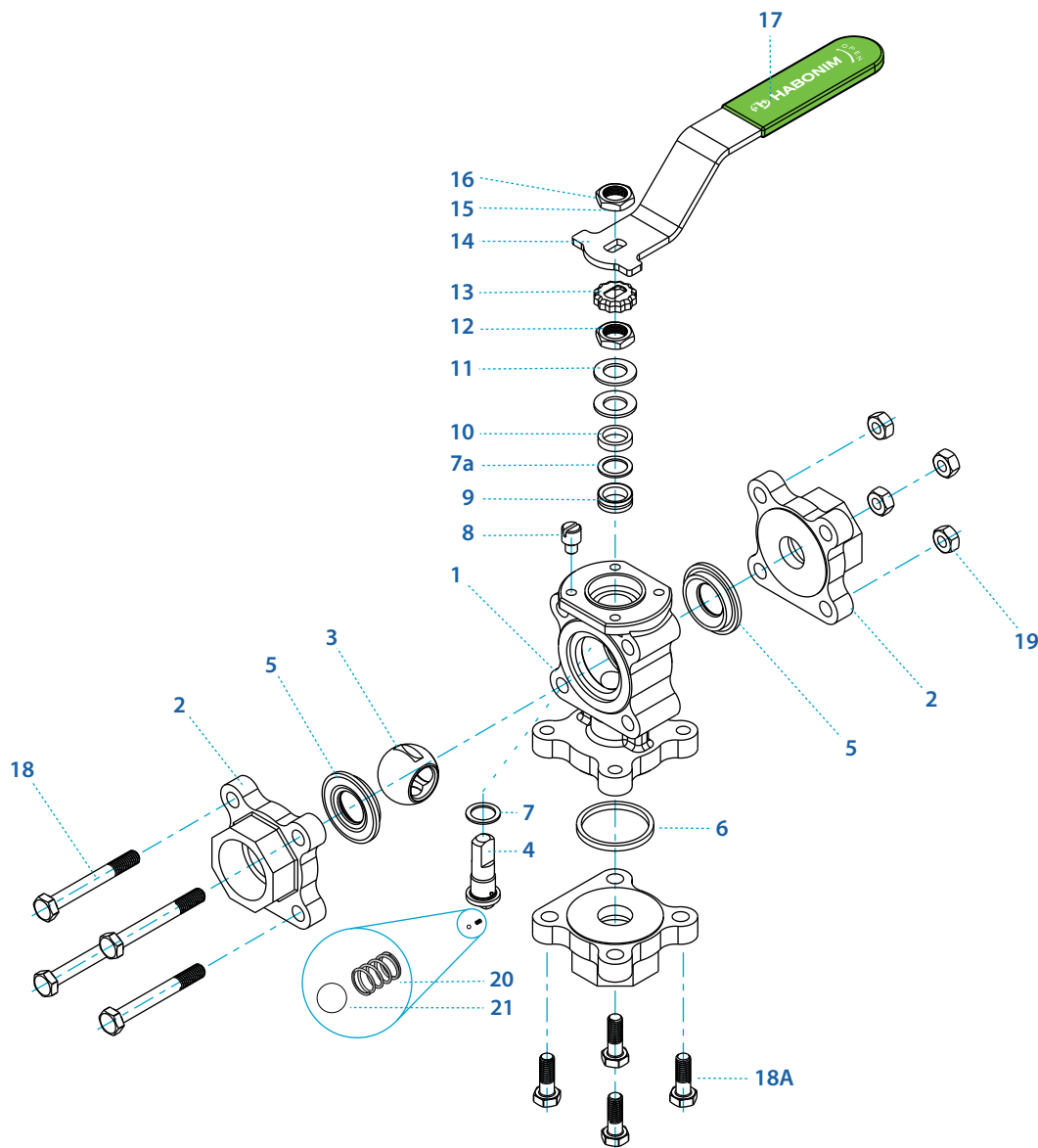
**D31 / D32 series - Bottom Entry**

Rotation: 180°





Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M35-1, A494 CW-12MW, A494 CX-2MW A351 CK3MCuN, A995 CD3MN 4A A995 CE3MN 5A	1
2	Ends	A351 CF3M, A216 WCB, A105, A351 CN7M, A494 M35-1, A494 CW-12MW, A494 CX-2MW A351 CK3MCuN, A995 CD3MN 4A A995 CE3MN 5A	3
3	Ball	A351 CF8M, B473 N08020 B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr.630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE <sup>(3)</sup> , TFM <sup>(3)</sup> , RPTFE <sup>(3)</sup> , CF PTFE <sup>(3)</sup> , PEEK, CF PEEK, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal <sup>(4)</sup>	PTFE, RPTFE, UHMWPE, Graphite, VITON, NBR, HNBR	1
6A***	Support ring	A479 316L, B473 N08020 B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	2
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1

Item	Description	Material specification	Qty.
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	C.St. A29 G10200 Zinc plated, A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	A194 Gr 8M, EN3506-2 A4-80	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70 / A4-80, A193 Gr B7 Zinc plated, A193 Gr B8M Zinc plated	4
18A	Body bolt	EN 3506-1 A2-70 / A4-80, A193 Gr B7 Zinc plated, A193 Gr B8M Zinc plated	4
19	Body nut	EN 3506-2 A4, A194 Gr 2H Zinc plated, A194 Gr 8M	4
20	Anti static spring	A313 302	1
21	Anti static plunger	A479 304	1
23	Tag (not shown)	A167 304	1

<sup>(1)</sup> D47P Series is Habonim's standard valve design without the HermetiX™ stem seal construction  
<sup>(2)</sup> This material can only be used as part of the D47P design  
<sup>(3)</sup> This material is available as standard as Seat-Seal one piece construction, No seal code require  
<sup>(4)</sup> One body seal is used in case of Seat-Seal one piece construction (item #5), otherwise three body seals are used  
<sup>(5)</sup> 2½" (DN65) size maximum pressure rating is Class 400.

\* Repair kit components  
 \*\* Only with HermetiX™ stem seal  
 \*\*\* Only with graphite body seal

