



NAVAL

Stainless steel valves



STAINLESS STEEL NAVALBALL VALVES

The stainless steel Navalball is a one-piece, all-welded, soft-seated on/off valve designed for a wide range of services in the chemical and process industries. It is used for oil, air and other liquids and gases which do not attack the valve at the temperatures and pressures specified in the diagram below.

CONSTRUCTION

The valve body, end pieces and valve neck are welded together to form a single unit and the blow-out proof stem is sealed by means of two FPM (Viton) O-rings, the upper one of which is replaceable.

A PTFE thrust washer between the stem shoulder and valve neck prevents jamming and protects the stem seals from the media. Pre-loaded bevel washers hold the metal-encapsulated carbon-reinforced PTFE seat rings in contact with the ball.

Naval ball valves are manufactured in accordance with European Pressure Equipment Directive 97/23/EY. Naval Oy applies Module H as conformity assessment procedure (=full quality assurance) controlled by Det Norske Veritas as notified body. Naval Oy has a certified quality system ISO 9001 and certified environmental management system ISO 14001.

FEATURES

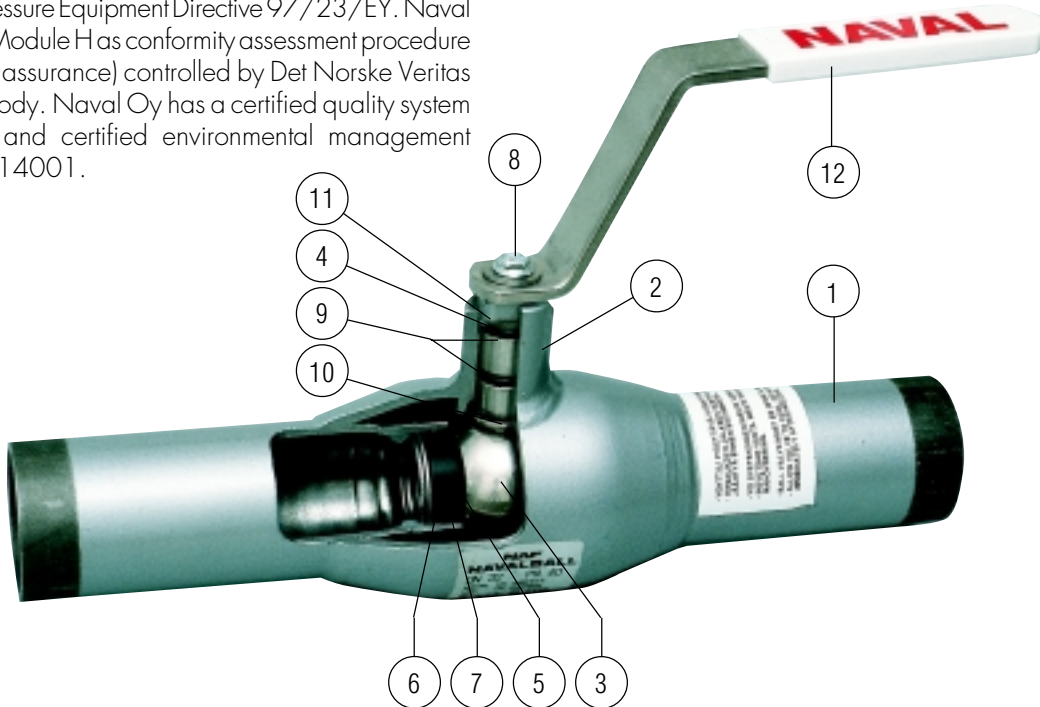
One-piece welded design with no body joints to leak. Double stem seals to avoid stem leakage.

Low lifetime cost due to long life, high leak-tight integrity and low initial cost.

