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
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)
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 CAT I

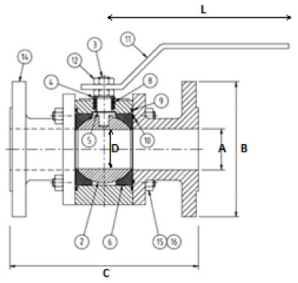
Ordering code

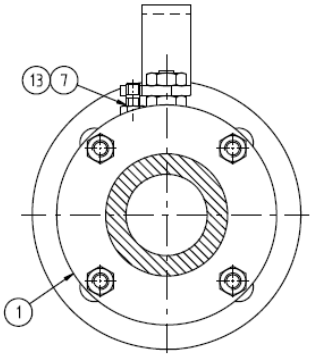
Example: Ball valve, threaded female BSP, in Titanium, DN50, reduced bore, PTFE/Viton/Viton seat & Seal, with hand lever. Code: EB4201-1328050RB51.

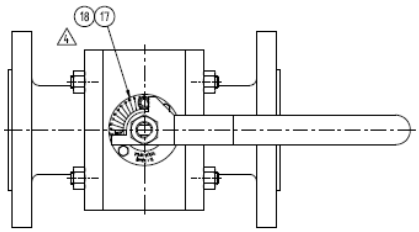
EB (1-2)	Valve series (3-6)	Body & disc material (7-8)		End connection (9-10)		Size (12-14)	Port (14-15)		Seat/seal material & options (16-17)		Actuation (18-21)	
EB	4201	13	Titanium Gr. 2	27	BSP male	015	FB	Full	Blank	Seat/seal: PTFE+C/Viton/ Graphite (std)	Blank	Lever (std)
	4301	14	Hastelloy C-276	28	BSP female	020	RB	Reduced	51	Seat/seal: PTFE+C/ Viton/Viton	GB	Gear box
	4401	16	254 SMO (EN 1.4547)	29	Butt weld	025			53	Seat/seal: PTFE/PTFE/ PTFE	SR	Spring return actuator
	4501	17	914L (EN 1.4539)	30	Socket weld	032			O2	Clean & degreased for O2 services	DA	Double acting actuator
	4601	19	Duplex (EN 1.4462)	31	NPT male	040					EE	Electric
	4701	20	Super Duplex (EN 1.4410)	32	NPT female	050					PP	Pneumatic
	5501			48	Wafer	065					MK	Mounting kit for actuator
	7201			63	Flange DIN PN16/40	080						
	7301			64	Flange DIN PN64/100	100						
	8201			65	Flange ANSI 150	150						
	8301			67	Flange ANSI 300							
				68	Flange ANSI 600							
				69	Flange ANSI 800							
				73	1xBSPF+1xBW/SW							
				74	1xBSPM+1xBW/SW							
				83	1xDIN+1xBW/SW							

EB serie: 4201= Threaded connection, reduced port
4301= Threaded connection, full port
4401= Flange connection, reduced port
4501= Flange connection, full port
4601= Welded connection, reduced port
4701= Welded connection, full port
5501= Wafer design, reduced port
7201= Threaded+welded connection, reduced port
7301= Threaded+welded connection, full port
8201= Flange+welded connection, reduced port
8301= Flange+welded connection, full port

Flanged design



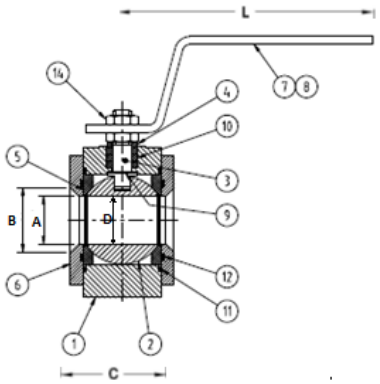


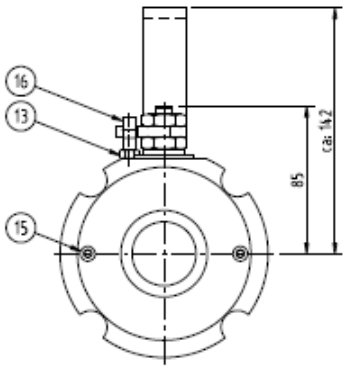


Parts and material of construction								
Pos.	**No.**	**Part**	**Material**					
1	1	Body	Titanium Gr. 2 or Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
2	1	Ball						
3	1	Stem						
4	1	Gland	Stainless steel (EN 1.4404)					
5	1	Washer	PTFE					
6	2	Seat	Carbon filled PTFE/PEEK					
7	1	Bolt nut	A4					
8	3	Steam seal	Graphite (Option: PTFE)					
9	2	O-ring	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
10	2	O -ring	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
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 or 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 (optional)	Stainless steel (EN 1.4404)					
18	2	Stop screw	A4					