# Floating Ball Valves

## Diverter valves

General

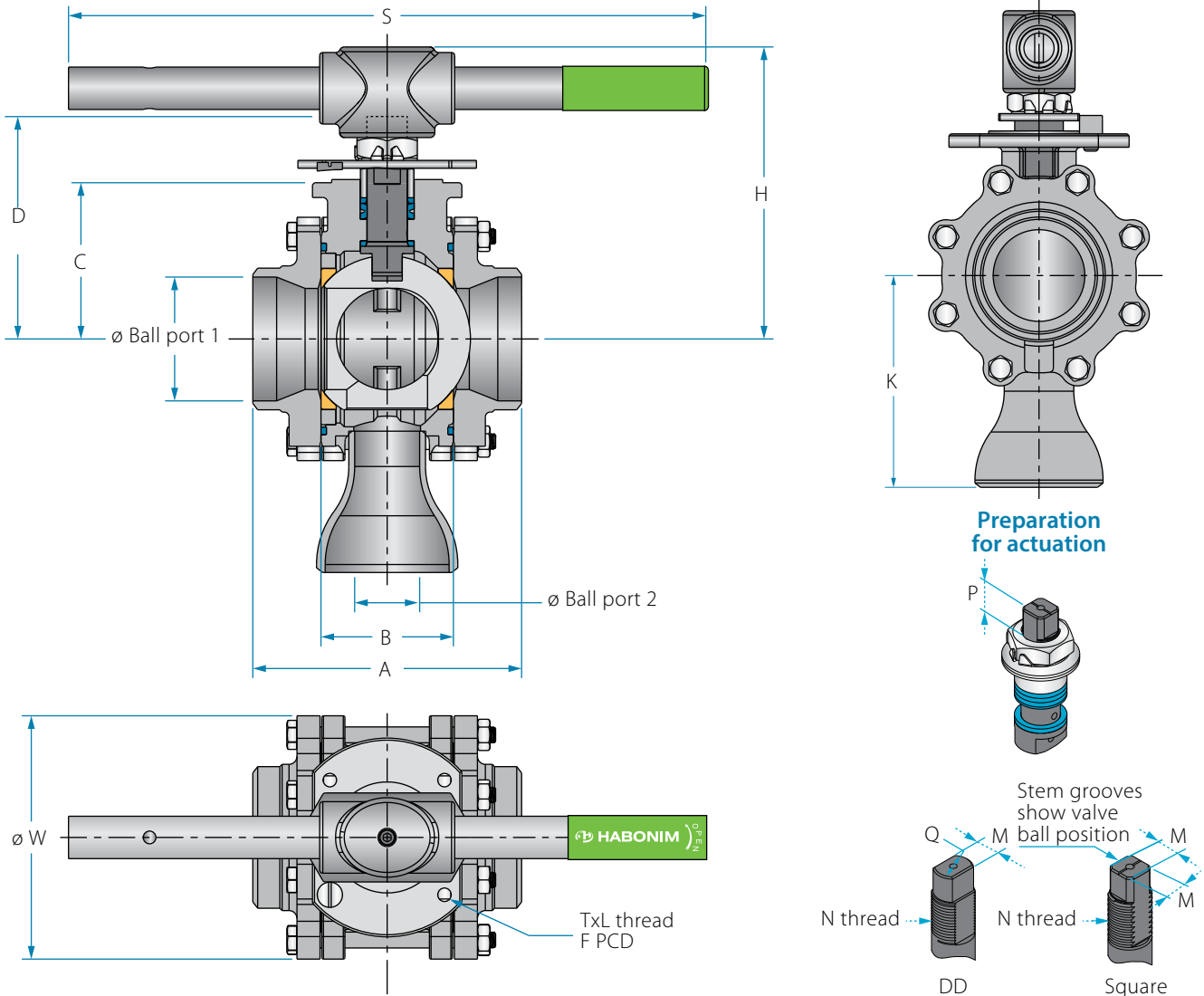
3 Piece

Flanged

Ordering code system

Size 3"- 6" | DN80-DN150 | Class 300 | D47X/D47P<sup>(1)</sup> Series

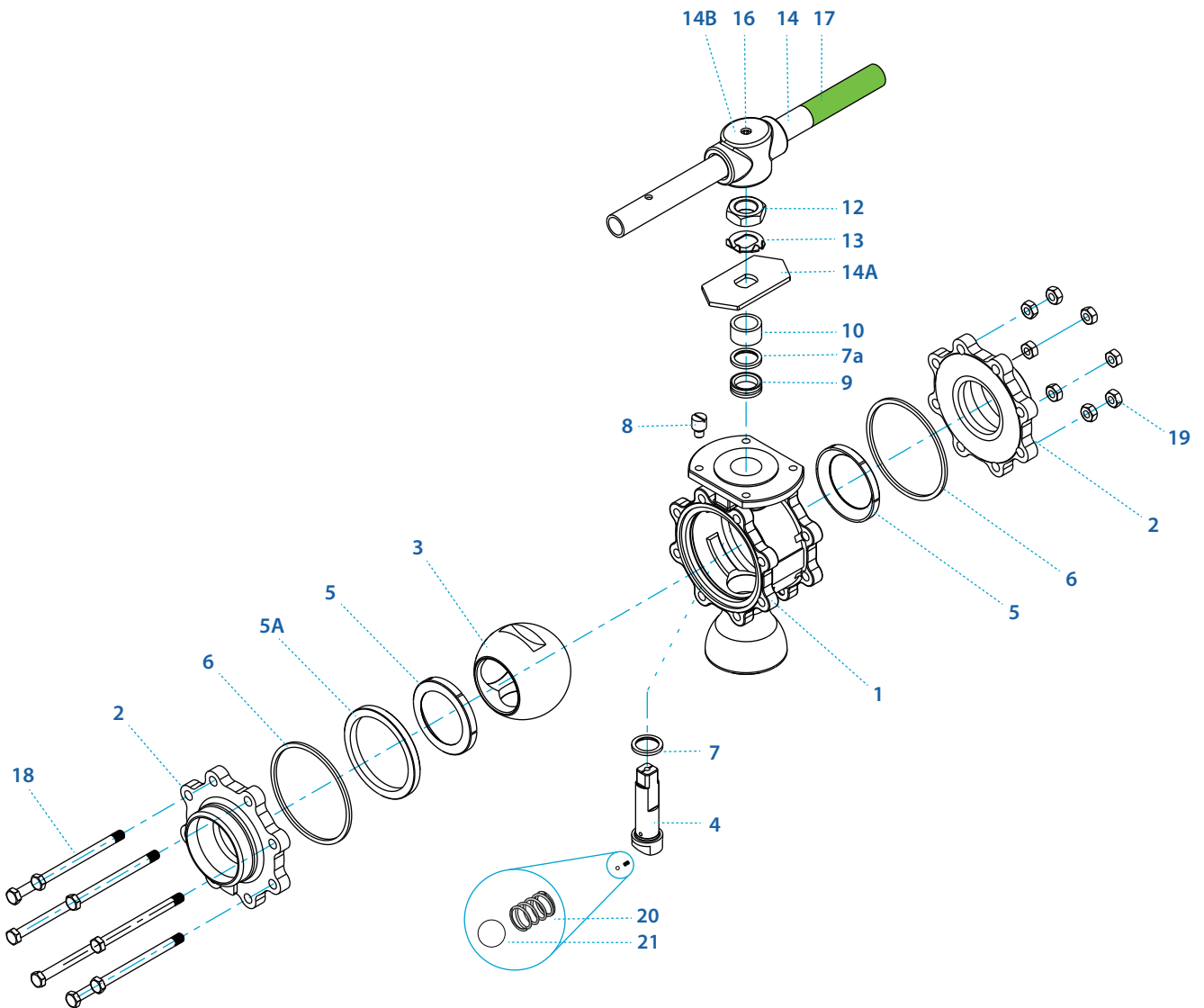
### Valve dimensions



Std. port	Full port	Unit	Ball port 1	Ball port 2	A	B	C	D	H	K	S	W	M	N	P	F	TxL	Weight kg/lb	Kv Cv
DN80	DN65	mm	63.75	80.50	169	83.3	98.3	144.9	185	163	400	18.90	15.90	1"-14	16.70 (F10)	102.00	M10x20	18.00	129
3"	2½"	inch	2.51	3.17	6.65	3.28	3.87	5.70	7.28	6.42	15.75	0.74	0.63	UNS-2A	0.66	4.02	M10x20	39.67	150
DN100	DN80	mm	80.00	63.25	214	108.8	114.1	160.7	200	183	600	18.90	15.90	1"-14	16.70 (F10)	102.00	M10x20	28.20	182
4"	3"	inch	3.15	2.49	8.43	4.28	4.49	6.33	7.87	7.20	23.62	0.74	0.63	UNS-2A	0.66	4.02	M10x20	62.15	211
	DN100	mm	92.00	67.00	239	123	124	170.5	211	200	600	18.90	15.90	1"-14	16.70 (F10)	102.00	M10x20	36.00	334
	4"	inch	3.62	2.64	9.41	4.84	4.88	6.71	8.31	7.87	23.62	0.74	0.63	UNS-2A	0.66	4.02	M10x20	79.34	388
DN150		mm	111.35	77.90	346	146	157	226	286	212	916	28.45	23.75	1½"-12	26.20 (F12)	125.00	M12x20	41.00	437
6"		inch	4.38	3.07	13.62	5.75	6.18	8.90	11.26	8.35	36.06	1.12	0.94	UNF-2A	1.03	4.92	M12x20	90.36	507



Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1

Item	Description	Material specification	Qty.
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	C.St. 1.0402 Zinc plate, A240 430	1
14B	Wrench head	Ductile Iron A536 Gr. 65-45-12, A216 WCB, A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70 / A4-80, A193 Gr B7 Zinc plated, A193 Gr B8M Zinc plated	8
19	Body nut	EN 3506-2 A4, A194 Gr 2H Zinc plated, A194 Gr 8M	8
20	Antistatic spring	A313 302	2
21	Antistatic plunger	A479 304	2
23	Tag (not shown)	A167 304	1

<sup>(1)</sup> D47P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the D47 design.

