

Hydrogen Service High Pressure Floating Ball Threaded body

Technical Information

Operation

Maximum Working pressure 1,000bar (15,000psi), with TPED mark up to 700bar (10,000psi)

Working temperature: -60°C up to +260°C (-76°F up to +500°F).

Design

- Threaded body
- Automation-ready with standard ISO 5211 connecting plate
- Total HermetiX Integrity package with:
ISO15848-1 and API 641 emission standard certificated design
ISO10497 and API607 fire-safe standard certificated design
Double body sealing

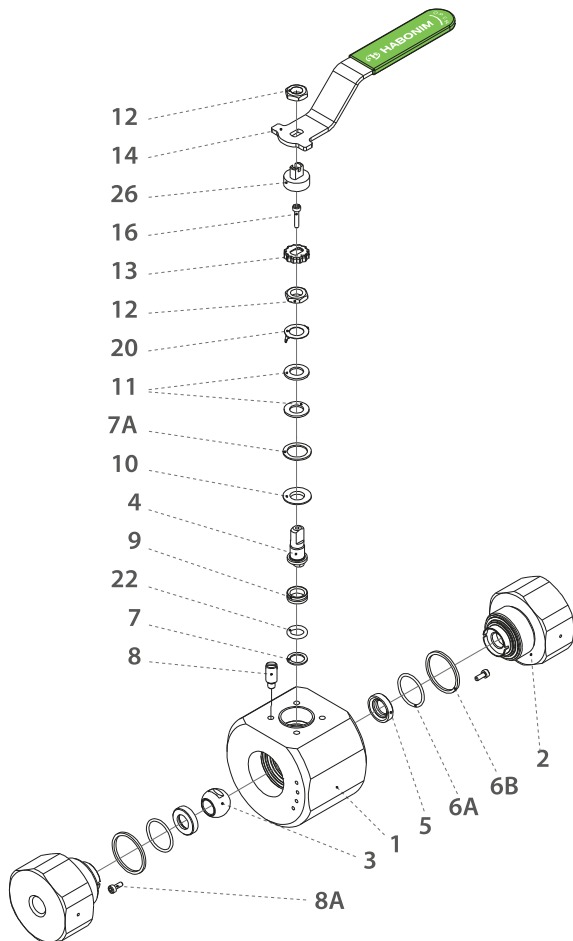
Testing & Certifications

- ISO19880-3:2018 Gaseous hydrogen – fueling stations valve, Tested up to 700bar use (internal test with He)
- TPED, Certified (up to 700bar MWP)
- 100% shell & inline leak tested§
- Marine classification (on demand): DNV GL, LR, BV, ABS, KR, RINA, others

Materials

- Stainless steel body & ends.
- All materials compatible for Hydrogen use.

Components & materials



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
6A	Body Inner seal	Acc. Ordering Code	2
6B	Body external seal	Acc. Ordering Code	2
7	Stem thrust seal	PEEK, CF PEEK, PCTFE	1
7A	Anti-abrasion ring	PEEK, CF PEEK, PCTFE	1
8	Stop pin	S. Steel	1
8A	Dowel Pin	S. Steel	2
9	Stem seal	CF PTFE, TFM	1
10	Follower	S. Steel	1
11	Disc spring	S. Steel	2
12	Stem nut	S. Steel	2
13	Locking clip	S. Steel	1
14	Handle	S. Steel	1
18	Sleeve	PVC	1
16	Bolt for adaptor	S. Steel	1
20	Anti static device	S. Steel	1
22	O-ring	Acc. Ordering Code	1
26	Adaptor	S. Steel	1



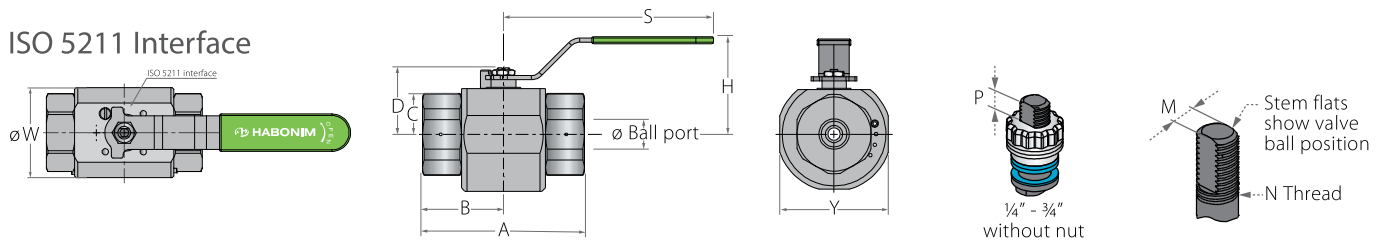
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End connections

Valve size code	Connection			Minimum orifice mm(inch)	Cv	Kv	
02	Medium Pressure Cone & Threaded	CTM	1/4"	Tube Size	2.8	0.33	0.29
03		CTM	3/8"		5.2	1.17	1.01
06		CTM	9/16"		7.9	4.39	3.80
07		CTM	3/4"		11.15	20.63	17.85
10		CTM	1"		11.15	9.81	8.49
02	High Pressure Cone & Threaded	CTH	1/4"	Thread Size	2.4	0.24	0.21
03		CTH	3/8"		3.2	0.43	0.37
06		CTH(F562C40)	9/16"		6.4	2.34	2.02
10		CTH	1"		11.15	20.63	17.85
02	Threaded	NPT/BSPP/DIN3852/BSPT	1/4"	Thread Size	6.35	1.62	1.40
03		NPT/BSPP/DIN3852/BSPT	3/8"		9.52	5.76	4.98
05		NPT/BSPP/DIN3852/BSPT	1/2"		11.15	8.6	7.44
07		NPT/BSPP/DIN3852/BSPT	3/4"		11.15	5.06	4.38
10		NPT/BSPP/DIN3852/BSPT	1"		11.15	4.7	4.07

