

2-way flange ball valve, article 465-VA with pneumatic actuator

Diameter DN 15 up to DN 50 pressure range PN 10 / PN 16 / PN 40

Diameter DN 65 up to DN 200 pressure range PN 40

2-way flange ball valve designed for industrial use. High-quality processing and diverse qualifications enable a wide range of applications. Version as 2-part, flanged housing, pressure range depends on nominal diameter up to 40,0 bar. Full bore, floating ball, both sides 100% tight closing. Shaft seal consisting of multilayer graphite rings, preloaded and self-adjusting by Belleville washers and additional FKM O-ring.

Suitable for gaseous and liquid media, for the steam area ball seals made of R-PTFE (TFM 4215) are available. In any case, the material resistance stainless steel 1.4408 must be observed.

- both sides flange connection according to DIN EN 1092-1, form B pressure class PN 10 / PN 16 / PN 40, from nominal diameter DN 65 PN 40
- ball above with pressure compensation bore
- ISO 5211 mounting flange for actuators (direct mounting)

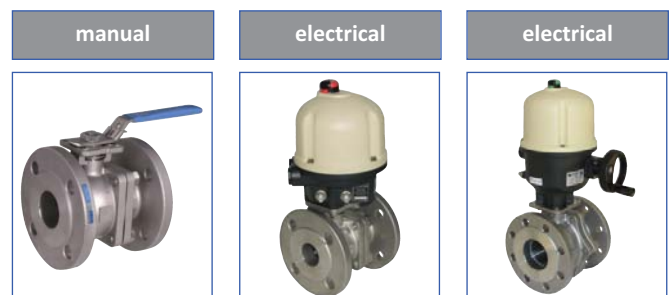
Operation optionally with lever (lockable), pneumatic or electrical actuator. Unit (ball valve / actuator) is mounted ready for connection including functional test.



	TÜV TA-Luft certified
	Antistatic design ATEX 94/9/EC
	0035
	Safety Integrity Level (IEC 61508)
	API 607/5
	ambient -30° C...+80° C
	medium -30° C...+200° C

- Design Standard DIN EN 12516-1
- Housing strength DIN EN 12516-2
- Design pressure PN 10 / PN 16
- Marking EN 19, MSS SP-25
- Examination / test DIN EN 12266 P10 / P11 / P12
- Housing cast AD 2000-Merkblatt W0 (TÜV)

Operating-variants:

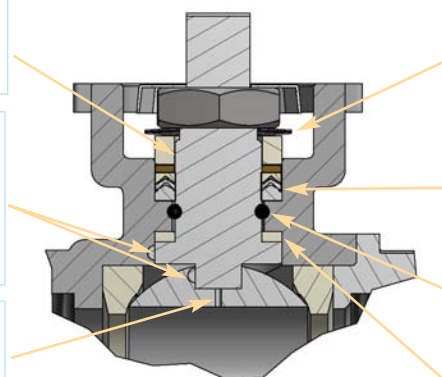


shaft sealing according to VDI 2440 (TA-Luft)

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)

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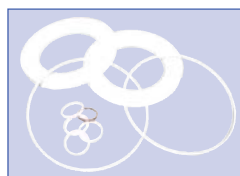
Diameter DN 65 up to DN 200 pressure range PN 40



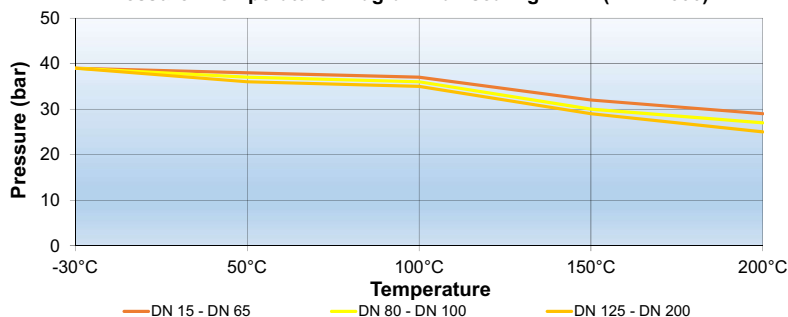
Seal kit (standard),

consisting of:

Pos.	Description	Material
4	ball seal (2x)	PTFE (TFM-1600)
8	thrust ring	PTFE
9	O-ring	FKM (Viton)
10	chevron packing set	graphite (3-parts)
12	thrust ring	stainless steel 1.4401
21	body seal	stainless steel-graphite-PTFE

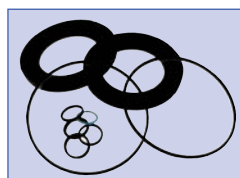


Pressure - Temperature Diagram Ball sealing PTFE (TFM-1600)



Seal kit PTFE TFM 1600 (standard)

Diameter	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Art.-Nr. 215.7881.18. __	11	13	15	18	19	21	24	25	27	28	29	31

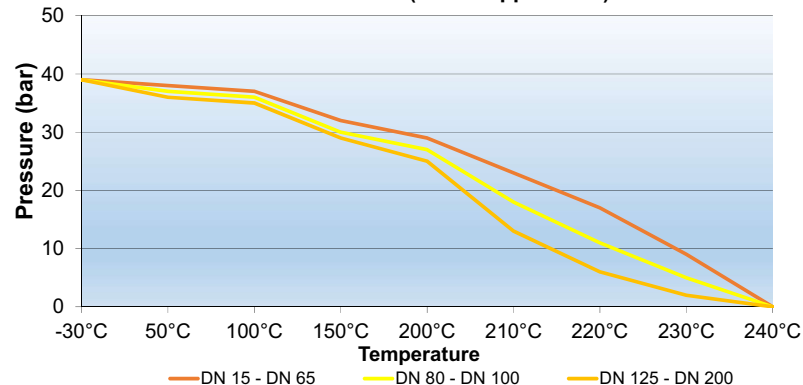


Seal kit for the steam sector,

Tmax. 240° C, consisting of:

Pos.	Description	Material
4	ball seal (2x)	R-PTFE (TFM-4215)
8	thrust ring	PTFE
9	O-ring	FKM (Viton)
10	chevron packing set	graphite (3-parts)
12	pressure ring	stainless steel 1.4401
21	body seal	stainless steel-graphite-PTFE

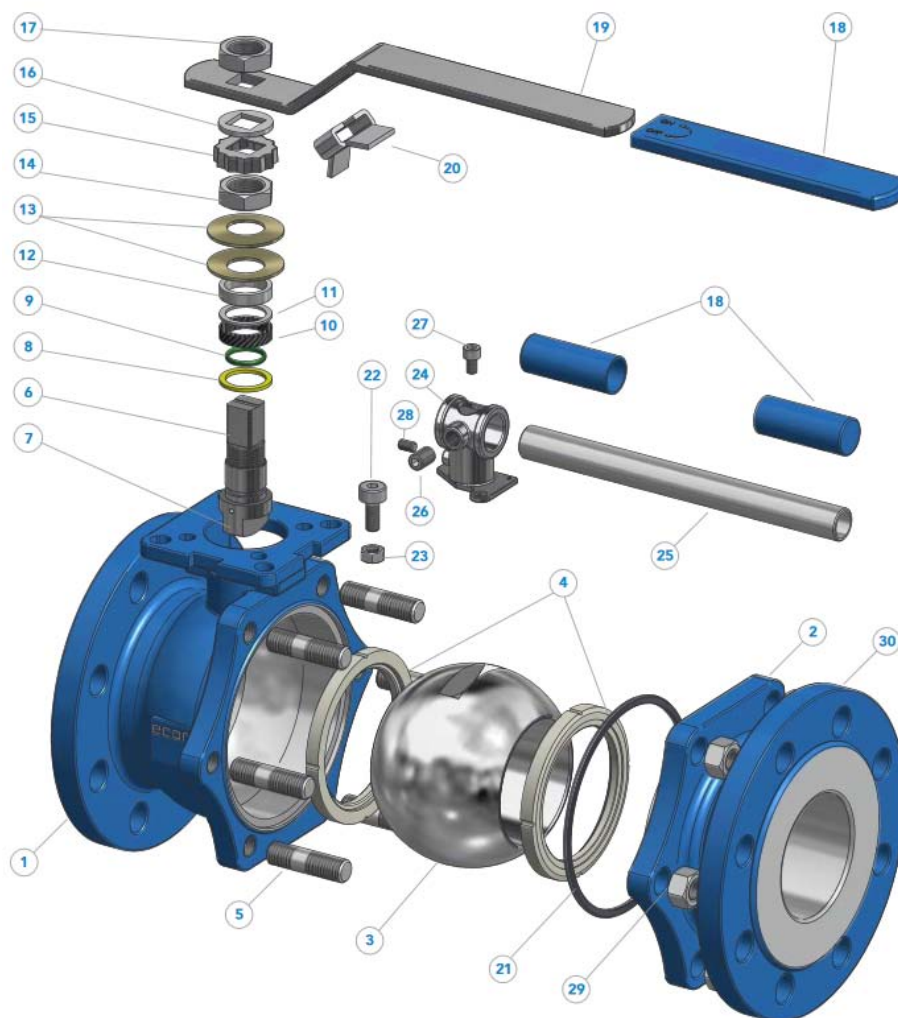
**Pressure - Temperature Diagram
Ball seal TFM4215 (Steam application)**