\* Repair kit components

\*\* Only with HermetiX™ stem seal

# Floating Ball Valves

## Diverter valves

General

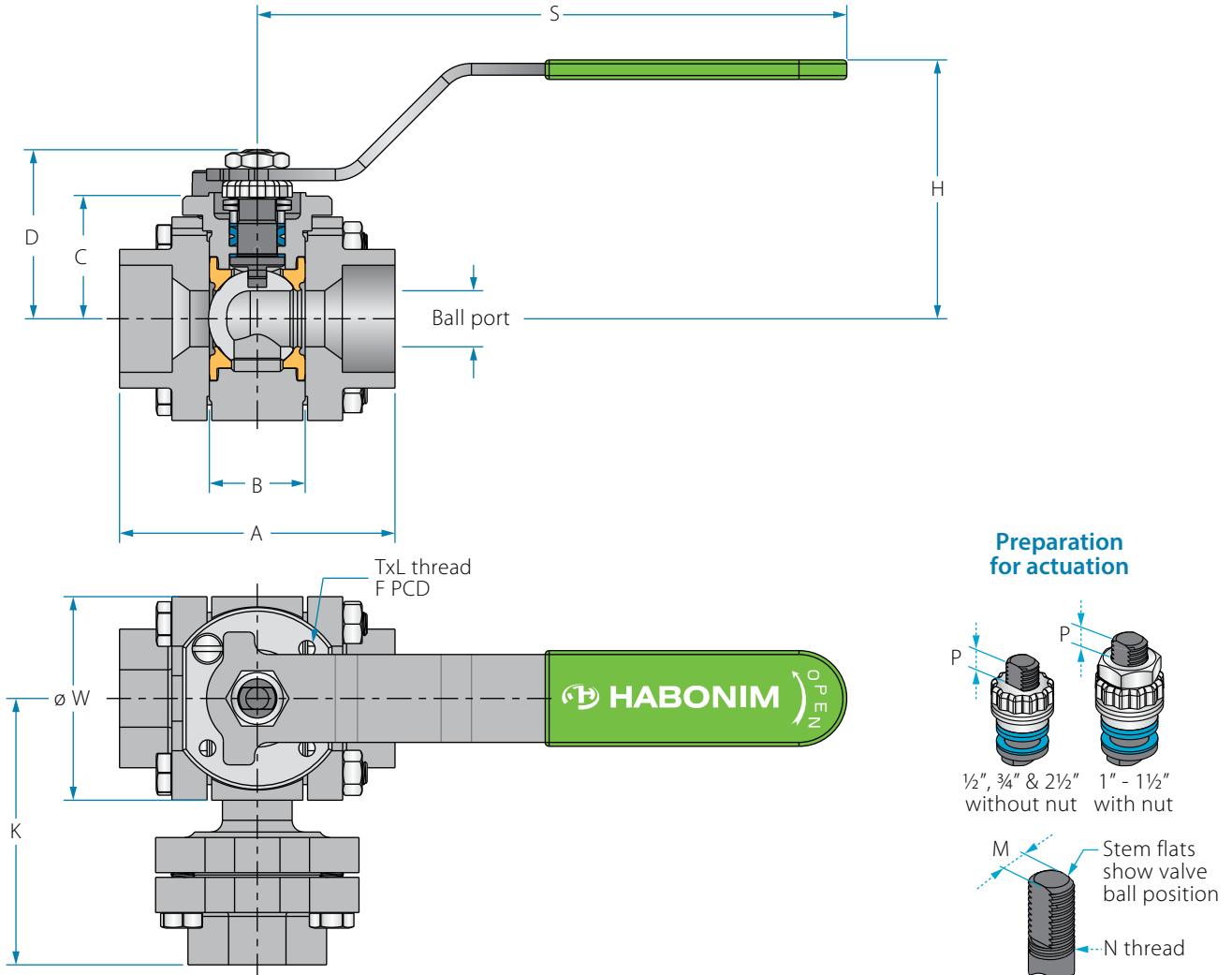
3 Piece

Flanged

Ordering code system

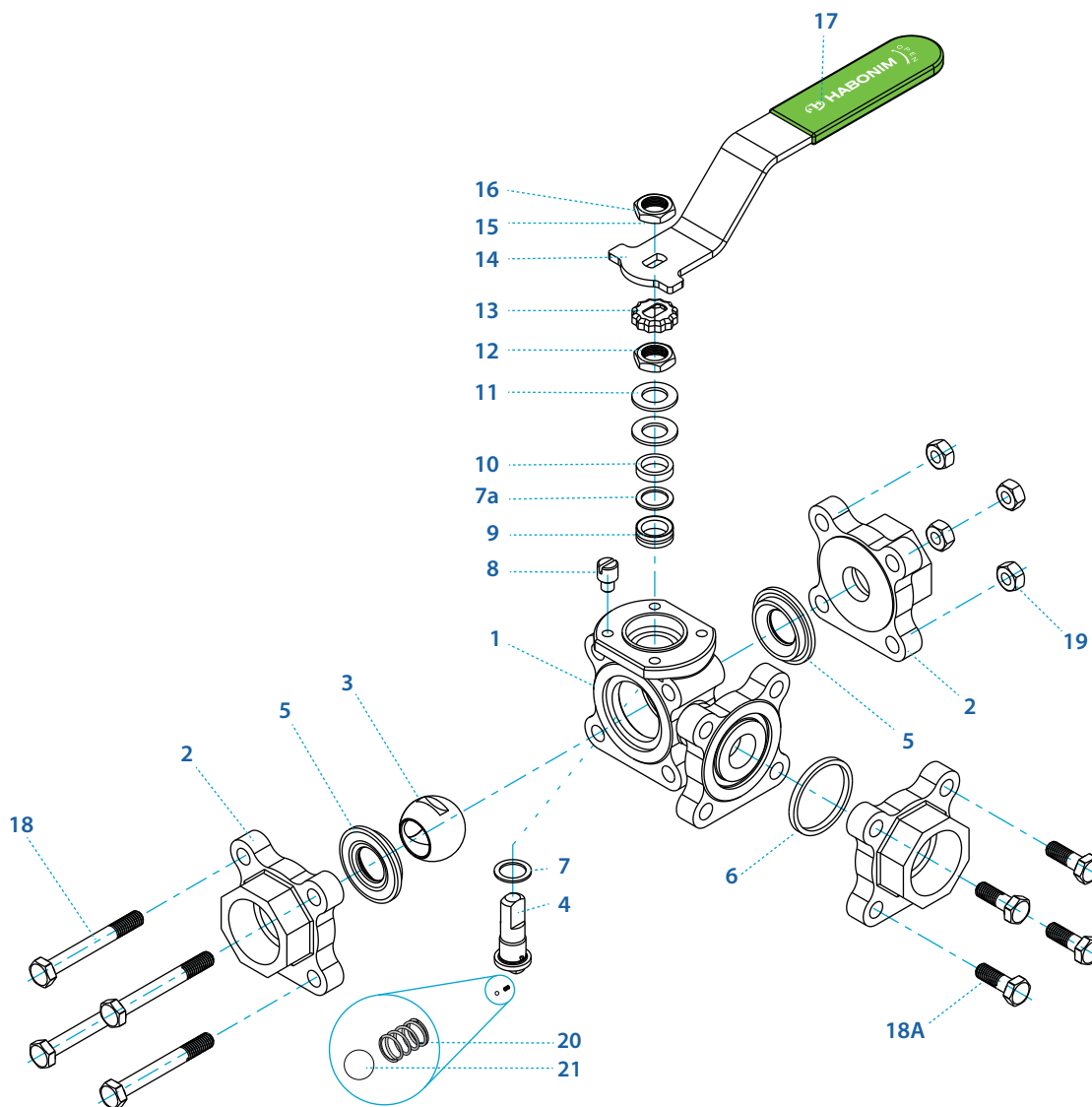
Size 1/2"- 2 1/2" | DN15-DN65 | Class 600 | S47X/S47P<sup>(1)</sup> Series

### Valve dimensions



Std. port	Full port	Unit	Ball port1	Ball port2	A	B	C	D	H	K	S	W	M	N	P	F	TxL	Weight kg/lb	Kv Cv	
	DN8	mm	10.50	9.50	66.00	20.60	29.00	37.90	61.50	88.20	150.00	47.00	5.54	3/8 UNF	6.65	(F03)	36.00	M5X10	1.00	2.4
	1/4"	inch	0.41	0.37	2.60	0.81	1.14	1.49	2.42	3.48	5.91	1.85	0.22		0.26		1.42			2.20
DN15	DN10	mm	10.50	9.50	66.00	20.60	29.00	37.90	61.50	88.20	150.00	47.00	5.54	3/8 UNF	6.65	(F03)	36.00	M5X10	1.00	2.8
	1/2"	3/8"	inch	0.41	0.37	2.60	0.81	1.14	1.49	2.42	3.48	5.91	1.85		0.22	0.26		1.42		
DN20	DN15	mm	14.30	11.90	70.60	24.50	31.40	40.30	63.90	93.70	150.00	53.70	5.54	3/8 UNF	6.65	(F03)	36.00	M5X10	1.20	4
	3/4"	1/2"	inch	0.56	0.47	2.78	0.97	1.24	1.59	2.52	3.68	5.91	2.11		0.22	0.26		1.42		
DN25	DN20	mm	20.60	15.90	93.70	31.70	38.10	55.60	79.40	119.00	187.00	63.70	7.54	7/16 UNF	7.40	(F04)	42.00	M5X10	2.40	8
	1"	3/4"	inch	0.81	0.63	3.69	1.25	1.50	2.19	3.13	4.68	7.36	2.51		0.30	0.29		1.65		
DN32	DN25	mm	25.40	20.50	108.00	41.30	42.70	60.20	84.10	130.15	187.00	71.70	7.54	7/16 UNF	7.40	(F04)	42.00	M5X10	4.00	16
	1 1/4"	1"	inch	1.00	0.81	4.25	1.62	1.68	2.37	3.31	5.13	7.36	2.82		0.30	0.29		1.65		
DN40	DN32	mm	31.80	26.60	115.50	48.40	43.60	73.00	97.00	139.05	237.00	86.70	8.71	9/16 UNF	8.50	(F05)	50.00	M6X12	5.50	40
	1 1/2"	1 1/4"	inch	1.25	1.05	4.55	1.91	1.72	2.87	3.82	5.47	9.33	3.41		0.34	0.33		1.97		
DN50	DN40	mm	38.10	35.00	128.00	56.30	48.30	77.80	101.80	149.45	237.00	96.90	8.71	9/16 UNF	8.50	(F05)	50.00	M6X12	6.90	42
	2"	1 1/2"	inch	1.50	1.38	5.04	2.22	1.90	3.06	4.01	5.88	9.33	3.82		0.34	0.33		1.97		
DN65	DN50	mm	50.80	48.00	158.00	72.60	70.00	88.10	115.10	175.40	237.00	108.00	8.71	9/16 UNF	13.50	(F07)	70.00	M8X12	14.45	96
	2 1/2"	2"	inch	2.00	1.89	6.22	2.86	2.76	3.47	4.53	6.90	9.33	4.25		0.34	0.53		2.76		

Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M35-1, A494 CW-12MW, A494 CX-2MW A351 CK3MCuN, A995 CD3MN 4A A995 CE3MN 5A	1
2	Ends	A351 CF3M, A216 WCB, A105, A351 CN7M, A494 M35-1, A494 CW-12MW, A494 CX-2MW A351 CK3MCuN, A995 CD3MN 4A A995 CE3MN 5A	3
3	Ball	A351 CF8M, B473 N08020 B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr.630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE <sup>(3)</sup> , TFM <sup>(3)</sup> , RPTFE <sup>(3)</sup> , CF PTFE <sup>(3)</sup> , PEEK, CF PEEK, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal <sup>(4)</sup>	PTFE, RPTFE, UHMWPE, Graphite, VITON, NBR, HNBR	1
6A***	Support ring	A479 316L, B473 N08020 B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	2
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1

Item	Description	Material specification	Qty.
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	C.St. A29 G10200 Zinc plated, A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	A194 Gr 8M, EN3506-2 A4-80	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70 / A4-80, A193 Gr B7 Zinc plated, A193 Gr B8M Zinc plated	4
18A	Body bolt	EN 3506-1 A2-70 / A4-80, A193 Gr B7 Zinc plated, A193 Gr B8M Zinc plated	4
19	Body nut	EN 3506-2 A4, A194 Gr 2H Zinc plated, A194 Gr 8M	4
20	Anti static spring	A313 302	1
21	Anti static plunger	A479 304	1
23	Tag (not shown)	A167 304	1

<sup>(1)</sup> S47P Series is Habonim's standard valve design without the HermetiX™ stem seal construction  
<sup>(2)</sup> This material can only be used as part of the S47P design  
<sup>(3)</sup> This material is available as standard as Seat-Seal one piece construction, No seal code required  
<sup>(4)</sup> One body seal is used in case of Seat-Seal one piece construction (item #5), otherwise three body seals are used

\* Repair kit components  
 \*\* Only with HermetiX™ stem seal  
 \*\*\* Only with graphite body seal