Dimensions (Flanged connection)									
Valve size mm (inch)	**PN**	**A**	**B**			**D_1**	**D_2**	**C**	**L**
		PN40/100	**PN40/100**	**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")	40	65	185	178	191	48	65	241	230
80 (3")	40	80	200	191	210	65	80	241	250
100 (4")	40	100	220	229	254	80	100	305	360
150 (6")	40	150	285	279	318	100	150	394	600

Wafer design



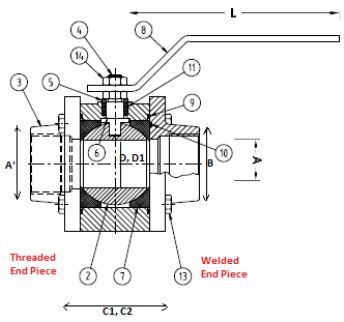


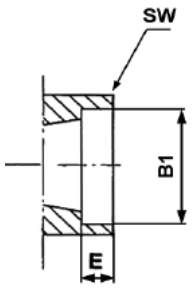
Parts and material of construction								
Pos.	**No.**	**Part**	**Material**					
1	1	Body	Titanium Gr. 2 or Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
2	1	Ball	Titanium Gr. 2 or Gr. 5	254 SMO (EN 1.4547)	904L (EN 1.4539)	Duplex (EN 1.4462)	Super Duplex (EN 1.4410)	Hastelloy C-276
3	1	Stem	Titanium Gr. 2 or 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 (EN 1.4404)					
5	1	Seat	Carbon filled PTFE / PEEK					
6	1	End piece	Titanium Gr. 2 or 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	PTFE					
10	3	Stem seals	Graphite (Option: PTFE)					
11	2	O-ring	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
12	2	O-ring	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
13	1	Nut	A4					
14	8	Nut	A4					
15	2	Screw	A4					
16	1	Screw	A4					

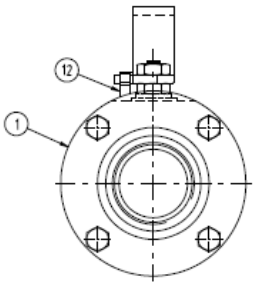
Dimensions (Wafer)						
DN (inch)	**PN**	**A (PN40/100)**	**B (PN40/100)**	**C**	**D**	**L**
20 (1”)	100	25	71	55	20	200
32 (1 1/4”)	100	32	78	60	25	200
40 (1 1/2”)	100	40	85	72	32	230
50 (2”)	100	50	98	80	38	230
65 (2 1/2”)	40	65	125	90	48	230
80 (3”)	40	80	135	110	65	250
100 (4”)	40	100	160	130	80	360
150 (6”)	40	150	210	165	100	600

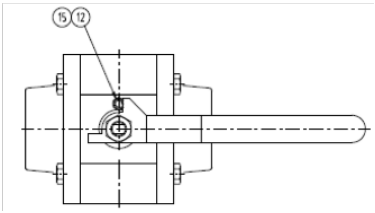
In steam design, max 60° open angle.

Threaded and Welded Connection









Parts and material of construction								
Pos.	**No.**	**Part**	**Material**					
1	1	Body	Titanium Gr. 2 or 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 or 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 or 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 or 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 (EN 1.4404)					
6	1	Washer	PTFE					
7	1	Seat	Carbon filled PTFE / PEEK					
8	2	Screw	A4					
9	1	O-ring	Graphite (Option: PTFE)					
10	3	O-ring	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
11	2	Stem seals	FKM (Viton) (Option: FFKM (Kalrez)/ EPDM 70P/ EPDM 90/ PTFE)					
12	2	Hand lever	Stainless steel (EN 1.4404)					
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")	40	-	65.0	76.1		164	170	65	48		300
80 (3")	40	-	80.0	88.9		190	164	80	65		400

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