

2-way ball valve, Article 470-VA/BW with pneumatic actuator Diameter DN 8 up to DN 100

Basic Line



Ball valve with threads **3-parts design with standardized interface** according to ISO 5211. **-Middle part can be swiveled out-** (Easily to exchange seal set, easy accessibility during dismantle the pipeline). Pressure class depends on nominal diameter up to PN 68. Full bore, floating ball, both sides 100% tight closing. Shaft seal consisting of multilayer PTFE V-rings, preloaded and self-adjusting by belleville washers and additional FKM O-ring.

Suitable for gaseous and liquid media (no steam) considering material resistance stainless steel 1.4408.

- both sides welding ends DIN/ISO 12627
- face to face dimensions according to DIN 3202 S-13
- ball above with pressure compensation bore
- ISO 5211 mounting flange for actuators (direct mounting)

Operation optionally with lever (lockable), pneumatic or electrical actuator. Unit (ball valve / actuator) is mounted ready for connection including functional test.

Optional: For the steam area we recommend the use of the ball seal made of material TFM4215 (25% carbon-graphite content).

	TÜV TA-Luft certified
	Antistatic design ATEX 2014/34/EU
	0036
	Ambient -20° C ... + 60° C
	Medium -34° C ... +200° C

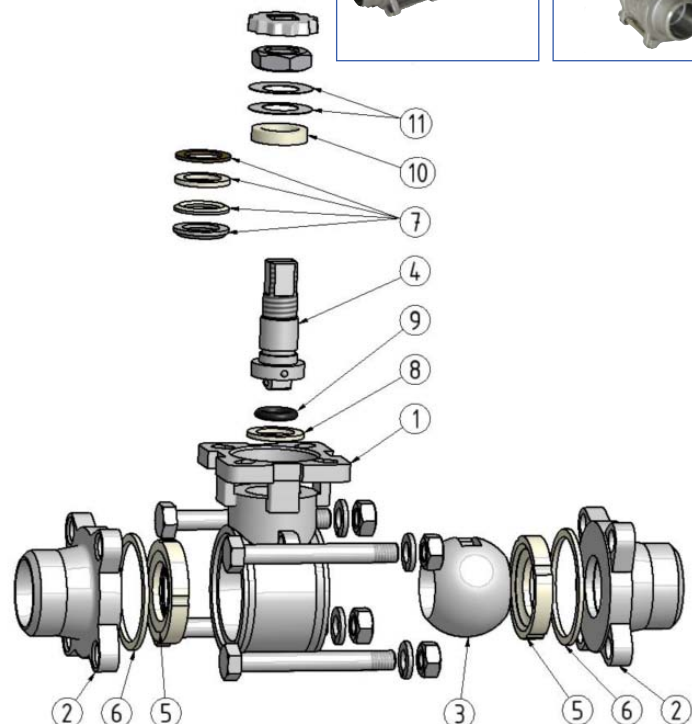
Operating-variants:



Pos.	Description	Material
1	Body	Stainless steel 1.4408
2	Welding ends	Stainless steel 1.4404
3	Ball	Stainless steel 1.4408
4	Stem	Stainless steel 1.4401
5	Ball seal	PTFE-profile shells
6	Body seal	PTFE
7	Chevron packing set	PTFE
8	Thrust ring	PTFE
9	Stem seal	VITON-O-Ring
10	Pressure ring	Stainless steel 1.4401
11	Belleville washers	Stainless steel 1.4301
	Stem nut	Stainless steel
	Pressure ring	Stainless steel 1.4401

Seal kit, consisting of:

Pos.	Description	Material
5	Ball seal (2x)	PTFE-profile shells
6	Body seal (2x)	PTFE
7	Chevron packing set	PTFE
8	Thrust washer	PTFE
9	O-Ring	FKM (Viton)