# Floating Ball Valves

## Diverter valves

General

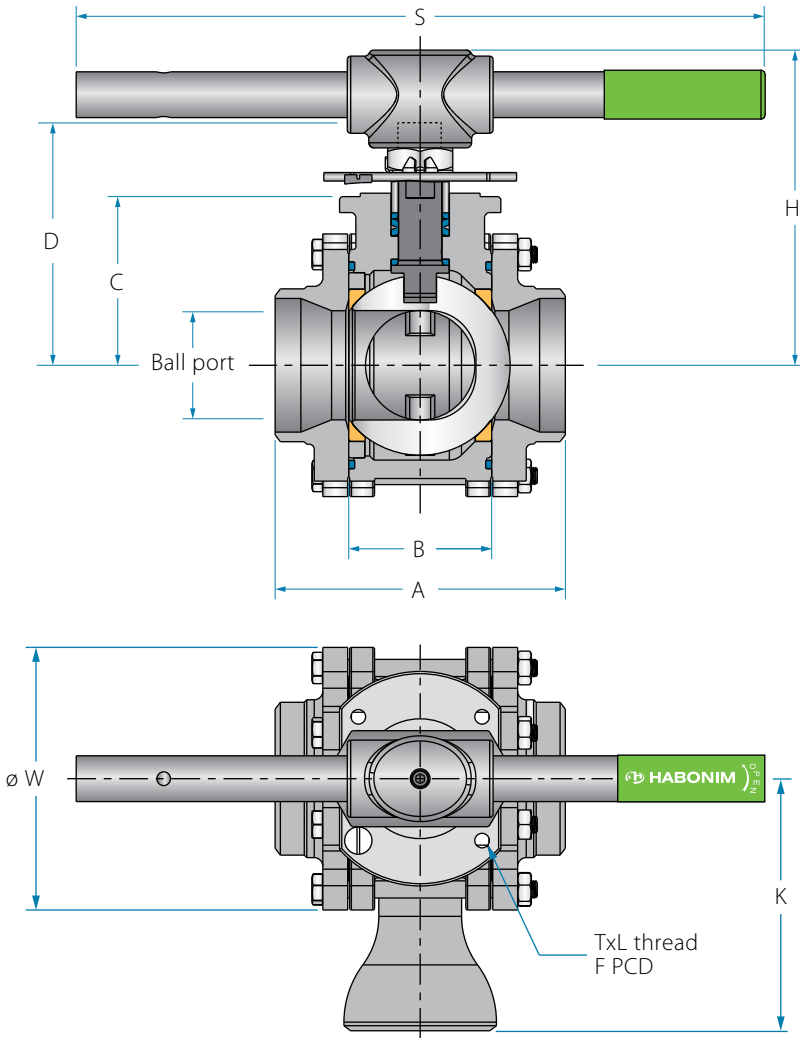
3 Piece

Flanged

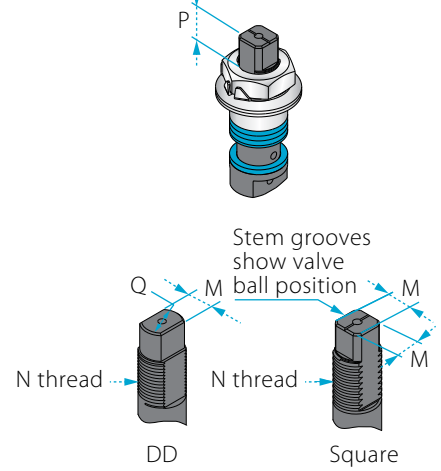
Ordering code system

Size 3"- 6" | DN80-DN150 | Class 300 | S47X/S47P<sup>(1)</sup> Series

### Valve dimensions

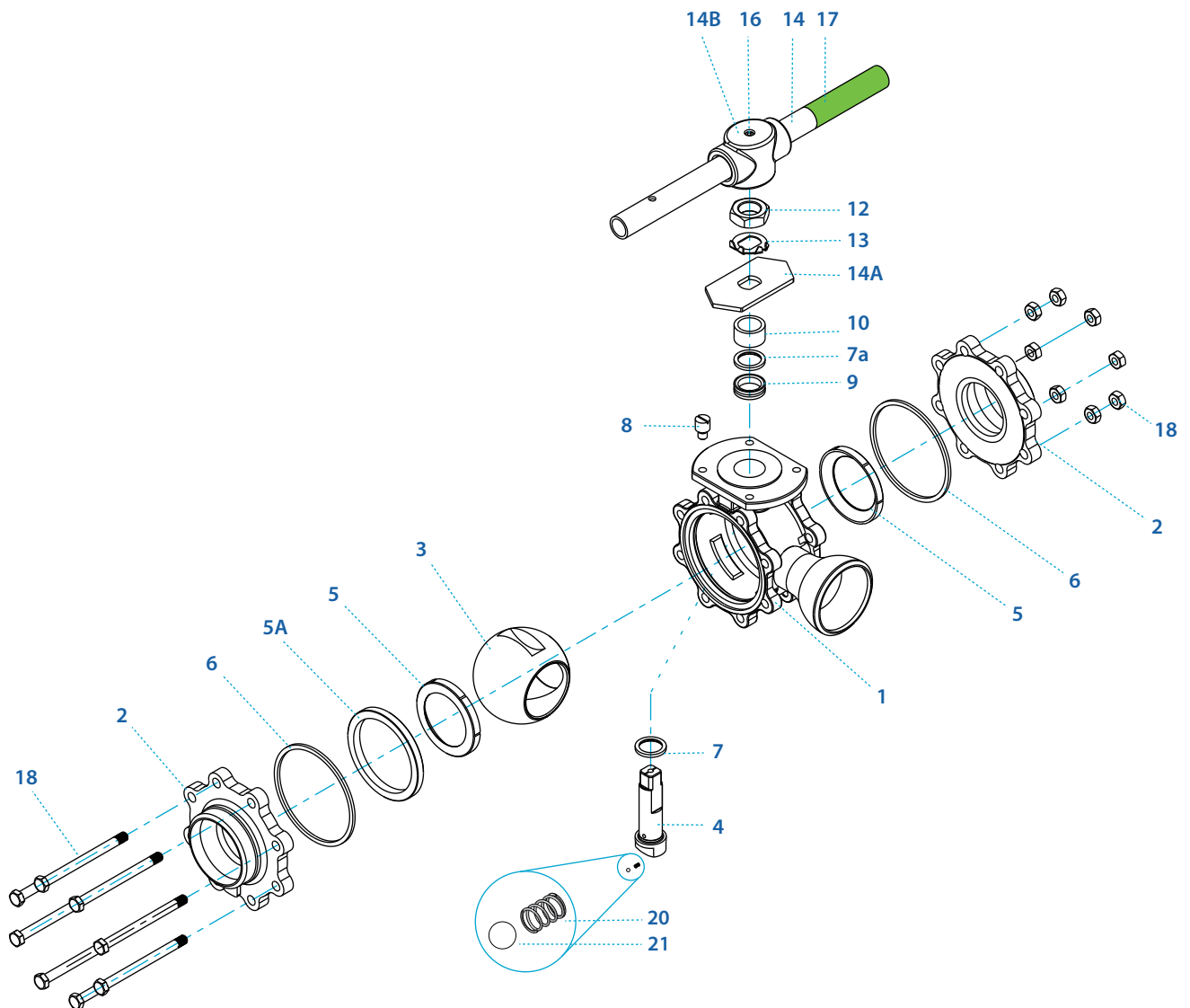


#### Preparation for actuation



Std. port	Full port	Unit	Ball port 1	Ball port 2	A	B	C	D	H	K	S	W	M	N	P	F	TxL	Weight kg/lb	Kv Cv
DN80	DN65	mm	63.75	80.50	169	83.3	98.3	144.9	185	163	400	140.00	18.90	1"-14	16.70 (F10)	102.00	M10x20	18.00	129
3"	2½"	inch	2.51	3.17	6.65	3.28	3.87	5.70	7.28	6.42	15.75	5.50	0.74	UNS-2A	0.66	4.02	M10x20	39.67	150
DN100	DN80	mm	80.00	63.25	214	108.8	114.1	160.7	200	183	600	177.00	18.90	1"-14	16.70 (F10)	102.00	M10x20	28.20	182
4"	3"	inch	3.15	2.49	8.43	4.28	4.49	6.33	7.87	7.20	23.62	6.97	0.74	UNS-2A	0.66	4.02	M10x20	62.15	211
	DN100	mm	92.00	67.00	239	123	124	170.5	211	200	600	217.00	18.90	1"-14	16.70 (F10)	102.00	M10x20	36.00	334
	4"	inch	3.62	2.64	9.41	4.84	4.88	6.71	8.31	7.87	23.62	8.54	0.74	UNS-2A	0.66	4.02	M10x20	79.34	388
DN150		mm	111.35	77.90	346	146	157	226	286	212	916	266.00	28.45	1½"-12	26.20 (F12)	125.00	M12x20	41.00	437
6"		inch	4.38	3.07	13.62	5.75	6.18	8.90	11.26	8.35	36.06	10.47	1.12	UNF-2A	1.03	4.92	M12x20	90.36	507

Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N10276, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1

<sup>(1)</sup> S47P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the S47 design.

Item	Description	Material specification	Qty.
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	C.St. 1.0402 Zinc plate, A240 430	1
14B	Wrench head	Ductile Iron A536 Gr. 65-45-12, A216 WCB, A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
20	Antistatic spring	A313 302	2
21	Antistatic plunger	A479 304	2
23	Tag (not shown)	A167 304	1

\* Repair kit components

\*\* Only with HermetiX™ stem seal

# Floating Ball Valves

**Diverter valves**

General

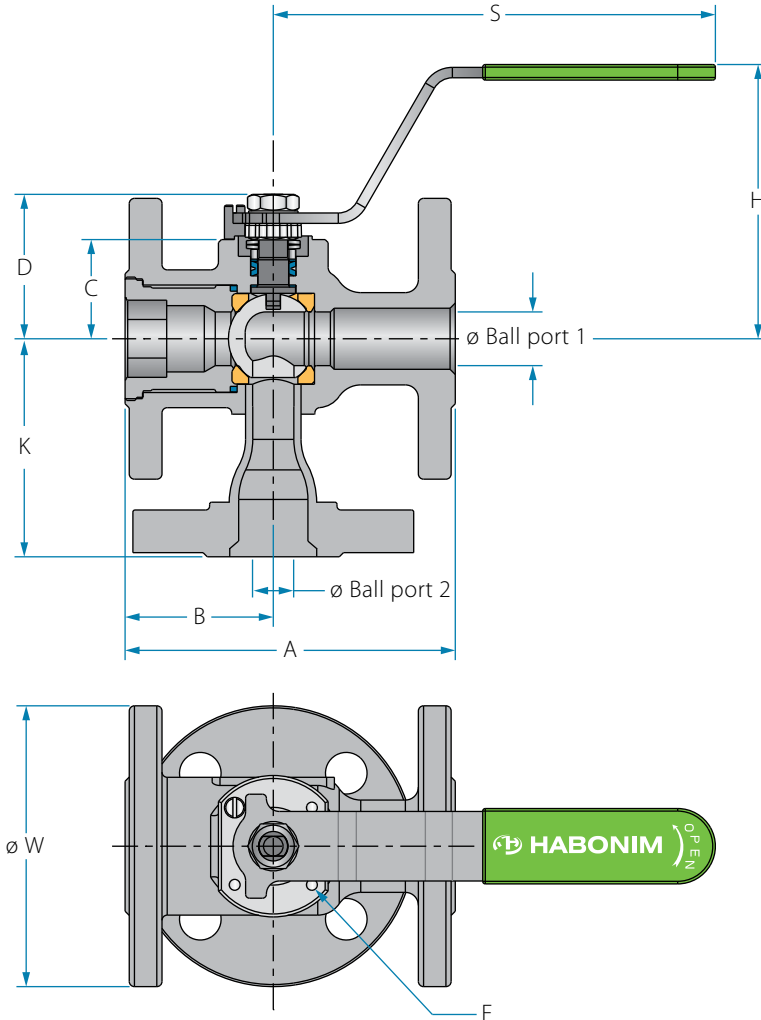
3 Piece

Flanged

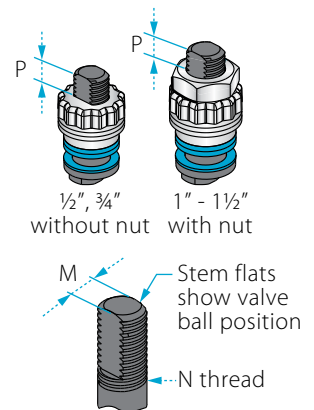
Ordering code system

Size 1/2"- 2" | DN15-DN50 | Class 150/300 | D31X/D32X, D31P<sup>(1)</sup>/D32P<sup>(1)</sup> Series