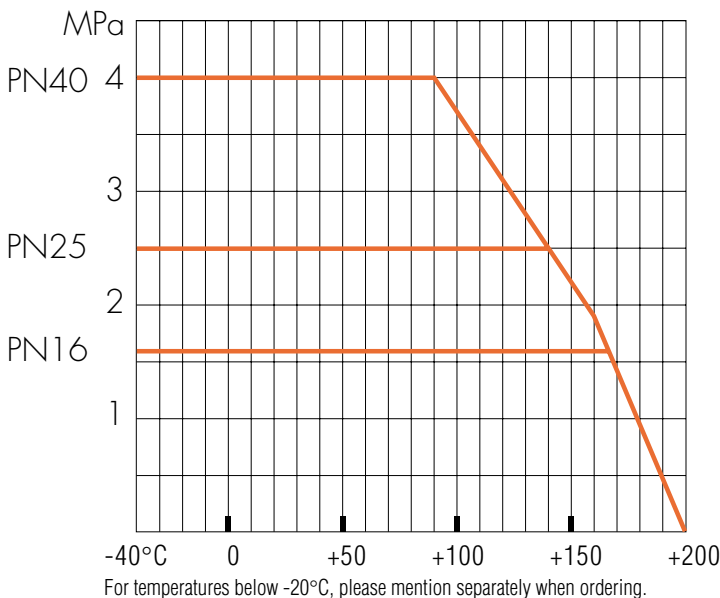
Stainless steel ball and stem. Carbon-reinforced PTFE seat rings. Stainless steel bevel spring washers.

Easy operation due to low friction components. 100% factory body and seat tests.

Easy to actuate. No modification or welding required.

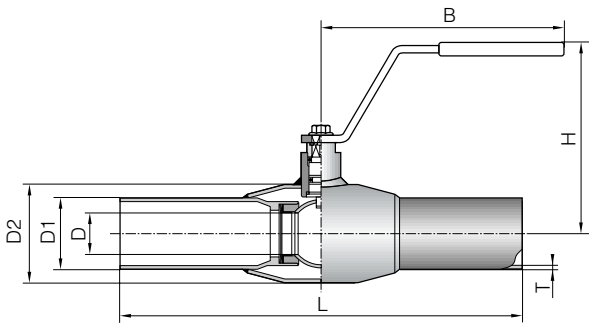


Pressure/temperature curves
(Do not use for steam)



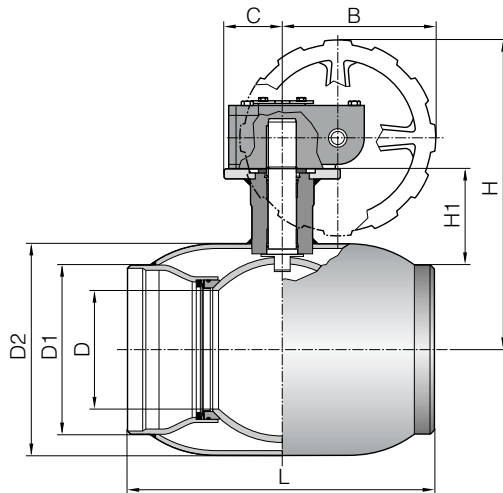
MATERIAL SPECIFICATION

ITEM	DESCRIPTION	MATERIAL	
1.	Body	Stainless steel	1.4404
2.	Stem housing	Stainless steel	1.4404
3.	Ball	Stainless steel	1.4404
4.	Stem	Stainless steel SS 2382	1.4404
5.	Seal	Teflon	PTFE+C
6.	Bevel washer	Stainless steel	1.4404
7.	Support ring	Stainless steel	1.4404
8.	Screw	Stainless steel	
9.	O-rings	Viton	FPM
10.	Thrust washer	Teflon	PTFE
11.	Washer	Stainless steel	1.4404
12.	Lever	Stainless steel (DN10-50) Zinc-plated steel (DN65-250)	