2-way ball valve, Article 470-VA/BW with pneumatic actuator

Diameter DN 8 up to DN 100

- Design Standard: DIN EN 12516-1
- Housing strength: DIN EN 12516-2
- Design pressure: PN 68 / PN 63 / PN 50 (depending on nominal diameter)
- Marking: EN 19, MSS SP-25
- Inspection / test: DIN EN 12266 P10 / P11 / P12

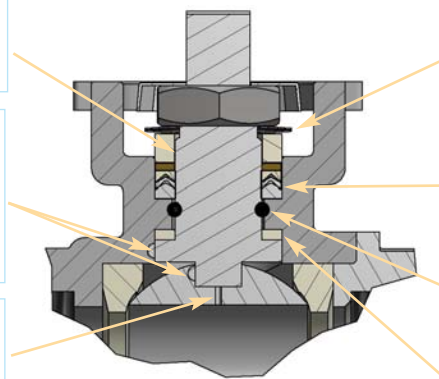


shaft sealing according to VDI 2440 (TA-Luft)

Operating stem is inserted into the body shaft from inside. This guarantees blow-out safety stem.

ATEX-antistatic, the ball-stem connection and the stem-body connection have an anti static feature, which ensures electrical continuity contact between those parts. As a result the ball valve complies with the ATEX Directive 2014/34/EU (Ex II 2 G/D Ex-c II)

The highly polished solid ball has a **pressure relief hole** in the stem slot in order to avoid pressure build-up in the body cavity. This ensures a right shutoff and a long service life



Disc springs ensure the permanent pretensioning of the chevron ring set.

primary shaft seal 3-ply V-ring chevron packing set (PTFE)

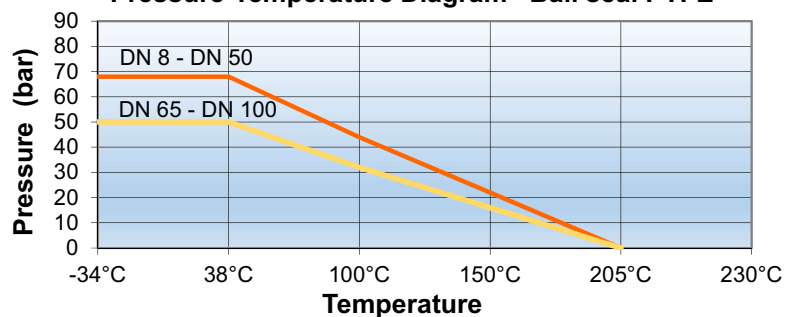
secondary shaft seal (O-ring FPM)

tertiary shaft feedthrough (PTFE sealing washer)

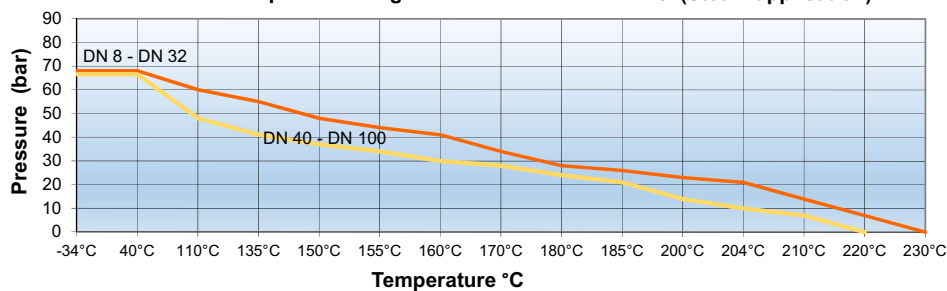
Seal kit PTFE (standard)

Diameter	Article-No.
DN 8	215.7821.18.61
DN 10	215.7821.18.62
DN 15	215.7821.18.63
DN 20	215.7821.18.65
DN 25	215.7821.18.67
DN 32	215.7821.18.68
DN 40	215.7821.18.69
DN 50	215.7821.18.71
DN 65	215.7821.18.72
DN 80	215.7821.18.73
DN 100	215.7821.18.75

Pressure-Temperature Diagram Ball seal PTFE



Pressure-Temperature Diagram Ball Seal TFM 4215 (Steam application)