## Valve dimensions

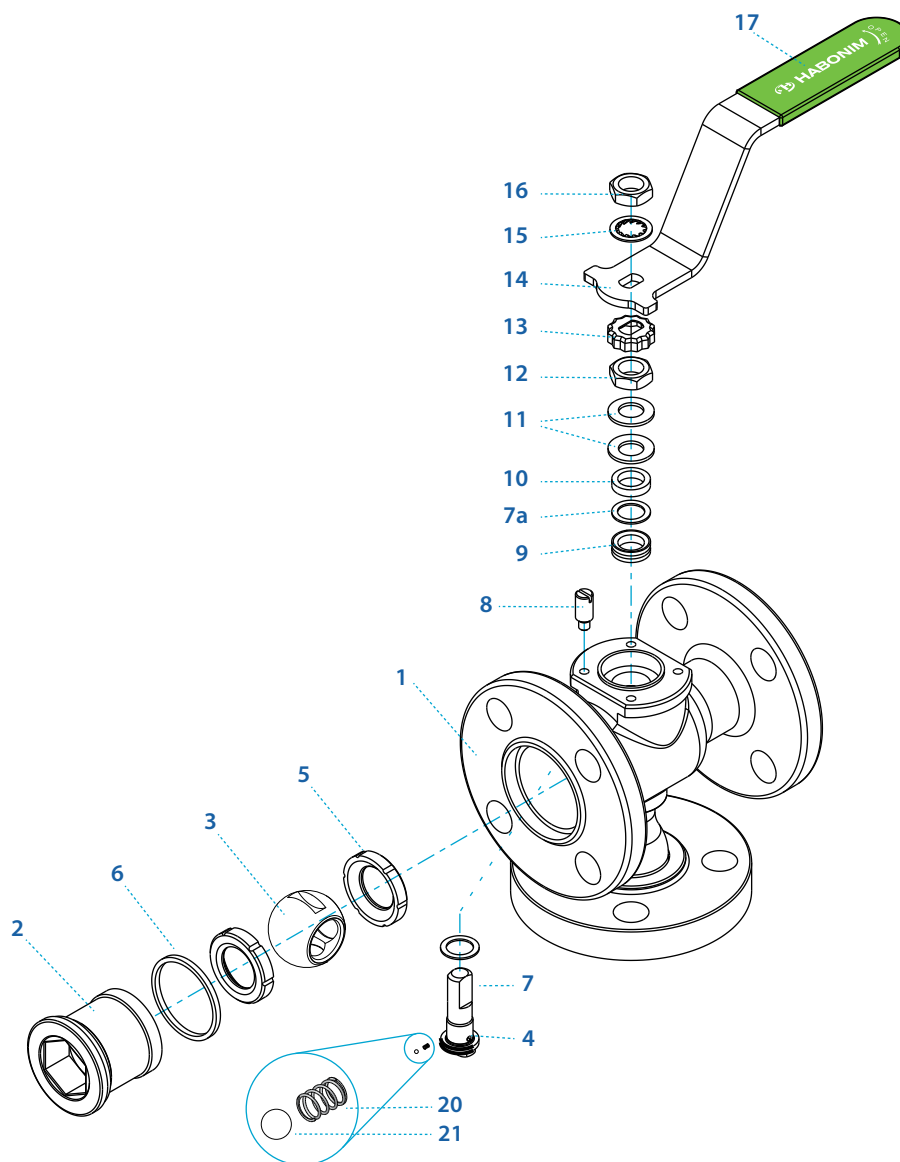


### Preparation for actuation



Std. port	Unit	Ball port1	Ball port2	A		B	C	D	H	K	S	W		M	N	P	F	Weight kg/lb		Kv
				150	300							150	300					150	300	
DN15	mm	13.50	11.15	108.00	140.00	46.00	29.00	38.00	92.00	70.00	151.00	88.90	95.25	5.54	3/8	6.65 (F03)	36.00	1.7	2.4	2.8
1/2"	inch	0.53	0.44	4.25	5.50	1.81	1.14	1.50	3.62	2.76	5.94	3.50	3.75	0.22	UNF	0.26	1.42	3.8	5.3	3.3
DN20	mm	17.50	14.30	117.00	152.00	49.00	31.40	40.30	94.00	85.00	151.00	98.55	163.07	5.54	3/8	6.65 (F03)	36.00	2.3	3.3	4
3/4"	inch	0.69	0.56	4.61	6.00	1.93	1.24	1.59	3.70	3.35	5.94	3.88	6.42	0.22	UNF	0.26	1.42	5.1	7.3	5
DN25	mm	23.50	20.60	127.00	165.00	57.00	38.20	55.60	103.50	90.00	170.00	107.95	123.95	7.54	7/16	7.40 (F04)	42.00	3.1	4.6	8
1"	inch	0.93	0.81	5.00	6.50	2.25	1.50	2.19	4.07	3.54	6.69	4.25	4.88	0.30	UNF	0.29	1.65	7.3	10.2	9
DN40	mm	39.00	31.80	165.00	190.00	62.00	43.60	73.10	119.20	110.00	220.50	127.00	155.52	8.71	9/16	8.50 (F05)	50.00	5.5	8.7	40
1 1/2"	inch	1.54	1.25	6.50	7.50	2.44	1.72	2.88	4.70	4.33	8.68	5.00	6.10	0.34	UNF	0.33	1.97	12.2	19.3	46
DN50	mm	48.00	38.20	178.00	216.00	68.00	48.30	77.80	123.90	130.00	220.50	152.40	165.10	8.71	9/16	8.50 (F05)	50.00	8.1	10.8	42
2"	inch	1.89	1.50	7.00	8.50	2.67	1.90	3.06	4.88	5.12	8.68	6.00	6.50	0.34	UNF	0.33	1.97	18	24	49

Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
6A***	Support ring	A479 316L, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1

Item	Description	Material specification	Qty.
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	A194 8M, EN3506-2 A4-80	1
13	Locking clip	A167 304	1
14	Handle	C.St. A29 G10200 Zinc plate, A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	A194 8M, EN3506-2 A4-80	1
17	Sleeve	PVC	1
20	Antistatic spring	A313 302	1
21	Antistatic plunger	A479 304	1
23	Tag (not shown)	A167 304	1

<sup>(1)</sup> D31P/D32P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the D31/D32 design.

\* Repair kit components

\*\* Only with HermetiX™ stem seal

\*\*\* Only with graphite body seal

# Floating Ball Valves

**Diverter valves**

General

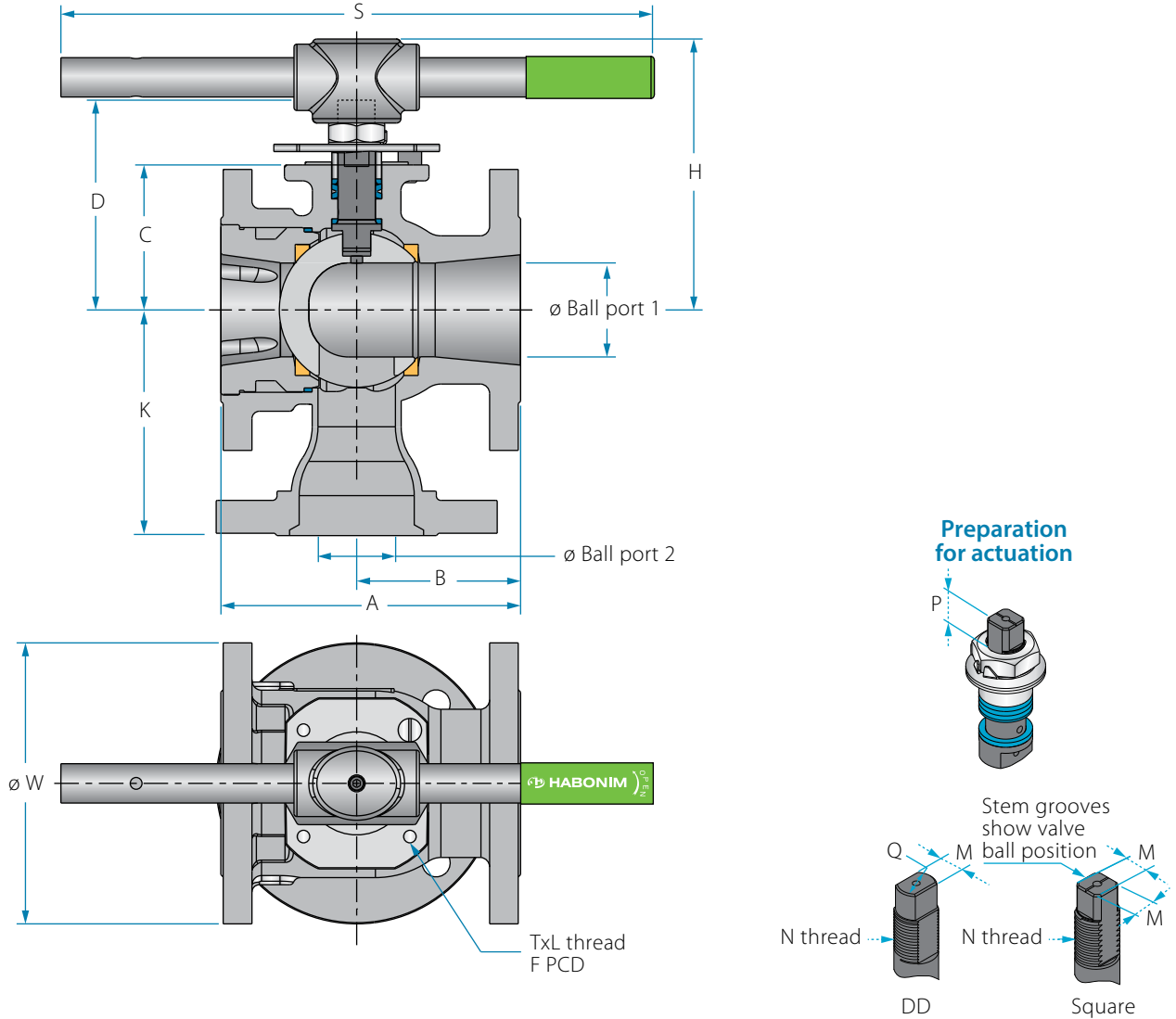
3 Piece

Flanged

Ordering code system

Size 3"- 8" | DN80-DN200 | Class 150/300 | D31X/D32X, D31P<sup>(1)</sup>/D32P<sup>(1)</sup> Series

