

# PRODUCT DATA SHEET

## Engelsberg ball valves



**Ramén Valves**

We know the flow



Reliable and durable three-piece ball valves (2-way) in high alloy materials for tight shut-off in liquid and gas applications. The floating ball is soft seated with special design avoiding hidden cavities between ball and body for a long-life cycle, even in applications containing particles and fibers. The valve can be manually operated with hand lever and has mounting flange according to ISO-5211 for actuator.

**Material:** Titanium ASTM grade 2 and grade 5, 254 SMO, Duplex, Super Duplex, Hastelloy C-276, 904L, 316, 316 L

**Dimension:** DN15-DN150 (1/2" – 6")

**End connections:** Flanged, threaded BSP/NPT (male/female), butt weld/socket weld, wafer

**Pressure class:** Up to PN100 (ANSI class 150/300/600/800) + indication of floating design

**Pressure test:** Acc. to EN12266-1

**Temperature:** -40°C to 170°C

**Leakage class:** Rate A acc. to EN12266-1

**Design:** Full bore (FB) DN15-DN150/Reduced bore (RB) DN20-DN150, three piece floating design

**Mode of operation:** Manual (hand lever/gear), Actuated (to be installed via the mounting flange according to ISO-5211)

**Approvals:** CE-marked acc. to PED 2014/68/EU

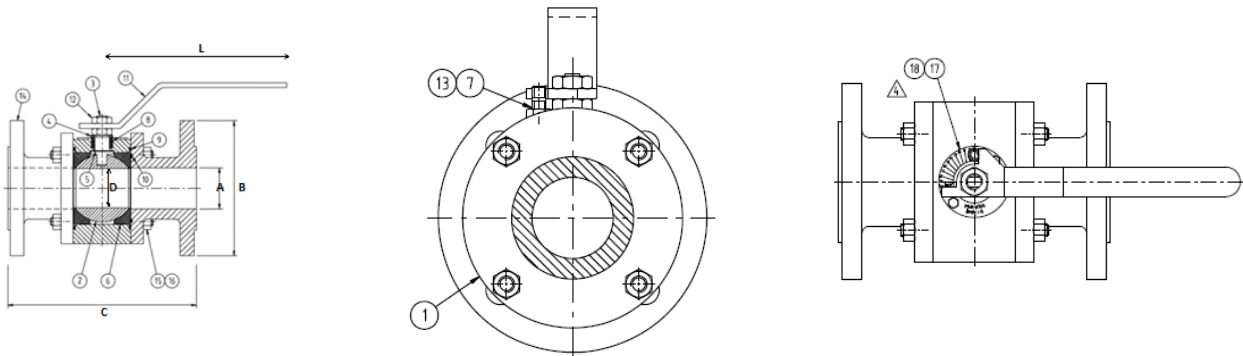
### Ordering code

Part no. Position	EB	1	2	3	4	-	5	6	-	7	8	9	10	11	-	12	13	14	15	16	17	18	-	19	20
Part No. code example	EB	4	3	0	1	-	1	3	-	4	0	1	5	0	-	5	0	-	R	B	5	2	-	H	L

Example: Ball valve, threaded female BSP, in Titanium, wafer connection to be mounted between ANSI class 150, DN50, reduced bore, PTFE/Viton/Viton seat & Seal, with hand lever

EB	Valve series (1-4)		Body material (5-6)		End connection (7-8)		Pressure rating (9-11)		Size (12-14)		Port (15-16)		Seat/seal (17-18)		Actuation (19-20)	
EB	4101	Threaded male BSP-RB	10	316 SST (EN 1.4301)	27	BSP male	10	DIN PN10	15	RB	Reduced	50	PTFE/Viton/Graphite	HL	Lever	
	4102	Threaded male BSP-FB	11	316L SST (EN 1.4435)	28	BSP female	16	DIN PN16	20	FB	Full	52	PTFE/Viton/Viton	GB	Gear box	
	4201	Threaded female BSP, NPT-RB	12	Duplex (EN 1.4460)	29	Butt weld	25	DIN PN25	21			53	PTFE/Grafex EX/Graphite	SR	Spring return	
	4301	Threaded female BSP, NPT-FB	13	Titanium	30	Socket weld	40	DIN PN40	25			53	PTFE/PTFE/PTFE	DA	Double acting	
	4401	Flanged RB	14	Hastelloy C-276	31	NPT male	64	DIN PN64	32					EE	Electric	
	4501	Flanged FB	15	SS2584 (Sanicro 28)	32	NPT female	100	DIN PN100	40					EH	Electro - Hydraulic	
	4601	Welded BW/SW-RB	16	254 SMO (EN 1.4547)	40	Wafer	150	ANSI class 150	50					HD	Hydraulic	
	4701	Welded BW/SW-FB	17	904L (EN 1.4539)	41	Flanged	300	ANSI class 300	65							
	5501	Wafer RB/FB	18	Duplex (EN 1.4462)	XX	Combination	600	ANSI class 600	80							
	7201	Combination BW or SW/Threaded -RB	19	Super Duplex (EN 1.4410)			800	ANSI class 800	100							
	7301	Combination BW or SW/Threaded -FB							125							
	8201	Combination BW or SW/flanged -RB							150							
	8301	Combination BW or SW/flanged -FB														
		XXXX		-XX		-XX		XX(X)	-XX(X)		RB/FB		XX		XX	Special