Seal kit TFM 4215

Diameter	Article-No.
DN 8	215.7821.18.61-DTF
DN 10	215.7821.18.62-DTF
DN 15	215.7821.18.63-DTF
DN 20	215.7821.18.65-DTF
DN 25	215.7821.18.67-DTF
DN 32	215.7821.18.68-DTF
DN 40	215.7821.18.69-DTF
DN 50	215.7821.18.71-DTF
DN 65	215.7821.18.72-DTF
DN 80	215.7821.18.73-DTF
DN 100	215.7821.18.75-DTF

2-way ball valve, Article 470-VA/BW with pneumatic actuator

Diameter DN 8 up to DN 100

Ball valve and pneumatic actuator each enable direct, backlash-free assembly due to their standardized interfaces according to ISO 5211. Modern industrial design and compact construction characterize this pneumatic rotary actuator series. High-quality materials and the robust, reliable design guarantee high availability in daily use.

Depending on the process requirements, there are two versions to choose from:

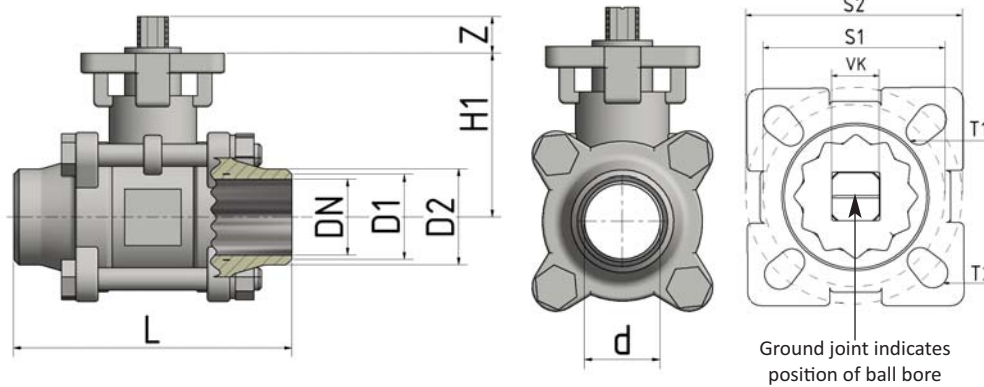
Function double-acting = Pressurization of the air chambers alternately on both sides

Function single-acting = Pressurization of only one air chamber, resetting by built-in spring assemblies (optionally spring-opening or spring-closing)

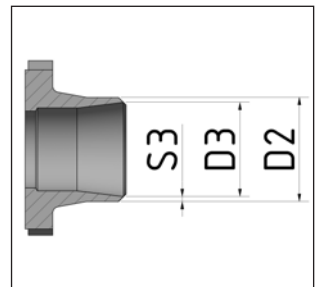
Quality of the control medium filtered compressed air according to DIN/ISO 8573-1, class 4.

The unit is always delivered adjusted and tested ready for operation.

Further information on the pneumatic actuators can be found in the individual data sheets.



Optional: welding end processed similar to ISO 4200 (Tube 2.0 mm)