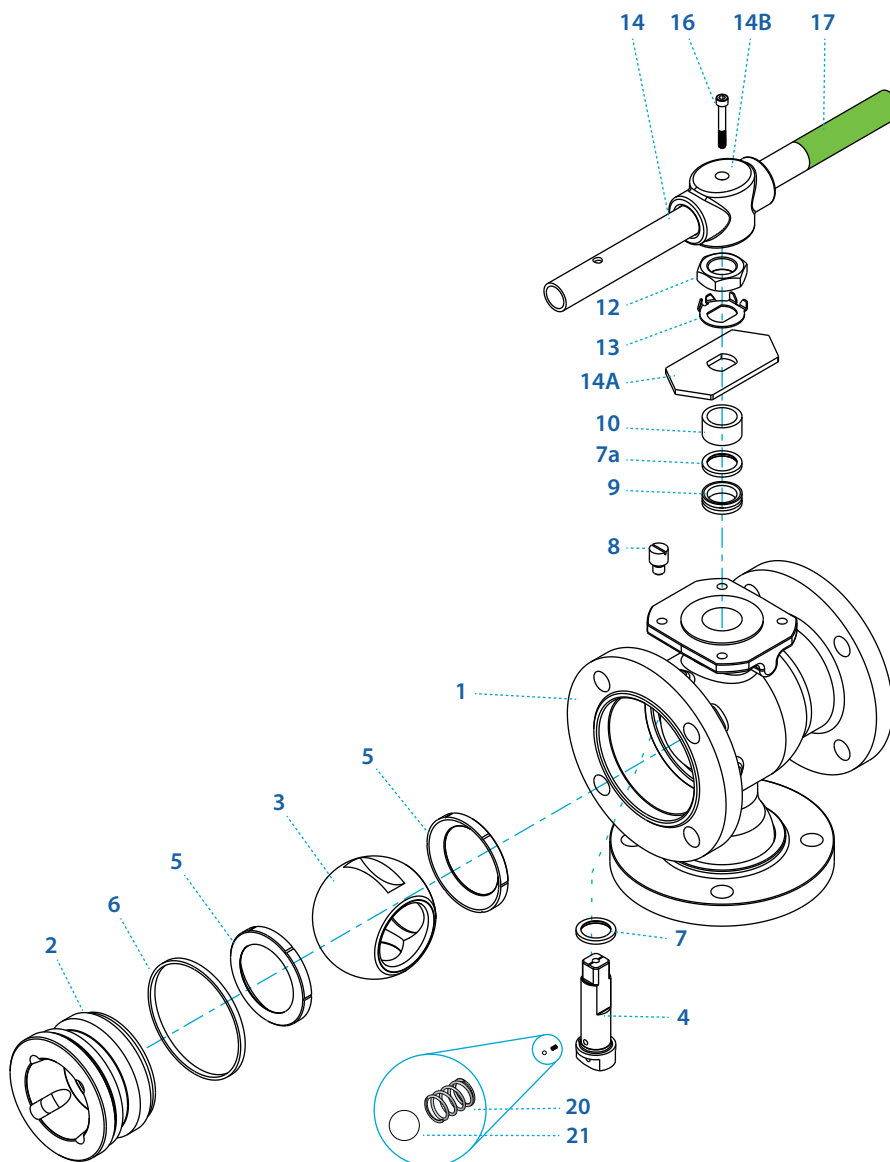
## Valve dimensions



Std. port	Unit	Ball port1	Ball port2	A		B	C	D	H	K	S	W		M	M-DD	N	P	Q	F	TxL	Weight kg/lb		Kv	
				150	300							150	300								150	300		
DN80	mm	63.50	50.00	203.00	284.00	92.00	98.40	145.00	185.10	153.00	400.00	190.50	209.55	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x20	18.00	22.70	129
3"	inch	2.50	1.97	8.00	11.18	3.62	3.88	5.72	7.28	6.02	15.75	7.50	8.25	0.74	0.63	UNS-2A	0.66	0.89		4.02	M10x20	40.00	50.40	150
DN100	mm	82.60	63.00	229.00	305.00	102.00	114.10	161.00	201.00	185.00	610.00	228.60	254.00	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x20	28.20	36.30	182
4"	inch	3.25	2.48	9.00	12.00	4.00	4.49	6.34	7.91	7.28	24.01	9.00	10.00	0.74	0.63	UNS-2A	0.66	0.89		4.02	M10x20	62.80	80.60	211
DN150	mm	111.10	78.00	267.00	403.20	108.00	157.40	226.00	285.90	250.00	916.00	279.40	317.50	28.45	23.75	1 1/2"-12	26.20	35.20	(F12)	125.00	M12x20	41.00	69.00	437
6"	inch	4.38	3.07	10.50	15.88	4.25	6.20	8.91	11.25	9.84	36.08	11.00	12.50	1.12	0.94	UNF-2A	1.03	1.39		4.92	M12x20	91.00	153.00	507
DN200	mm	144.40	98.00	292.00	419.00	163.50	185.20	254.00	313.60	300.00	916.00	342.90	381.00	28.45	23.75	1 1/2"-12	26.20	35.20	(F12)	125.00	M12x20	82.00	105.00	698
8"	inch	5.68	3.86	11.50	16.50	5.37	7.30	10.00	12.34	11.81	36.08	13.50	15.00	1.12	0.94	UNF-2A	1.03	1.39		4.92	M12x20	182.00	233.00	810



### Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1

Item	Description	Material specification	Qty.
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	C.St. 1.0402 Zinc plate, A240 430	1
14B	Wrench head	Ductile Iron A536 Gr. 65-45-12, A216 WCB, A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
20	Antistatic spring	A313 302	2
21	Antistatic plunger	A479 304	2
23	Tag (not shown)	A167 304	1

\* Repair kit components

\*\* Only with HermetiX™ stem seal

<sup>(1)</sup> D31P/D32P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the D31/D32 design.

# Floating Ball Valves

**Diverter valves**

General

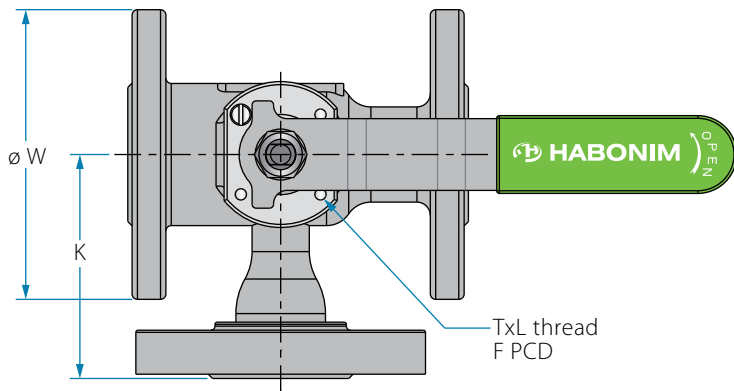
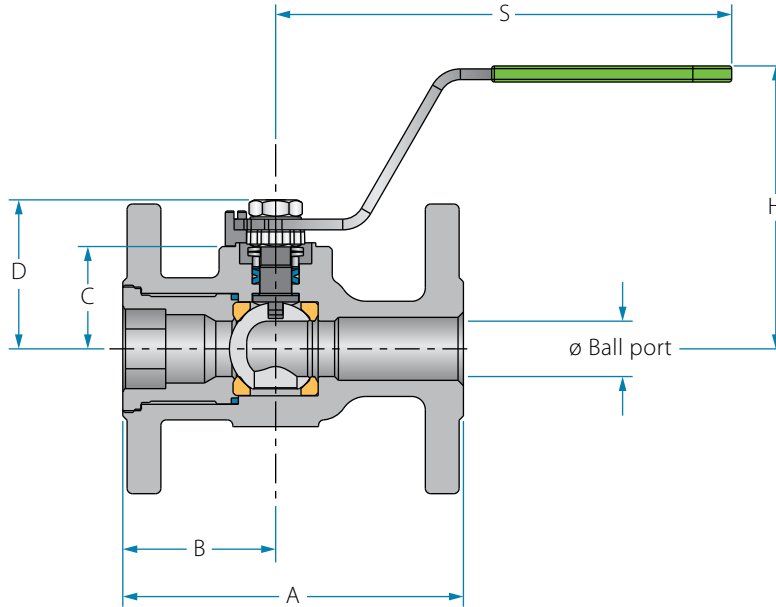
3 Piece

Flanged

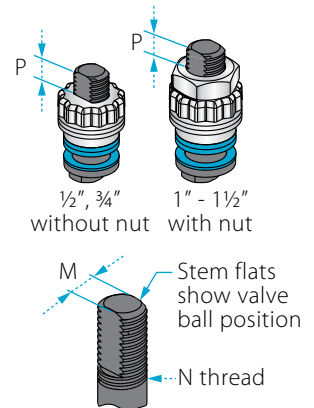
Ordering code system

Size 1/2"- 2" | DN15-DN50 | Class 150/300 | S31X/S32X, S31P<sup>(1)</sup>/S32P<sup>(1)</sup> Series