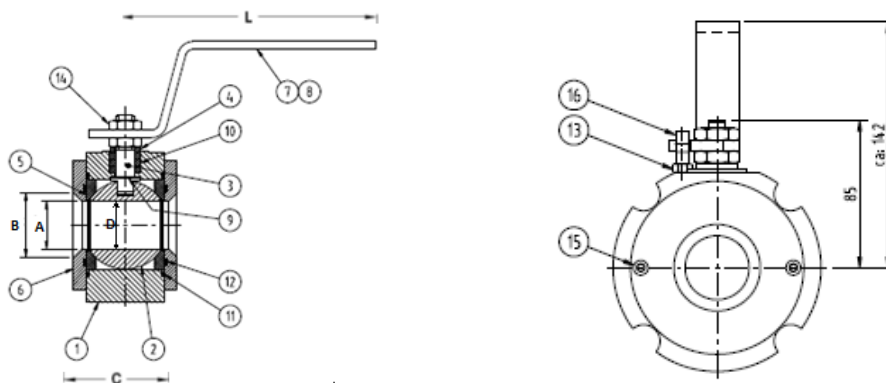
## Flanged design



Parts and material of construction								
Pos.	No.	Part	Material					
1	1	Body	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
2	1	Ball						
3	1	Stem						
4	1	Gland	Stainless steel 316 (EN 1.4408)					
5	1	Washer	Teflon					
6	2	Seat	Carbon filled PTFE/PEEK					
7	1	Bolt nut	A4					
8	3	Steam seal	Graphite					
9	2	O-ring	FKM (Viton)/ FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE					
10	2	O -ring	FKM (Viton)/ FFKM (Kalrez)/ EPDM 70P/ EPDM 90					
11	1	Hand lever	Stainless steel 316 (EN 1.4408)					
12	2	Nut	A4					
13	1	Nut	A4					
14	2	End piece	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
15	8	Screw	A4					
16	8	Nut	A4					
17	1	Hand lever scale	Stainless steel 316 (EN 1.4408)					
18	2	Stop screw	A4					

Dimensions (Flanged connection)									
Valve size mm (inch)	PN	A	B		D <sub>1</sub>	D <sub>2</sub>	C	L	
		PN100/40	PN100/40	Class 150	Class 300	Reduced bore			Full bore
15 (1/2")	100	15	95	89	95	-	15	130	170
20 (3/4")	100	20	105	98	118	15	20	150	170
25 (1")	100	25	115	108	124	20	25	160	200
32 (1 1/4")	100	32	140	118	133	25	32	180	200
40 (1 1/2")	100	40	150	127	156	32	38	200	230
50 (2")	100	50	165	152	165	38	48	230	230
65 (2 1/2")	100	65	185	178	191	48	65	241	230
80 (3")	100	80	200	191	210	65	80	241	250
100 (4")	100	100	220	229	254	80	100	305	360
150 (6")	100	150	285	279	318	100	150	394	600