Valve dimensions

ISO 5211 Interface



Full port	Unit	Ball port	A	B	C	D	H	M	N	P	W	S	Y
DN8	mm	11.15	116.4	58.2	33.00	48.00	70.5	5.54	3/8" UNF	11.1	85	151	80.5
1/4"	inch	0.44	4.58	2.29	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17
DN10	mm	11.15	116.4	58.2	33.00	48.00	70.5	5.54		11.1	85	151	80.5
3/8"	inch	0.44	4.58	2.29	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17
DN12	mm	11.15	116.4	58.2	33.00	48.00	70.5	5.54		11.1	85	151	80.5
1/2"	inch	0.44	4.58	2.29	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17
DN14	mm	11.15	116.4	58.2	33.00	48.00	70.5	5.54		11.1	85	151	80.5
9/16"	inch	0.44	4.58	2.29	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17
DN20	mm	11.15	116.4	58.2	33.00	48.00	70.5	5.54		11.1	85	151	80.5
3/4"	inch	0.44	4.58	2.29	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17
DN25	mm	11.15	136.4	68.2	33.00	48.00	70.5	5.54		11.1	85	151	80.5
1"	inch	0.44	5.37	2.685	1.30	1.89	2.77	0.22		0.43	3.46	5.94	3.17

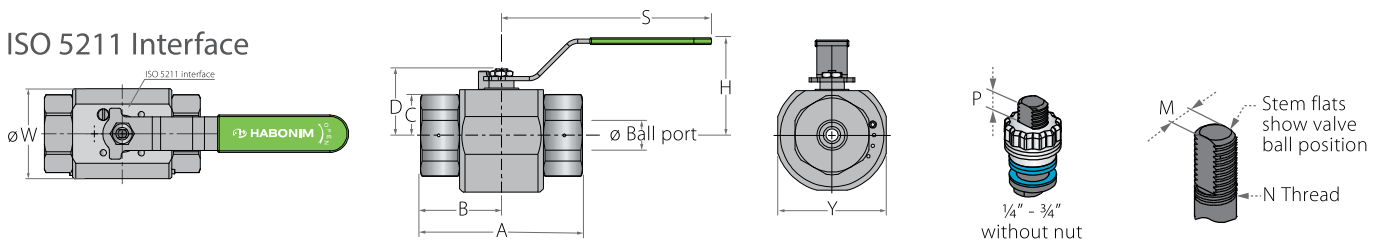
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End connections

Valve size code	Connection			Minimum orifice mm(inch)	Cv	Kv
10	Medium Pressure Cone & Threaded	CTM	1" Tube Size	14.3	14.11	12.21
15		CTM	1 1/2" Tube Size	20.6	50.41	43.60
07	Threaded	NPT/BSPP/DIN3852/BSPT	3/4" Thread Size	19	30.93	26.76
10		NPT/BSPP/DIN3852/BSPT	1" Thread Size	20.6	23.79	20.58

Valve dimensions

ISO 5211 Interface



Full port	Unit	Ball port	A	B	C	D	H	M	N	P	W	S	Y
DN20	mm	20.6	215	107.5	48.25	68.00	95	8.65	3/16" UNF	8	119	273	116
3/4"	inch	0.81	8.46	4.23	1.90	2.67	3.74	0.34		0.31	4.68	10.75	0.56
DN25	mm	20.6	215	107.5	48.25	68.00	95	8.65		8	119	273	116
1"	inch	0.81	8.46	4.23	1.90	2.67	3.74	0.34		0.31	4.68	10.75	0.56
DN32	mm	20.6	215	107.5	48.25	68.00	95	8.65		8	119	273	116
1 1/4"	inch	0.81	8.46	4.23	1.90	2.67	3.74	0.34		0.31	4.68	10.75	0.56
DN38	mm	20.6	215	107.5	48.25	68.00	95	8.65		8	119	273	116
1 1/2"	inch	0.81	8.46	4.23	1.90	2.67	3.74	0.34		0.31	4.68	10.75	0.56

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	27	28	30
0	3			F	H	2	9	W	-	6	6	M	M	L	H	G	/	C	T	M								
Size		Features			Series	Design	Body/Ends material		Ball material	Stem material	Seat material	Inner Seal	Outer Seal	End Connection			Special features											

Size (1-2)		
Code	inch	mm
02	1/4"	8
03	3/8"	10
05*	1/2"	13
06	5/16"	15
07	3/4"	20
10	1"	25
15	1 1/2"	40

* Not applicable for CTM/CTH

Features (3-6)	
F	Fire safe
H	Hydrogen use
O	Clean assembly for O2 service
B	Body size B (700bar / 10,00psi)
Series (7-8)	
29	HP Float 3 piece
Design (9)	
W	Total HermetiX Integrity package
Body/Ends material (11-12)	
6	S. Steel 316L

Ball material (13)	
M	High Strength S. Steel
Stem material (14)	
M	High Strength S. Steel
Seat material (15)	
L	Virgin PEEK
Inner Seal Material (16)	
H	HNBR
V	Viton
A	TFM
G	Expanded graphite

Outer Seal Material (17)	
G	Expanded graphite
A	TFM
H	HNBR
V	Viton
End connections (19-22)	
CTM	Conned & Threaded Medium pressure
CTH	Conned & Threaded High pressure
NPT	ASME B1.20.1 - National Pipe Taper thread
BSPP	ISO228-1 - Pipe Parallel thread
DIN3852	DIN3852 - Pipe Parallel thread
BSPT	EN 10226 - Pipe Taper thread