## Valve dimensions

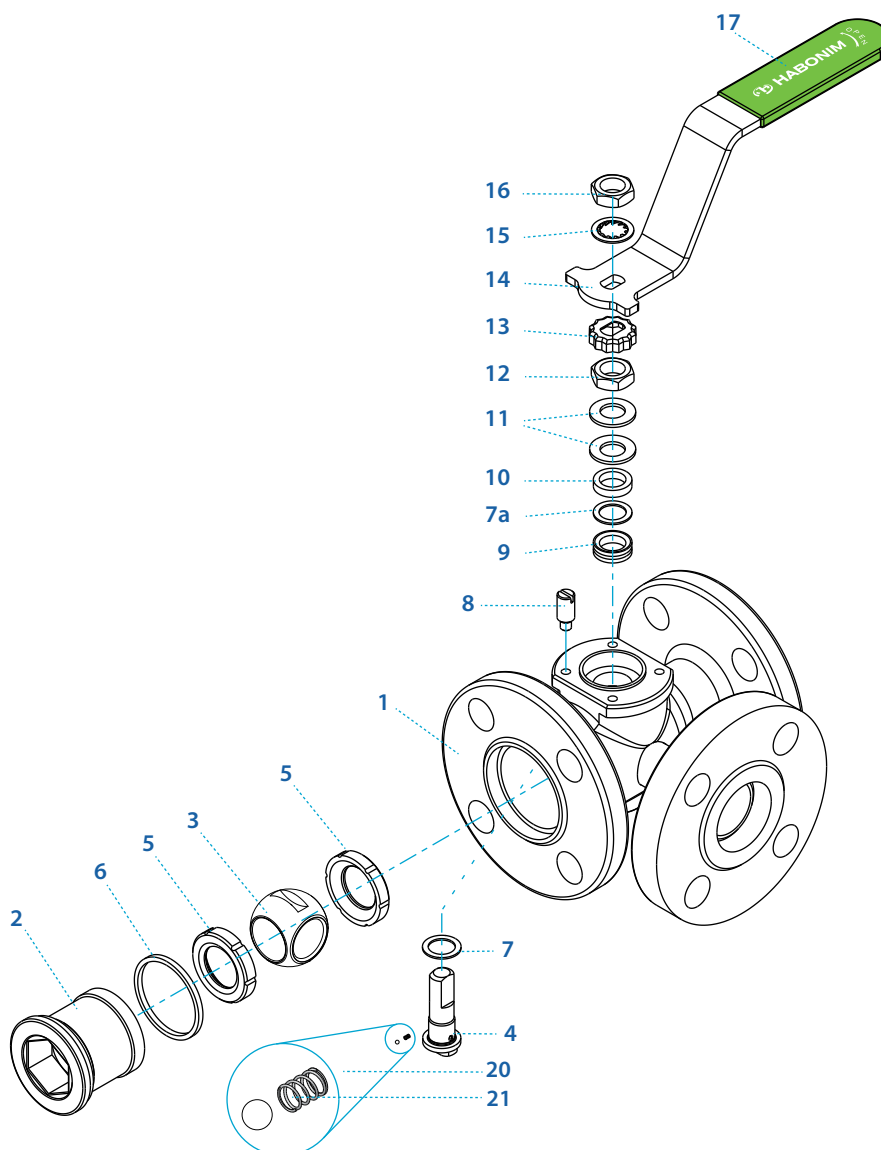


### Preparation for actuation



Std. port	Unit	Ball port1	Ball port2	A		B	C	D	H	K	S	W		M	N	P	F	Weight kg/lb		Kv
				150	300							150	300					150	300	
DN15	mm	13.50	11.15	108.00	140.00	46.00	29.00	38.00	92.00	70.00	151.00	88.90	95.25	5.54	3/8	6.65 (F03)	36.00	1.7	2.4	2.8
1/2"	inch	0.53	0.44	4.25	5.50	1.81	1.14	1.50	3.62	2.76	5.94	3.50	3.75	0.22	UNF	0.26	1.42	3.8	5.3	3.3
DN20	mm	17.50	14.30	117.00	152.00	49.00	31.40	40.30	94.00	85.00	151.00	98.55	163.07	5.54	3/8	6.65 (F03)	36.00	2.3	3.3	4
3/4"	inch	0.69	0.56	4.61	6.00	1.93	1.24	1.59	3.70	3.35	5.94	3.88	6.42	0.22	UNF	0.26	1.42	5.1	7.3	5
DN25	mm	23.50	20.60	127.00	165.00	57.00	38.20	55.60	103.50	90.00	170.00	107.95	123.95	7.54	7/16	7.40 (F04)	42.00	3.1	4.6	8
1"	inch	0.93	0.81	5.00	6.50	2.25	1.50	2.19	4.07	3.54	6.69	4.25	4.88	0.30	UNF	0.29	1.65	7.3	10.2	9
DN40	mm	39.00	31.80	165.00	190.00	62.00	43.60	73.10	119.20	110.00	220.50	127.00	155.52	8.71	9/16	8.50 (F05)	50.00	5.5	8.7	40
1 1/2"	inch	1.54	1.25	6.50	7.50	2.44	1.72	2.88	4.70	4.33	8.68	5.00	6.10	0.34	UNF	0.33	1.97	12.2	19.3	46
DN50	mm	48.00	38.20	178.00	216.00	68.00	48.30	77.80	123.90	130.00	220.50	152.40	165.10	8.71	9/16	8.50 (F05)	50.00	8.1	10.8	42
2"	inch	1.89	1.50	7.00	8.50	2.67	1.90	3.06	4.88	5.12	8.68	6.00	6.50	0.34	UNF	0.33	1.97	18	24	49

### Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
6A***	Support ring	A479 316L, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1

Item	Description	Material specification	Qty.
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	A194 8M, EN3506-2 A4-80	1
13	Locking clip	A167 304	1
14	Handle	C.St. A29 G10200 Zinc plate, A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	A194 8M, EN3506-2 A4-80	1
17	Sleeve	PVC	1
20	Antistatic spring	A313 302	1
21	Antistatic plunger	A479 304	1
23	Tag (not shown)	A167 304	1

<sup>(1)</sup> S31P/S32P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the S31/S32 design.

\* Repair kit components

\*\* Only with HermetiX™ stem seal

\*\*\* Only with graphite body seal

# Floating Ball Valves

**Diverter valves**

General

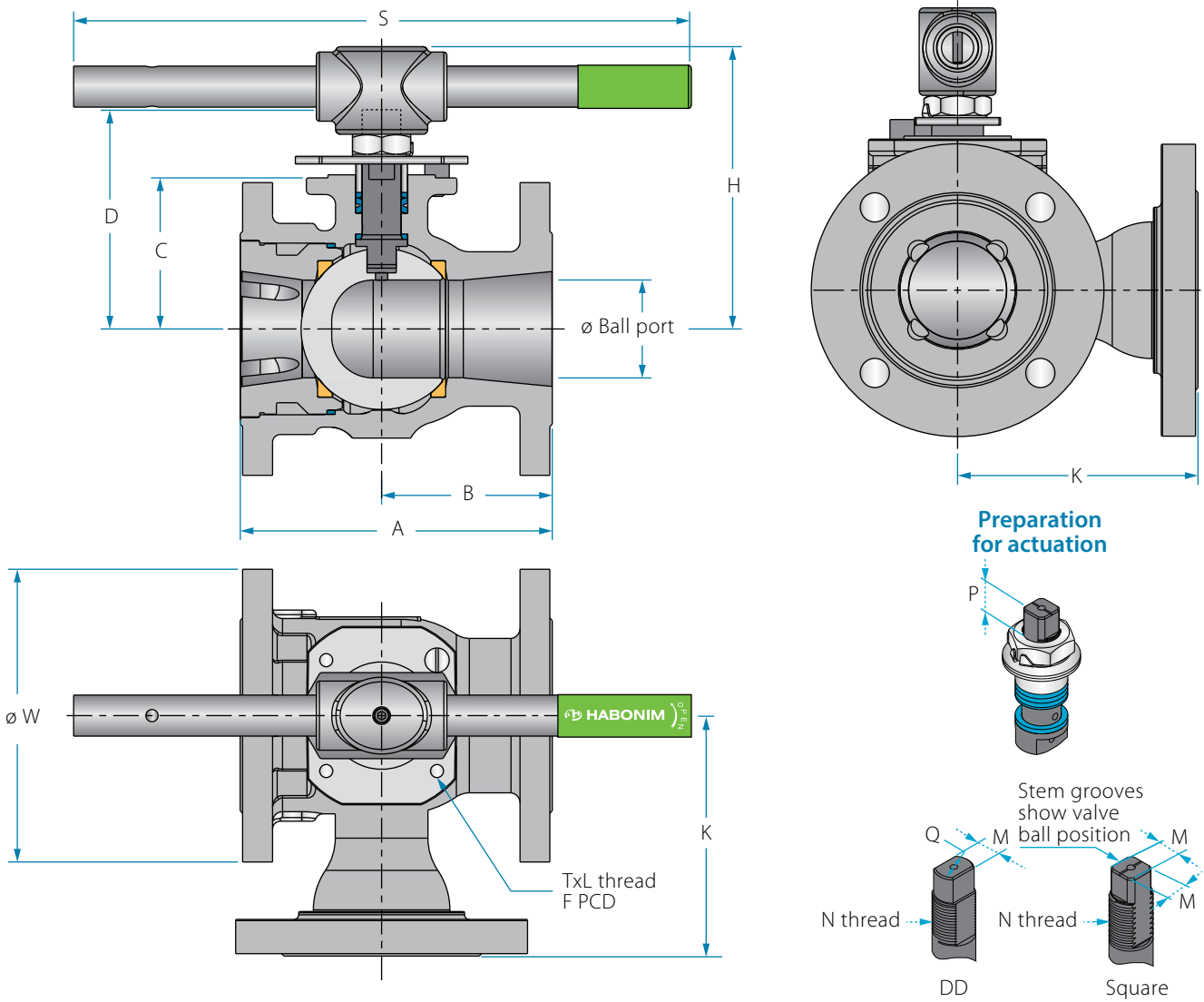
3 Piece

Flanged

Ordering code system

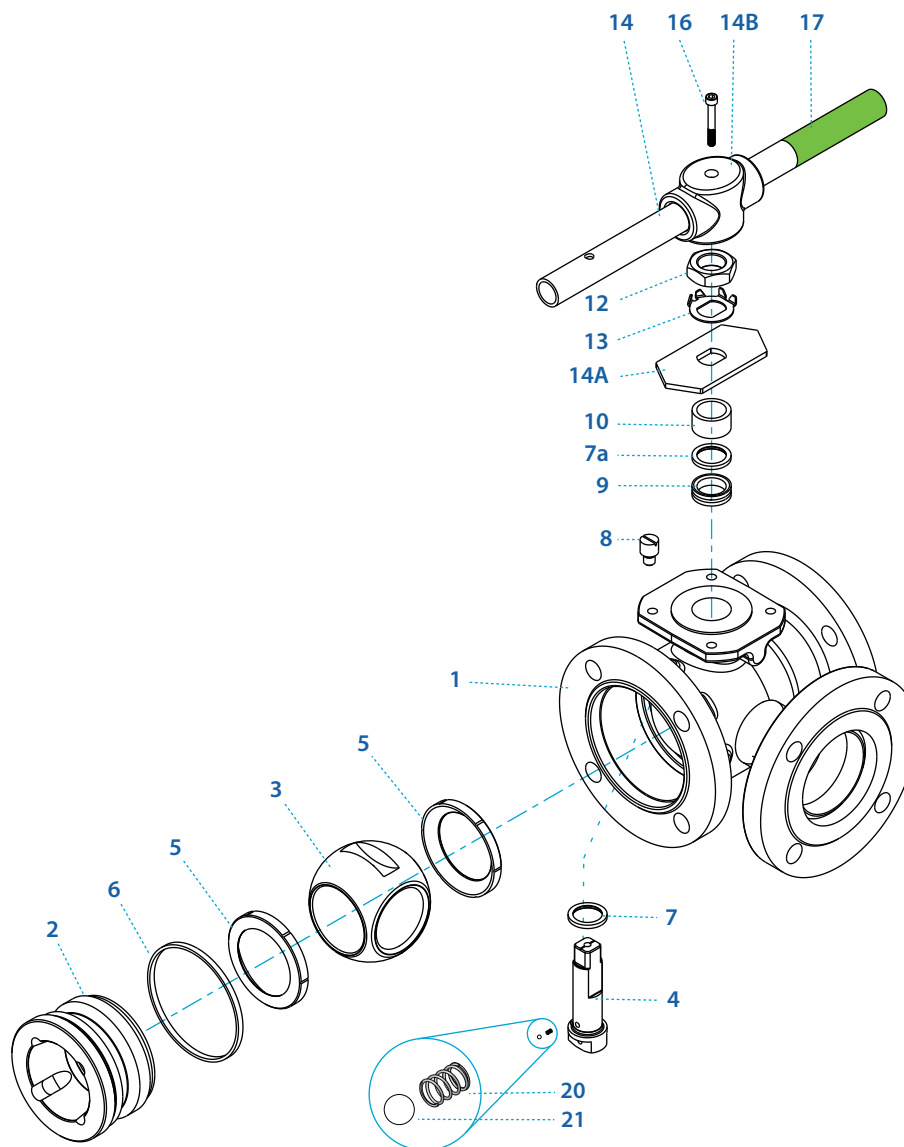
Size 3"- 8" | DN80-DN200 | Class 150/300 | S31X/S32X, S31P<sup>(1)</sup>/S32P<sup>(1)</sup> Series