# Wafer design

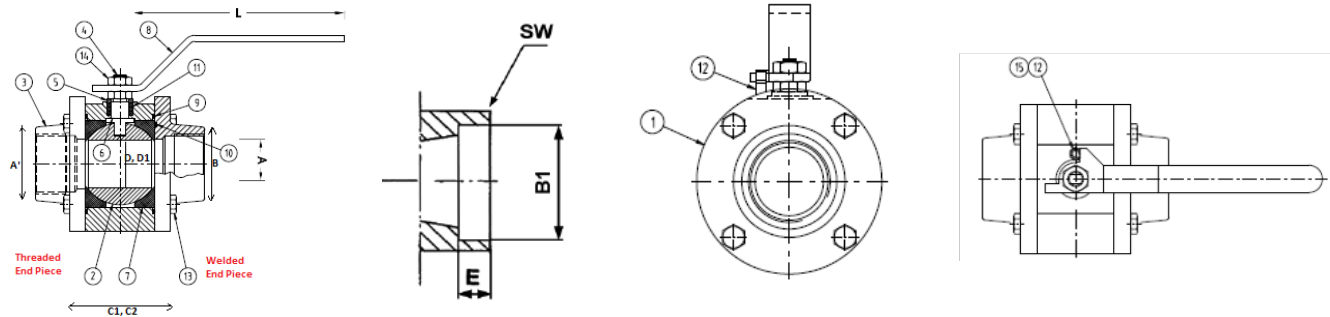


Parts and material of construction								
Pos.	No.	Part	Material					
1	1	Body	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
2	1	Ball	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
3	1	Stem	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
4	1	Gland	Stainless steel 316 (EN 1.4408)					
5	1	Seat	Carbon filled PTFE / PEEK					
6	1	End piece	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
7	1	Hand lever	Stainless steel 316 (EN 1.4408)					
9	1	Washer	Teflon					
10	3	Stem seals	Graphite					
11	2	O-ring	FKM (Viton) /FFKM (Kalrez) /EPDM 70P /EPDM90					
12	2	O-ring	FKM (Viton) /FFKM (Kalrez) /EPDM 70P /EPDM90					
13	1	Nut	A4					
14	8	Nut	A4					
15	2	Screw	A4					
16	1	Screw	A4					

Dimensions (Wafer)						
DN (inch)	PN	A (PN100/40)	B (PN100/40)	C	D	L
20 (1")	100	25	71	55	20	200
32 (1 1/4")	100	32	78	60	25	200
40 (1 1/2")	100	40	85	72	32	230
50 (2")	100	50	98	80	38	230
65 (2 1/2")	100	65	125	90	48	230
80 (3")	100	80	135	110	65	250
100 (4")	100	100	160	130	80	360
150 (6")	100	150	210	165	100	600

In steam design, max 60° open angle.

# Threaded and Welded Connection



Parts and material of construction									
Pos.	No.	Part	Material						
1	1	Body	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex / (EN 1.4410)	Hastelloy C-276	
2	1	Ball	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex / (EN 1.4410)	Hastelloy C-276	
3	1	Threaded/Welded end piece	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex / (EN 1.4410)	Hastelloy C-276	
4	1	Stem	Titanium Gr. 2 and Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex / (EN 1.4410)	Duplex (EN 1.4462)	
5	1	Gland	Stainless steel 316 (EN 1.4408)						
6	1	Washer	Teflon						
7	1	Seat	Carbon filled PTFE / PEEK						
8	2	Screw	A4						
9	1	O-ring	Graphite						
10	3	O-ring	FKM (Viton) / FFKM (Kalrez) / EPDM 70P / EPDM90						
11	2	Stem seals	FKM (Viton) / FFKM (Kalrez) / EPDM 70P / EPDM90						
12	2	Hand lever	Stainless steel 316 (EN 1.4408)						
13	1	Bolt	A4						
14	8	Nut	A4						
15	2	Nut	A4						

Dimensions											
DN (inch)	PN	A (Inch)	A BW	B (BW)	B1 (SW)	C1	C2	D1	D2	E	L
						Full Bore	Reduced bore	Full Bore	Reduced bore		
15 (1/2")	100	1/2	17.1	21.3		75	-	15	-		170
20 (3/4")	100	3/4	22.5	26.9		90	75	20	15		170
25 (1")	100	1	27.9	33.7		105	90	25	20		200
32 (1 1/4")	100	1 1/4	36.7	42.4		120	105	32	25		200
40 (1 1/2")	100	1 1/2	42.8	48.3		145	120	38	32		230
50 (2")	100	2	54.8	60.3		170	145	48	38		230
65 (2 1/2")	100	-	65.0	76.1		164	170	65	48		300
80 (3")	100	-	80.0	88.9		190	164	80	65		400