Seal kit TFM 4215

Diameter	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Art.-Nr. 215.7883.46. __	11	13	15	18	19	21	24	25	27	28	29	31

2-way flange ball valve, article 465-VA



Diameter	Ø d	KV
DN 15	15,0 mm	15,5
DN 20	20,0 mm	31,0
DN 25	25,0 mm	41,3
DN 32	32,0 mm	80,0
DN 40	38,0 mm	141,9
DN 50	50,0 mm	178,0
DN 65	63,5 mm	387,0
DN 80	76,0 mm	670,8
DN 100	100,0 mm	1.169,6
DN 125	125,0 mm	1.462,0
DN 150	150,0 mm	2.236,0
DN 200	200,0 mm	3.612,0

Pos.	Description	Material	Pos.	Description	Material
1	body	stainless steel 1.4408 with ISO top flange	2	body end	stainless steel 1.4408
3	ball	stainless steel 1.4408	4	seat ring	PTFE profile shells (TFM 1600)
5	stud	stainless steel 1.4301	6	stem	stainless steel 1.4401
7	Anti-static device	stainless steel 1.4401	8	thrust washer seal	PTFE
9	O-ring	FKM (Viton)	10	chevron packing set	graphite (3-parts)
11	bushing	stainless steel 1.4301	12	gland	stainless steel 1.4401
13	belleville washer	stainless steel 1.4310	14	nut	stainless steel 1.4301
15	locking cap	stainless steel 1.4301	16	ring	stainless steel 1.4301
17	nut	stainless steel 1.4301	18	sleeve	plastic
19	hand lever	stainless steel 1.4301	20	locking device	stainless steel 1.4301
21	body gasket	stainless steel-graphite-PTFE (spiral wound)	22	socket head screw	stainless steel 1.4301
23	nut	stainless steel 1.4301	24	T-bar support	stainless steel 1.4308
25	T-bar	steel zinc plated	26	allen set screw	stainless steel 1.4301
27	socket head screw	stainless steel 1.4301	28	allen set screw	stainless steel 1.4301
29	nut	stainless steel 1.4301	30	name plate	stainless steel 1.4301

2-way flange ball valve, article 465-VA with pneumatic actuator

Diameter DN 15 up to DN 50 pressure range PN 10 / PN 16 / PN 40

Diameter DN 65 up to DN 200 pressure range PN 40

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:

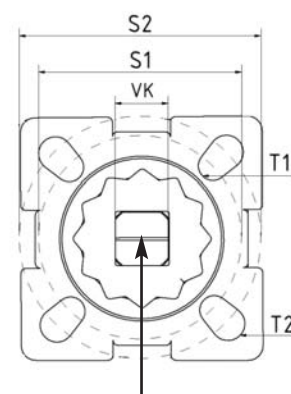
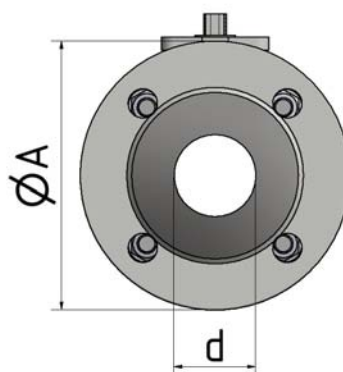
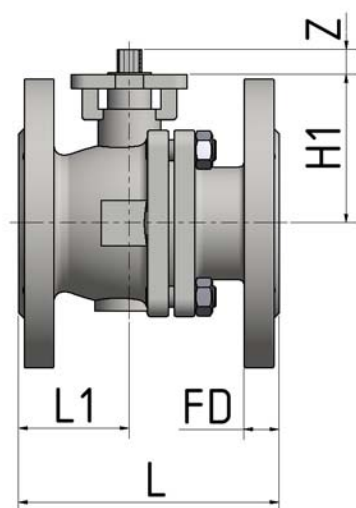
Function double-acting = Pressurization of the air chambers alternately on both sides

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.



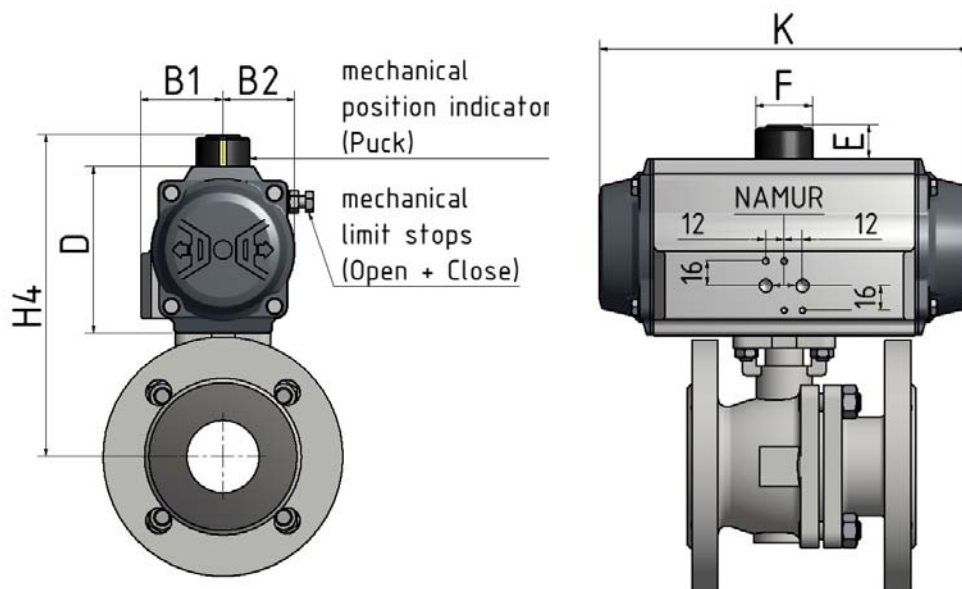
Ground joint indicates position of ball bore

Diameter	L (mm)	L1 (mm)	FD (mm)	H1 (mm)	Z (mm)	ØA (mm)	d (mm)	S1/S2	VK (mm)	T1 (mm)	T2 (mm)	Pressure rating
DN 15 (1/2")	115	50	16	48	9	95	15	F03 / F04	9	4x6	4x6	PN 10/PN 16/PN 40
DN 20 (3/4")	120	54	18	53	9	105	20	F03 / F04	9	4x6	4x6	PN 10/PN 16/PN 40
DN 25 (1")	125	56	18	59	11	115	25	F04 / F05	11	4x6	4x7	PN 10/PN 16/PN 40
DN 32 (1 1/4")	130	58	18	71	11	140	32	F04 / F05	11	4x6	4x7	PN 10/PN 16/PN 40
DN 40 (1 1/2")	140	58	18	76	14	150	38	F05 / F07	14	4x7	4x9	PN 10/PN 16/PN 40
DN 50 (2")	150	63	20	85	14	165	50	F05 / F07	14	4x7	4x9	PN 10/PN 16/PN 40
DN 65 (2 1/2")	170	64	22	107	17	185	63	F07 / F10	17	4x9	4x11	PN 40
DN 80 (3")	180	70	24	117	17	200	76	F07 / F10	17	4x9	4x11	PN 40
DN 100 (4")	190	78	24	140	22	235	100	F10	22	-	4x11	PN 40
DN 125 (5")	325	160	26	183	27	270	125	F12	27	-	4x14	PN 40
DN 150 (6")	350	176	28	204	27	300	150	F12	27	-	4x14	PN 40
DN 200 (8")	400	221	34	253	36	375	200	F14	36	-	4x14	PN 40

2-way flange ball valve, article 465-VA

Diameter DN 15 up to DN 50 pressure range PN 10 / PN 16 / PN 40

Diameter DN 65 up to DN 200 pressure range PN 40

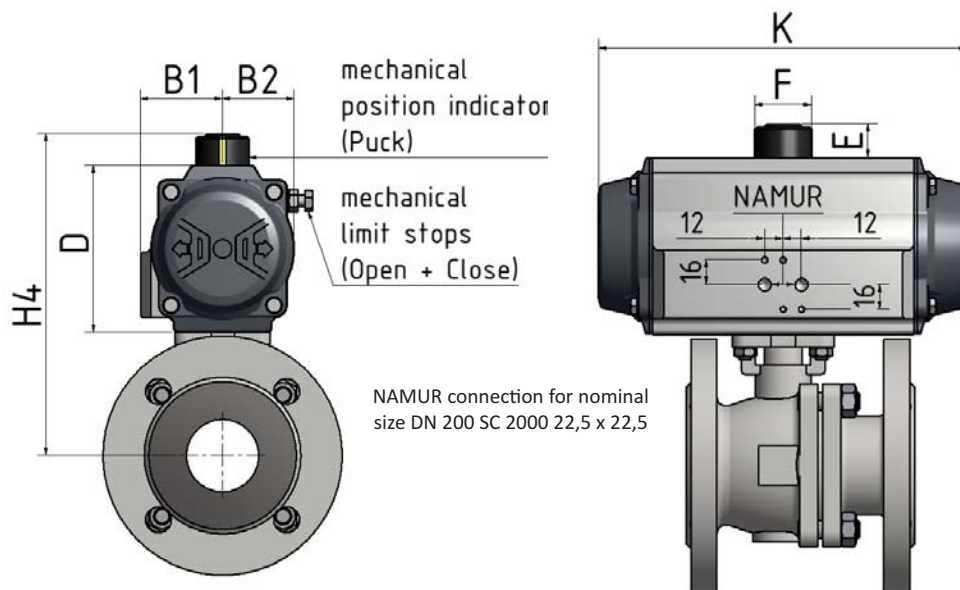


Longitudinal construction standard, if transverse construction desired, please indicate when ordering.

- double acting -

	Article-No.:	Pressure rating PN 40 (actuator design up to 10 bar)								
Diameter	465-VA Stainless steel 1.4408	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
DN 15	215.3842.6.11	114,0	66,0	35,5	26,5	118,0	51,0	20	G 1/8"	3,15
DR 10	86.8200.5.10									
DN 20	215.3842.6.13	119,0	66,0	35,5	26,5	118,0	51,0	20	G 1/8"	3,95
DR 10	86.8200.5.10									
DN 25	215.3842.6.15	128,0	69,0	43,0	29,0	136,0	51,0	20	G 1/8"	5,30
DR 15	86.8200.5.15									
DN 32	215.3842.6.18	156,0	85,0	48,5	36,0	153,5	51,0	20	G 1/8"	7,11
DR 30	86.8200.5.30									
DN 40	215.3842.6.19	161,0	85,0	48,5	36,0	153,5	51,0	20	G 1/8"	8,51
DR 30	86.8200.5.30									
DN 50	215.3842.6.21	187,0	102,0	50,5	42,5	203,5	51,0	20	G 1/8"	12,18
DR 60	86.8200.5.60									
DN 65	215.3842.6.24	222,0	115,0	56,5	49,5	241,0	51,0	20	G 1/8"	17,62
DR 100	86.8200.5.100									
DN 80	215.3842.6.25	244,0	127,0	63,0	55,5	259,0	51,0	20	G 1/4"	22,95
DR 150	86.8200.5.150									
DN 100	215.3842.6.27	285,0	145,0	72,0	64,0	304,0	57,5	30	G 1/4"	38,57
DR 220	86.8200.5.220									
DN 125	215.3842.6.28	360,0	177,0	86,0	80,0	394,5	67,5	30	G 1/4"	76,70
DR 450	86.8200.5.450									
DN 150	215.3842.6.29	400,0	196,0	93,0	88,0	422,5	67,5	30	G 1/4"	91,60
DR 600	86.8200.5.600									
DN 200	215.3842.6.31	473,5	220,5	101,0	99,0	474,0	94,0	50	G 1/4"	176,30
DR 900	86.8200.5.900									

2-way flange ball valve, article 465-VA

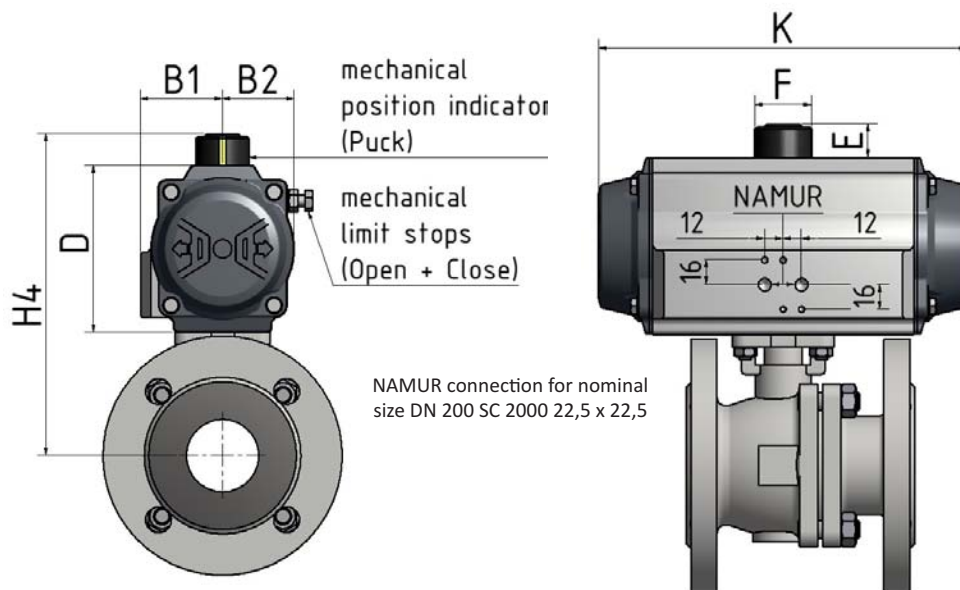


Longitudinal construction standard, if transverse construction desired, please indicate when ordering.

- single acting -

Article-No.:		Pressure rating PN 40 (actuator design up to 10 bar)								
Diameter	spring closing	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
	465-VA Stainless steel 1.4408									
DN 15	215.3842.6.11	133	85	48,5	36,0	153,0	51,0	20	G 1/8"	4,21
SC 30	86.8201.5.30-10									
DN 20	215.3842.6.13	138	85	48,5	36,0	153,0	51,0	20	G 1/8"	5,01
SC 30	86.8201.5.30-10									
DN 25	215.3842.6.15	161	102	50,5	42,5	203,5	51,0	20	G 1/8"	7,12
SC 60	86.8201.5.60-08									
DN 32	215.3842.6.18	173	102	50,5	42,5	203,5	51,0	20	G 1/8"	8,48
SC 60	86.8201.5.60-10									
DN 40	215.3842.6.19	191	115	56,5	49,5	241,0	51,0	20	G 1/8"	11,22
SC 100	86.8201.5.100-10									
DN 50	215.3842.6.21	212	127	63,0	55,5	259,0	51,0	20	G 1/4"	15,35
SC 150	86.8201.5.150-10									
DN 65	215.3842.6.24	252	145	72,0	64,0	304,0	57,5	30	G 1/4"	22,97
SC 220	86.8201.5.220-10									
DN 80	215.3842.6.25	274	157	77,0	69,5	333,0	57,5	30	G 1/4"	29,97
SC 300	86.8201.5.300-11									
DN 100	215.3842.6.27	317	177	86,0	80,0	394,5	67,5	30	G 1/4"	47,40
SC 450	86.8201.5.450-11									
DN 125	215.3842.6.28	403,5	220,5	101,0	99,0	474,0	94,0	50	G 1/4"	95,20
SC 900	86.8201.5.900-12									
DN 150	215.3842.6.29	502,5	298,5	131,0	131,0	605,0	115,0	50	G 3/8"	140,40
SC 2000	86.8201.5.2000-10									
DN 200	215.3842.6.31	551,5	298,5	131,0	131,0	605,0	115,0	50	G 3/8"	219,80
SC 2000	86.8201.5.2000-11									

2-way flange ball valve, article 465-VA



Longitudinal construction standard, if transverse construction desired, please indicate when ordering.

- single acting -

Article-No.:										
Diameter	spring opening	Pressure rating PN 40 (actuator design up to 10 bar)								
	465-VA Stainless steel 1.4408	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
DN 15	215.3842.6.11	133,0	85,0	48,5	36,0	153,5	51,0	20	G 1/8"	4,21
SC 30	86.8202.5.30-10									
DN 20	215.3842.6.13	138,0	85,0	48,5	36,0	153,5	51,0	20	G 1/8"	5,01
SC 30	86.8202.5.30-10									
DN 25	215.3842.6.15	144,0	85,0	48,5	36,0	153,5	51,0	20	G 1/8"	5,99
SC 30	86.8202.5.30-09									
DN 32	215.3842.6.18	173,0	102,0	50,5	42,5	203,5	51,0	20	G 1/8"	8,42
SC 60	86.8202.5.60-08									
DN 40	215.3842.6.19	191,0	115,0	56,5	49,5	241,0	51,0	20	G 1/8"	11,22
SC 100	86.8202.5.100-10									
DN 50	215.3842.6.21	200,0	115,0	56,5	49,5	241,0	51,0	20	G 1/8"	13,72
SC 100	86.8202.5.100-08									
DN 65	215.3842.6.24	252,0	145,0	72,0	64,0	304,0	57,5	30	G 1/4"	22,97
SC 220	86.8202.5.220-10									
DN 80	215.3842.6.25	274,0	157,0	77,0	69,5	333,0	57,5	30	G 1/4"	29,37
SC 300	86.8202.5.300-08									
DN 100	215.3842.6.27	317,0	177,0	86,0	80,0	394,5	67,5	30	G 1/4"	47,10
SC 450	86.8202.5.450-10									
DN 125	215.3842.6.28	403,5	220,5	101,0	99,0	474,0	94,0	50	G 1/4"	92,40
SC 900	86.8202.5.900-08									
DN 150	215.3842.6.29	502,5	298,5	131,0	131,0	605,0	115,0	50	G 3/8"	140,40
SC 2000	86.8202.5.2000-10									
DN 200	215.3842.6.31	551,5	298,5	131,0	131,0	605,0	115,0	50	G 3/8"	216,20
SC 2000	86.8202.5.2000-08									