## Valve dimensions



Std. port	Unit	Ball port1	Ball port2	A		B	C	D	H	K	S	W		M	M-DD	N	P	Q	F	TxL	Weight kg/lb		Kv	
				150	300							150	300								150	300		Cv
DN80	mm	63.50	50.00	203.00	284.00	92.00	98.40	145.00	185.10	153.00	400.00	190.50	209.55	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x20	18.00	22.70	129
3"	inch	2.50	1.97	8.00	11.18	3.62	3.88	5.72	7.28	6.02	15.75	7.50	8.25	0.74	0.63	UNS-2A	0.66	0.89		4.02	M10x20	40.00	50.40	150
DN100	mm	82.60	63.00	229.00	305.00	102.00	114.10	161.00	201.00	185.00	610.00	228.60	254.00	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x20	28.20	36.30	182
4"	inch	3.25	2.48	9.00	12.00	4.00	4.49	6.34	7.91	7.28	24.01	9.00	10.00	0.74	0.63	UNS-2A	0.66	0.89		4.02	M10x20	62.80	80.60	211
DN150	mm	111.10	78.00	267.00	403.20	108.00	157.40	226.00	285.90	250.00	916.00	279.40	317.50	28.45	23.75	1 1/2"-12	26.20	35.20	(F12)	125.00	M12x20	41.00	69.00	437
6"	inch	4.38	3.07	10.50	15.88	4.25	6.20	8.91	11.25	9.84	36.08	11.00	12.50	1.12	0.94	UNF-2A	1.03	1.39		4.92	M12x20	91.00	153.00	507
DN200	mm	144.40	98.00	292.00	419.00	163.50	185.20	254.00	313.60	300.00	916.00	342.90	381.00	28.45	23.75	1 1/2"-12	26.20	35.20	(F12)	125.00	M12x20	82.00	105.00	698
8"	inch	5.68	3.86	11.50	16.50	5.37	7.30	10.00	12.34	11.81	36.08	13.50	15.00	1.12	0.94	UNF-2A	1.03	1.39		4.92	M12x20	182.00	233.00	810

Components & materials



Item	Description	Material specification	Qty.
1	Body	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
2	Plug	A351 CF8M, A216 WCB, A351 CN7M, A494 M-35-1, A494 CW-12MW, A494 CX-2MW, A351 CK3MCuN, A995 CD3MN 4A, A995 CE3MN 5A	1
3	Ball	A351 CF8M, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
4	Stem	A479 316L, A564 Gr 630 H1150D 17-4PH, B473 N08020, B164 N04400, B574 N06022, B574 N10276, A479 S31254, A479 S31803, A479 S32750	1
5*	Seat	PTFE, RPTFE, CF PTFE, PEEK, CF PEEK, TFM, UHMWPE, VESPEL, PVDF, DELRIN, PCTFE (KEL-F)	2
6*	Body seal	PTFE, RPTFE, TFM, UHMWPE, Graphite	1
7*	Stem thrust seal	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
7a**	Anti-abrasion ring	PEEK, CF PEEK, PCTFE (KEL-F), TFM <sup>(2)</sup> , CF PTFE <sup>(2)</sup>	1
8	Stop pin	A582 303	1

Item	Description	Material specification	Qty.
9*	Stem seal	CF PTFE, TFM, Graphite <sup>(2)</sup>	1
10	Follower	B783 316L, B164 N04400	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	C.St. 1.0402 Zinc plate, A240 430	1
14B	Wrench head	Ductile Iron A536 Gr. 65-45-12, A216 WCB, A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
20	Antistatic spring	A313 302	2
21	Antistatic plunger	A479 304	2
23	Tag (not shown)	A167 304	1

\* Repair kit components

\*\* Only with HermetiX™ stem seal

<sup>(1)</sup> S31P/S32P Series is Habonim's standard valve design without the HermetiX™ stem seal construction.

<sup>(2)</sup> This material can only be used as part of the S31/S32 design.

# Floating Ball Valves

**Diverter valves**

General

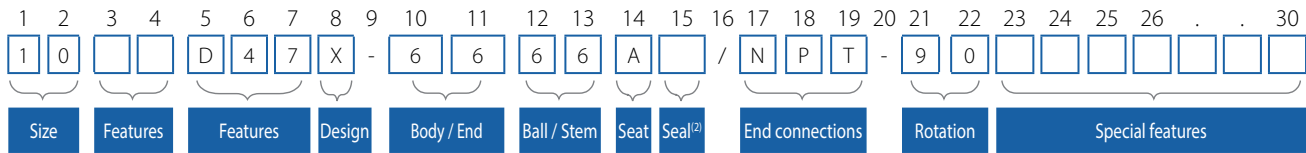
3 Piece

Flanged

**Ordering code system**

## Diverter valves ordering code system

The HABONIM Diverter valves identification code



Size		
Code	inch	mm
05	1/2"	15
07	3/4"	20
10	1"	25
12	1 1/4"	32
15	1 1/2"	40
20	2"	50
25	2 1/2"	65
30	3"	80
40	4"	100
60	6"	150
80	8"	200

Features	
A	Anti-Static
B	Full port
D	Diverter bottom entry
S	Diverter side entry
Q <sup>(3)</sup>	Cavity filler seats
O	Clean assembly for O <sub>2</sub> service
M	Ammonia service
K	Chlorine service
V	Vacuum service

Series	
D47	3 piece bottom entry
D31	ANSI #150 Flanged bottom entry
D32	ANSI #300 Flanged bottom entry
S47	3 piece side entry
S31	ANSI #150 Flanged side entry
S32	ANSI #300 Flanged side entry

Design	
P	Basic design
X	HermetiX™ stem seal

Body / Ends	
4	C. Steel A216 WCB / A105
6	S. Steel A351 CF8M
7	Monel A494 M-35-1
I	Inconel 625 A494 CW-6MC
A	Alloy-20 A351 CN7M
C	Alloy-C276 A494 CW-12MW
W	Alloy-C22 A494 CX-2MW
D	Duplex A995 CD3MN 4A
K	Super Duplex A995 CE3MN 5A
S	254SMO A351 CK3MCuN

Ball / Stem	
6	S. steel A479 316\316L
8	S. steel A479 304\304L
M	17-4PH A564 Gr 630 H1150D
I <sup>(4)</sup>	Inconel 625 A494 CW-6MC
Z <sup>(5)</sup>	Inconel 718 B637 N07718
7	Monel B164 N04400
A	Alloy-20 B473 N08020
C	Alloy-C276 B574 N10276
W	Alloy-C22 B574 N06022
D	Duplex A479 S31803
K	Super duplex A479 S32750
S	254SMO A479 S31254

Seat	
A <sup>(1)</sup>	TFM
C	PCTFE (KEL-F)
K	CF PEEK
L	Virgin PEEK
P <sup>(1)</sup>	CF PTFE
R <sup>(1)</sup>	15% Glass filled RPTFE
S	VESPEL
T <sup>(1)</sup>	PTFE
U	UHMWPE
Y	Derlin
W	PVDF

Seal <sup>(2)</sup>	
G	Expanded graphite
I	Impregnated Graphite
R	15% Glass filled RPTFE
T	PTFE
U	UHMWPE
V	VITON
B	NBR

Rotation	
90	90 degrees rotation
180	180 degrees rotation applicable for bottom entry diverter valve L

Special features	
B	Body made from rolled bar
EP	Electropolished
PN	Ball with LTPN surface treatment
WR	DD stem
G..	Internal surface finish (G24, G32)

Valve special stem seals	
HC	High cycle service
ORV	Viton O-ring based
ORB	NBR O-ring based
ORE	EPDM O-ring based
LAX	FDA compliant HermetiX™
PPX	CF PTFE thrust and X shape gasket

End Connection	
BW5	Buttweld schd. 5
BW10	Buttweld schd. 10
BW	Buttweld schd. 40
BW80	Buttweld schd. 80
XBW	Extended buttweld schd. 40
SW	Socket weld
XSW	Extended socket weld
BWO	Buttweld tube OD
ETO	Extended tube OD
SWO	Socket weld tube OD
BWD	Buttweld DIN 11860

Threaded	
NPT	ANSI B1.20.1 - National Pipe Taper thread
MNPT	Male NPT
BSPT	EN 10226-1 - British Standard Pipe Taper thread
MBSPT	Male BSPT
DIN2999	EN 10226-1 - British Standard Pipe parallel thread
DIN3852	EN 10226-1 - British Standard Pipe parallel thread
AS5202	SAE Internal Straight Thread

Clamp	
LL	Compression fitting (Imperial)
LM	Compression fitting (metric)
TC	Tri-Clamp
GR	Grayloc

Flanged	
150	ANSI B16.5 #150 RF
300	ANSI B16.5 #300 RF
600	ANSI B16.5 #600 RF
PN16	EN1092 PN16 RF
PN40	EN1092 PN40 RF
PN64	EN1092 PN64 RF
PN100	EN1092 PN100 RF

<sup>(1)</sup> This material enable one piece seat-seal design, the only option applicable for mixing service

<sup>(2)</sup> Leave the seal code blank when using a seat-seal one piece design

<sup>(3)</sup> Only applicable for 3 piece valve design

<sup>(4)</sup> Ball material only

<sup>(5)</sup> Stem material only

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





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Three piece valves Cat.