Actuator design up to max. 20 bar

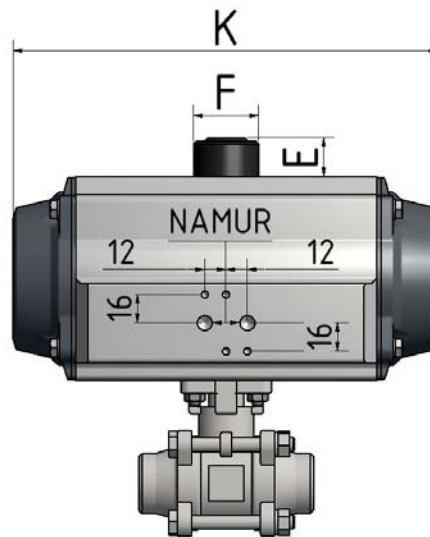
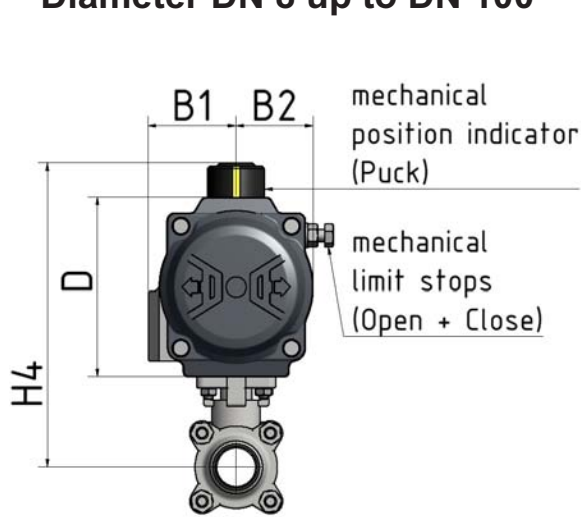
Diameter	L (mm)	D1 (mm)	D2 (mm)	H1 (mm)	d (mm)	Z (mm)	VK (mm)	T1 (mm)	T2 (mm)	LK ISO 5211 S1 / S2	Pressure rating max. (bar)	Starting torque (Nm)		D3 (mm)	S3 (mm)
												10,0 bar	50,0 bar		
DN 8	70	9,3	18	42,0	10,6	9	9	6,0	6,0	F03 / F04	68	4,5	4,5	13,0	4,5
DN 10	70	12,5	18	42,0	12,7	9	9	6,0	6,0	F03 / F04	68	4,5	4,5	15,0	3,5
DN 15	75	15,8	22	42,0	15,0	9	9	6,0	6,0	F03 / F04	63	5,0	5,5	17,3	2,35
DN 20	90	20,9	28	48,5	20,0	9	9	6,0	6,0	F03 / F04	63	6,0	8,5	22,9	2,65
DN 25	100	26,7	34	58,5	25,0	11	11	6,0	6,0	F04 / F05	63	10,0	11,0	29,7	2,15
DN 32	110	35,1	43	63,0	32,0	11	11	6,0	7,0	F04 / F05	63	13,0	17,0	38,4	2,55
DN 40	125	40,9	50	71,3	38,0	14	14	7,0	9,0	F05 / F07	63	19,0	24,0	44,3	3,05
DN 50	150	52,5	61	78,2	50,0	14	14	7,0	9,0	F05 / F07	63	29,0	35,0	56,3	2,60
DN 65	190	62,7	76	100,0	63,5	17	17	9,0	11,0	F07 / F10	50	45,0	54,0	72,1	2,60
DN 80	220	78,0	92	108,5	76,0	17	17	9,0	11,0	F07 / F10	50	72,0	90,0	84,9	4,05
DN 100	270	102,4	115	140,0	100,0	22	22	-	11,0	F10	50	110,0	138,0	110,3	2,85

Diameter	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
∅	10,6	12,7	15,0	20,0	25,0	32,0	38,0	50,0	63,5	76,0	100,0
KV	8,6	11,2	15,5	31,0	41,3	80,0	142,0	178,0	387,0	671,0	1.169,5

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2-way ball valve, Article 470-VA/BW with pneumatic actuator

Diameter DN 8 up to DN 100



actuator longitudinal mounted as standard, if transverse mounting desired, please indicate at ordering.

