



Flange Ball Valves

DIN flange ball valves with double sealing system to be mounted between flanges according to DIN EN 1092-1, antistatic with ISO mounting pad for direct mounting of pneumatic or electrical actuators. Fire safe certified and in conformity with FDA regulation.

Acceptance / Certificates

- ATEX Ex II 2 GDc IIB/IIC
- CE0036 acc. to PED 97/23/EC
- Fire safe acc. to BS EN ISO 10497:2004
- FDA 21CFR 177.1550
- DIN EN 12266-1:2003

Basis DN15 - DN50



Basis DN65 - DN100



with stem extension



with actuator



with actuator + stem extension



PROCOL System Ball Valve AF90D • Description



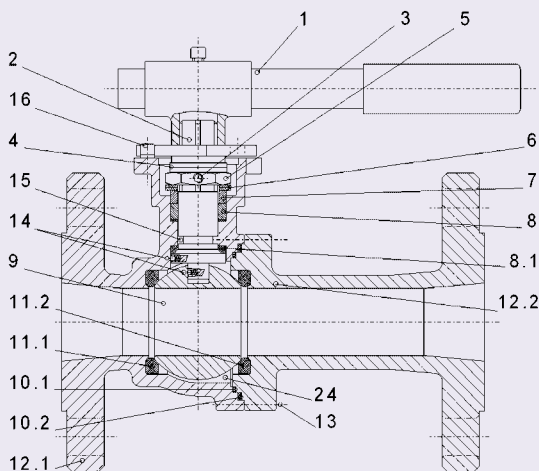
At a glance

The system ball valve grows with the requirement of the plant. Initially mounted as basis ball valve with handle, the ball valve can easily be retrofitted with a stem extension, an actuator or a combination of both.

Brief description

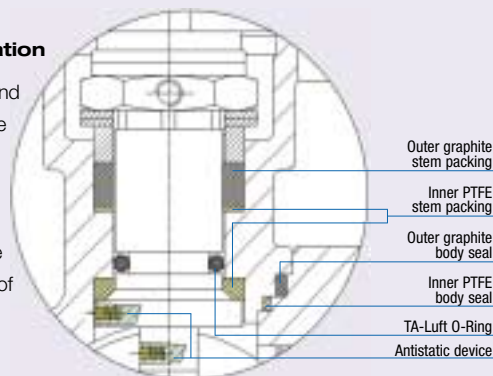
2 piece ball valve to be mounted between flanges DIN EN 1092-1, antistatic, full bore, face to face dimension according to DIN EN 558-1 column 1 and column 27, with plane faced face form B1. Tight closing according to DIN EN 12266-1:2003, P11 and P12 (leakage rate A). Fire safe according to BS EN ISO 10497:2004 and in conformity with US FDA 21CFR 177.1550. Double sealing system on body with chambered PTFE sealing towards media and graphite sealing towards outside. ISO top flange according to DIN EN ISO 5211 for actuator direct mounting.

Options: Automatically pressure release system, stem extension, heating jacket, locking device.



Double sealing system Fire safe and FDA certification

The outer graphite body seal and graphite stem packing grant the fire safe attribute of the ball valve, which is fire safe certified according to BS EN ISO 10497:2004. The chambered PTFE body and stem seal are certified according to the regulation of FDA US 21 CFR 177.1550.



Antistatic

The antistatic devices on stem and ball prevent an electrostatic charge.

TA-Luft execution

The stem is equipped with an FEP covered Viton O-Ring.

E-Set = repair kit * = optional

POS.	Pcs	Description	Material	POS.	Pcs	Description	Material
1	1	Handle, adapter, sleeve	316/1.4408/PVC	10.2	1 E-Set	Body seal outside	Graphite
2	1	Stem	316	11.1	1 E-Set	Seat ring	PTFE
3	1	Locking screw	316	11.2	1 E-Set	Seat ring (pressure releasing)	PTFE / FEP
4	2	Distancer	1.4435	12.1	1	Body part	1.4408/CF8M/A216WCB
5	1	Stem nut	1.4301	12.2	1	Flange part	1.4408/CF8M/A216WCB
6	2	Belleville washer	1.4301	13	4 (6)	Body bolts	A2-70
7	1	Stem seal follower	1.4401	14	2	Antistatic device	316
8	1 E-Set	Stem packing	Graphite/PTFE	15	1 E-Set	O-Ring*	NBR / FEP
8.1	1 E-Set	Washer	PTFE	16	1	Stop device	1.4301
9	1	Ball	1.4401	24	2 E-Set	Body cavity filler*	PTFE
10.1	1 E-Set	Body seal wetted side	PTFE				