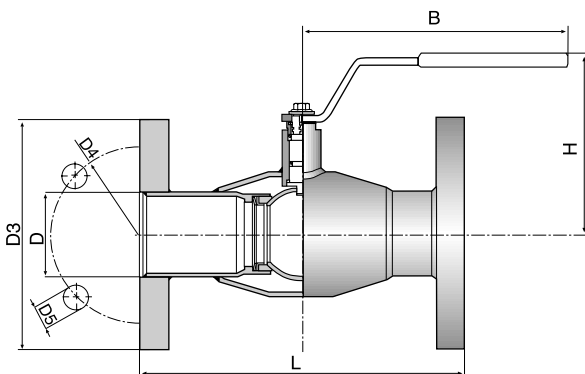
WITH BUTT WELD CONNECTIONS

DN	PN	NAVAL N:O	L	D	D1	D2	H	B	T	KG
10	40	286 402	230	10	17,2	33,7	98	145	2,0	0,5
15	40	286 403	230	10	21,3	33,7	98	145	2,0	0,5
20	40	286 405	230	15	26,9	42,4	103	145	2,0	0,65
25	40	286 406	230	20	33,7	48,3	112	145	2,0	0,85
32	40	286 407	260	25	42,4	60,3	116	145	2,0	1,13
40	40	286 408	260	32	48,3	70,0	111	188	2,5	1,82
50	40	286 409	300	40	60,3	88,9	118	188	3,0	2,6
65	25	286 410	300	50	76,1	114,3	150	277,5	3,0	3,98
80	25	286 411	300	65	88,9	131	160	277,5	3,0	5,5
100	25	286 412	325	80	114,3	156	175	278,5	3,0	8,0
125	16	286 413	325	100	139,7	177,8	220	400	3,3	13,0
150	16	286 414	350	125	168,3	219,1	240	600	4	17,0
200	16	286 416	390	150	219,1	273	271	900	4,5	38,0
250	16	286 417	520	200	273	355,6	345	1200	6,35	70,0



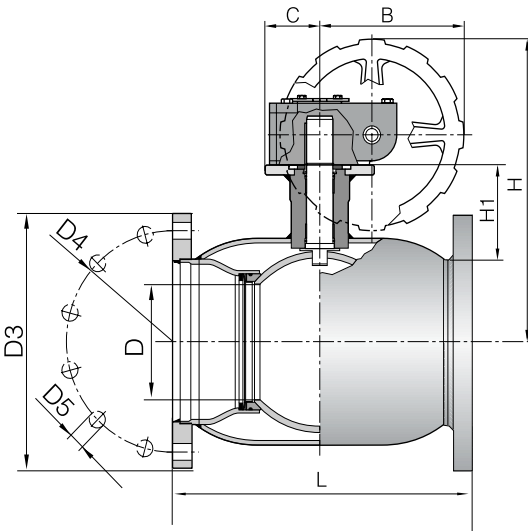
WITH BUTT WELD CONNECTIONS AND GEAR

DN	PN	NAVAL N:O	L	D	D1	D2	H	B	C	H1	KG
125	16	286 433	325	100	139,7	177,8	276	145	50	68	18
150	16	286 434	350	125	168,3	219,1	297	145	50	74	22
200	16	286 436	390	150	219,1	273	369	196	75	94	45
250	16	286 437	520	200	273	355,6	451	236	100	122	80



WITH FLANGES

DN	PN	NAVAL N:O	L	D	D3	D4	D5	H	B	KG
15	40	286 553	130	10	95	65	14	98	145	2,1
20	40	286 555	150	15	105	75	14	103	145	2,65
25	40	286 556	160	20	115	85	14	112	145	3,3
32	40	286 557	180	25	140	100	18	116	145	4,8
40	40	286 558	200	32	150	110	18	111	188	5,8
50	40	286 559	230	40	165	125	18	118	188	7,9
65	16	286 560	270	50	185	145	18	150	277,5	11
80	16	286 561	280	65	200	160	18	160	277,5	12,5
100	16	286 562	300	80	220	180	18	175	278,5	16,7
125	16	286 563	325	100	250	210	18	220	400	21
150	16	286 564	350	125	285	240	22	240	600	25
200	16	286 566	400	150	340	295	22	271	900	50
250	16	286 567	530	200	405	355	26	345	1200	90



WITH FLANGES AND GEAR

DN	PN	NAVAL N:O	L	D	D3	D4	D5	H	B	C	H1	KG
125	16	286 593	325	100	250	210	18	276	145	50	68	26
150	16	286 594	350	125	285	240	22	297	145	50	74	30
200	16	286 596	390	150	340	295	22	369	196	75	94	60
250	16	286 597	520	200	405	355	26	451	236	100	122	100

Flanges: DIN 2501, ISO 2084, SFS 21 23, SS 335, EN1092-1

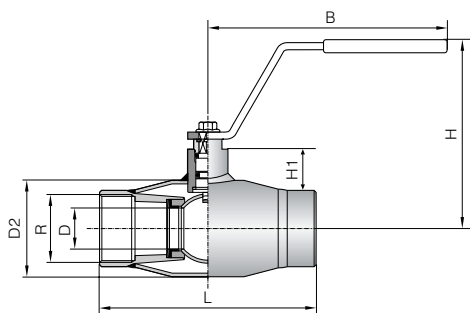
Face to face dimensions according to:

DN 15-50 DIN 3202/F1

DN 65-200 DIN 3202/F5

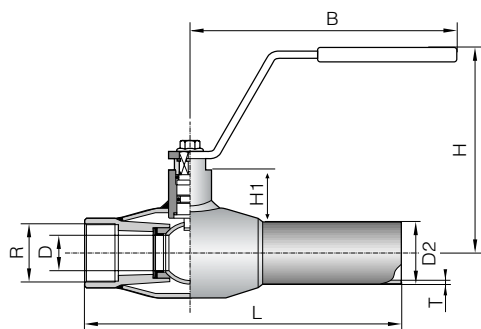
DN 250 DIN 3202/F15

We recommend that the sizes DN125-250 be equipped with gear



WITH FEMALE PIPE THREADS

DN	PN	NAVAL N:O	L	D	R	D2	H	B	KG
10	40	286 152	75	10	R 3/8	33,7	98	145	0,46
15	40	286 153	85	10	R 1/2	33,7	98	145	0,43
20	40	286 155	100	15	R 3/4	42,4	103	145	0,49
25	40	286 156	115	20	R 1	48,3	112	145	0,78
32	40	286 157	130	25	R 1 1/4	60,3	116	145	0,89
40	40	286 158	150	32	R 1 1/2	76,1	111	188	1,50
50	40	286 159	180	40	R 2	88,9	118	188	2,09



WITH BUTT WELD CONNECTION/ FEMALE PIPE THREADS

DN	PN	NAVAL N:O	L	D	R	D2	H	B	T	KG
10	40	286 002	153	10	R 3/8	17,2	98	145	2,0	0,48
15	40	286 003	158	10	R 1/2	21,3	98	145	2,0	0,48
20	40	286 005	168	15	R 3/4	26,9	103	145	2,0	0,35
25	40	286 006	172	20	R 1	33,7	112	145	2,0	0,76
32	40	286 007	195	25	R 1 1/4	42,4	116	145	2,0	0,98
40	40	286 008	205	32	R 1 1/2	48,3	111	188	2,5	1,67
50	40	286 009	240	40	R 2	60,3	118	188	3,0	2,18

ACTUATOR SELECTION TABLE

DN	PN	Pneumatic, spring return RC	Pneumatic, double acting RC	Electric actuator Auma	Electric actuator Bernard
10	40	RC210-SR	RC210-DA	SG03-11	OA3
15	40	RC210-SR	RC210-DA	SG03-11	OA3
20	40	RC210-SR	RC210-DA	SG03-11	OA3
25	40	RC220-SR	RC210-DA	SG03-11	OA3
32	40	RC220-SR	RC210-DA	SG03-11	OA3
40	40	RC230-SR	RC220-DA	SG04-11	OA6
50	40	RC230-SR	RC220-DA	SG04-11	OA6
65	25	RC240-SR	RC220-DA	SG05-11	OA8
80	25	RC240-SR	RC230-DA	SG05-11	OA15
100	25	RC250-SR	RC240-DA	SG07-22	AS18
125	16	RC260-SR	RC240-DA	SG07-22	AS50
150	16	RC270-SR	RC260-DA	SG10-45	AS50
200	16	RC270-SR	RC260-DA	SG12-63	AS100
250	16	RC280-SR	RC270-DA	SA07.1-GSM100.3	AS200

Electric actuators are available with one or three phase motors and also in explosion-proof design.

KV-VALUE TABLE

Size	10-15	20	25	32	40	50	65	80	100	125	150	200	250
Kv-value	6	14	26	41	67	105	182	315	420	650	1070	1420	2620



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