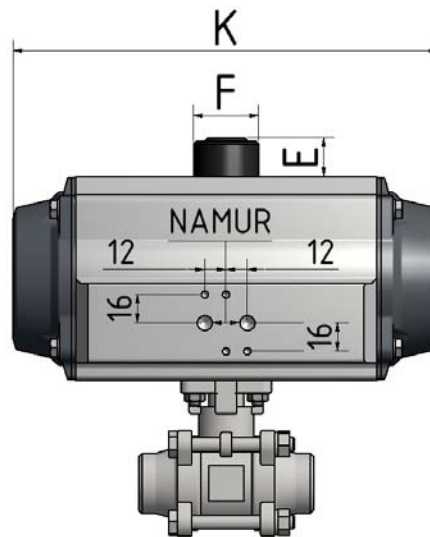
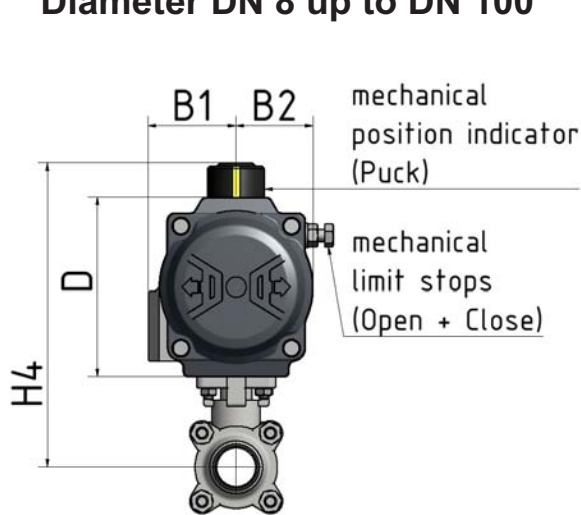
- double acting -

Diameter	Article No.:	Actuator design up to max. 20 bar								
	470-VA/BW Welding ends	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
DN 8	215.3715.6.61	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
DN 10	215.3715.6.62	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
DN 15	215.3715.6.63	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
DN 20	215.3715.6.65	134,5	66	35,5	26,5	118,0	37	20	G 1/8"	1,65
DR 10	86.8200.5.10									
DN 25	215.3715.6.67	147,5	69	43,0	29,0	136,0	37	20	G 1/8"	2,50
DR 15	86.8200.5.15									
DN 32	215.3715.6.68	168,0	85	48,5	36,0	153,5	37	20	G 1/8"	3,71
DR 30	86.8200.5.30									
DN 40	215.3715.6.69	176,3	85	48,5	36,0	153,5	37	20	G 1/8"	5,68
DR 30	86.8200.5.60									
DN 50	215.3715.6.71	200,2	102	50,5	42,5	203,5	37	20	G 1/8"	6,98
DR 60	86.8200.5.60									
DN 65	215.3715.6.72	222,0	102	50,5	50,5	203,5	37	20	G 1/8"	10,98
DR 60	86.8200.5.60									
DN 80	215.3715.6.73	243,5	115	56,5	49,5	241,0	37	20	G 1/8"	15,72
DR 100	86.8200.5.100									
DN 100	215.3715.6.75	315,0	145	72,0	64,0	304,0	51	30	G 1/4"	30,77
DR 220	86.8200.5.220									

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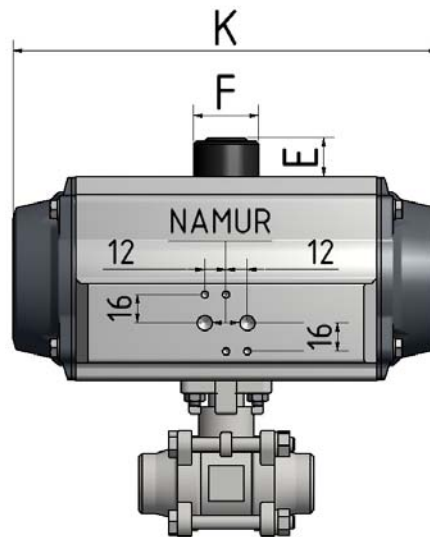
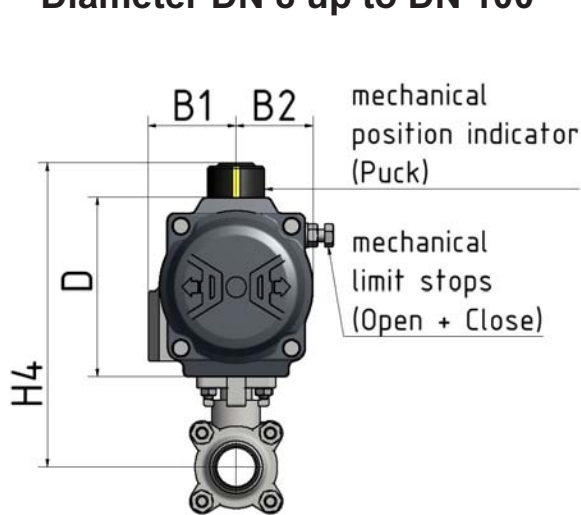
- single acting -

Article No.:		actuator design up to max. 20 bar								
Diameter	Spring closing	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
	470-VA/BW Welding ends									
DN 8	215.3715.6.61	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
DN 10	215.3715.6.62	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
DN 15	215.3715.6.63	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
DN 20	215.3715.6.65	153,5	85	48,5	36,0	153,5	37	20	G 1/8"	2,67
SC 30	86.8201.5.30-08									
DN 25	215.3715.6.67	180,5	102	50,5	42,5	203,5	37	20	G 1/8"	4,32
SC 60	86.8201.5.60-08									
DN 32	215.3715.6.68	185,0	102	50,5	42,5	203,5	37	20	G 1/8"	5,08
SC 60	86.8201.5.60-10									
DN 40	215.3715.6.69	206,3	115	56,5	49,5	241,0	37	20	G 1/8"	7,32
SC 100	86.8201.5.100-10									
DN 50	215.3715.6.71	213,2	115	56,5	49,5	241,0	37	20	G 1/8"	8,67
SC 100	86.8201.5.100-11									
DN 65	215.3715.6.72	275,0	145	72,0	64,0	304,0	51	30	G 1/4"	17,47
SC 220	86.8201.5.220-10									
DN 80	215.3715.6.73	295,5	157	77,0	69,5	333,0	51	30	G 1/4"	23,87
SC 300	86.8201.5.300-10									
DN 100	215.3715.6.75	347,0	177	86,0	80,0	394,5	60	30	G 1/4"	39,30
SC 450	86.8201.5.450-10									

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2-way ball valve, Article 470-VA/BW with pneumatic actuator

Diameter DN 8 up to DN 100



actuator longitudinal mounted as standard, if transverse mounting desired, please indicate at ordering.

- single acting -

Diameter	Article No.:	Actuator design up to max. 20 bar								
	Spring opening	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
DN 8	215.3715.6.61	147,0	85	48,5	36	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
DN 10	215.3715.6.62	147,0	85	48,5	36	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
DN 15	215.3715.6.63	147,0	85	48,5	36	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
DN 20	215.3715.6.65	153,5	85	48,5	36	153,5	37	20	G 1/8"	2,67
SC 30	86.8202.5.30-08									
DN 25	215.3715.6.67	163,5	85	48,5	36	153,5	37	20	G 1/8"	3,19
SC 30	86.8202.5.30-09									
DN 32	215.3715.6.68	185,0	102	50,5	42,5	203,5	37	20	G 1/8"	5,02
SC 60	86.8202.5.60-08									
DN 40	215.3715.6.69	193,3	102	50,5	42,5	203,5	37	20	G 1/8"	5,92
SC 60	86.8202.5.60-08									
DN 50	215.3715.6.71	213,2	115	56,5	49,5	241,0	37	20	G 1/8"	8,62
SC 100	86.8202.5.100-08									
DN 65	215.3715.6.72	247,0	127	63,0	55,5	259,0	37	20	G 1/4"	14,01
SC 150	86.8202.5.150-08									
DN 80	215.3715.6.73	283,5	145	72,0	64,0	304,0	51	30	G 1/4"	20,85
SC 220	86.8202.5.220-08									
DN 100	215.3715.6.75	347,0	177	86,0	80,0	394,5	60	30	G 1/4"	39,30
SC 450	86.8202.5.450-10									

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