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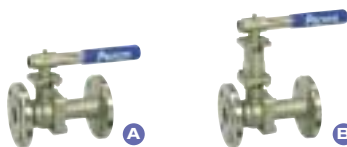
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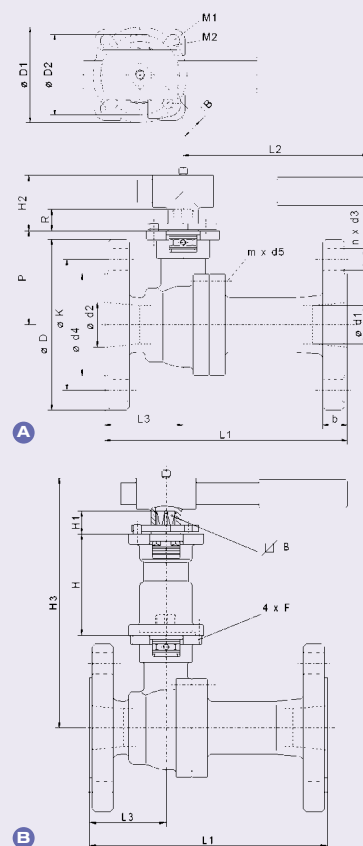
PROCOL System Ball Valve AF90D • Dimensions

Hand operated ball valve



DN	PN	ød1	ød2	ød4	n x d3	øK	øD	P	H2	R	L1 Column 1	Weight kg Column 1	L1 Column 27	Weight kg Column 27	L2	L3
15	16/40	15	18	45	4 x 14	65	95	47	52	11	130	2,3	115	2,2	170	44,5
20	16/40	20	23	58	4 x 14	75	105	52,5	52	9	150	3,3	120	3,0	170	44,5
25	16/40	25	29	68	4 x 14	85	115	61	52	12	160	4,1	125	3,7	170	51,3
32	16/40	32	38	78	4 x 18	100	140	70	52	13	180	5,4	130	4,9	170	56
40	16/40	38	44	88	4 x 18	110	150	79	58	16	200	6,9	140	6,4	230	62,5
50	16/40	50	56	102	4 x 18	125	165	88	58	16	230	10,0	150	9,1	230	70
65	16	65	71	122	4 x (3) x 18	145	185	110	58	25	290	14,0	170	12,7	370	87
80	16	80	84	138	8 x 18	160	200	118	58	25	310	17,9	180	15,8	370	90
100	16	100	109	158	8 x 18	180	220	134	58	22	350	25,7	190	22,0	450	103

DN	PN	b	øD1	øD2	M1	M2	mxd5	B	H3	H	H1
15	16/40	14	42	36	6	6	4 x M8 x 25	9	148	61	6.1
20	16/40	16	42	36	6	6	4 x M8 x 25	9	153	61	6.1
25	16/40	16	50	42	7	6	4 x M8 x 25	11	168	67	10.9
32	16/40	16	50	42	7	6	4 x M8 x 25	11	177	67	10.9
40	16/40	16	70	50	10	8	4 x M10 x 25	14	223	86	13.9
50	16/40	18	70	50	10	8	4 x M12 x 30	14	232	86	13.9
65	16	18	102	70	12	9.5	6 x M10 x 25	17	273	105	16.8
80	16	20	102	70	12	9.5	6 x M10 x 25	17	281	105	16.8
100	16	20	102	70	12	9.5	6 x M10 x 25	17	297	105	16.8



Actuated ball valve

Actuator dimensioning:

Air supply 6 bar

Max. pressure difference 10 bar

Lubricating media

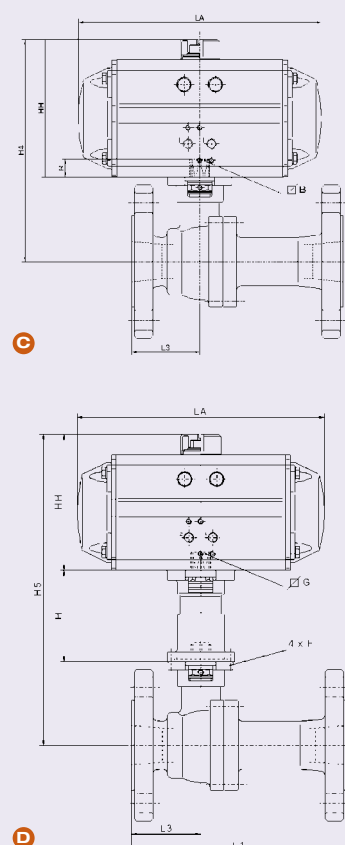
Ball seats PTFE



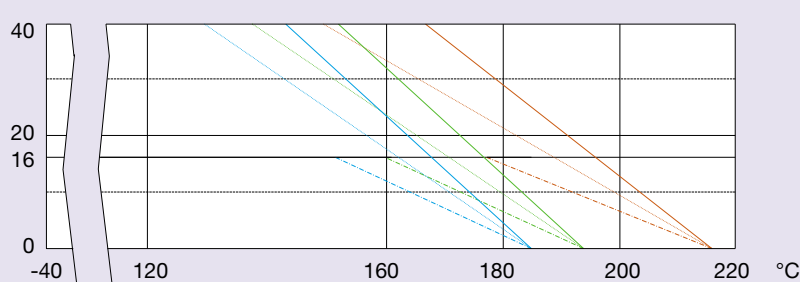
DN	KV	Running torque Nm	double acting actuator	Weight kg Column 1 Actuator DA	Weight kg Column 27 Actuator DA	single acting actuator	Weight kg Column 1 Actuator SA	Weight kg Column 27 Actuator SA
15	11	12	AT 50 D	3,3	3,2	AT 100 S12	4,0	3,9
20	28	13	AT 50 D	4,3	4,0	AT 100 S12	5,0	4,7
25	50	16	AT 100 D	5,7	5,3	AT 200 S12	7,3	6,9
32	71	24	AT 100 D	7,0	6,5	AT 200 S12	8,6	8,1
40	96	44	AT 200 D	9,6	9,1	AT 250 S12	11,3	10,9
50	205	55	AT 200 D	12,7	11,8	AT 300 S12	16,5	15,6
65	275	60	AT 200 D	16,7	15,4	AT 300 S12	20,5	19,2
80	500	89	AT 250 D	21,8	19,6	AT 350 S12	28,0	25,8
100	700	130	AT 300 D	31,1	27,4	AT 400 S12	38,3	34,6

SA = single acting DA = double acting

DN	H4		HH		R	L1 Column 1	L1 Column 27	L3	LA		B/C	H5	
	DA	SA	DA	SA					DA	SA		DA	SA
15	136	152	89	105	11	130	115	44,5	141	159	9	197	213
20	142	158	89	105	9	150	120	44,5	141	159	9	202	218
25	166	183	105	122	12	160	125	51,3	159	211	11	233	250
32	175	192	105	122	13	180	130	56	159	211	11	242	259
40	201	214	122	135	16	200	140	62,5	211	248	14	287	300
50	210	235	122	147	16	230	150	70	211	269	14	296	321
65	232	257	122	147	25	290	170	87	211	269	17	337	362
80	253	293	135	175	25	310	180	90	248	315	17	358	398
100	281	321	147	187	22	350	190	103	269	345	17	386	426



Pressure/temperature diagram



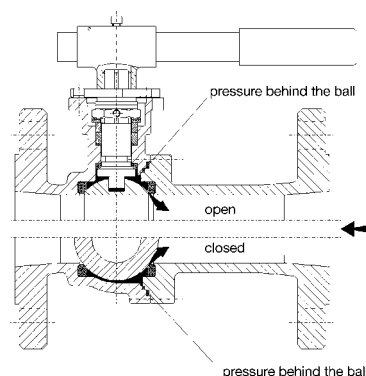
— DN 15 – 20
— DN 25 – 50
- - - DN 65 – 100

— CPTFE PTFE / 25% carbon
— RPTFE PTFE glass reinforced
— PTFE PTFE virgin

For applications at temperatures below -10° C the notched bar impact strength has to be respected.

Pressure releasing system

Ball valves equipped with an automatically pressure releasing system prevent the uncontrolled pressure increase between ball and body. In open and closed ball positions, the media behind the ball remains in closed. In case of a heating up of the media, the media expands and as a result the pressure behind the ball raises up. This pressure increase may damage the ball seats and an internal leakage occurs or the ball will be blocked by the increased pressure. The optional pressure releasing system prevents an uncontrolled pressure increase and releases overpressures directly back into the piping system. No damage of the ball seats will therefore occur.



Production range:

