

2-way ball valve, Article 470-VA with pneumatic actuator Diameter G 1/4" up to G 4"

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 female thread according to ISO 228-1, UNI 7/1, EN 10226
- face to face dimensions according to DIN 3202 M-3
- 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

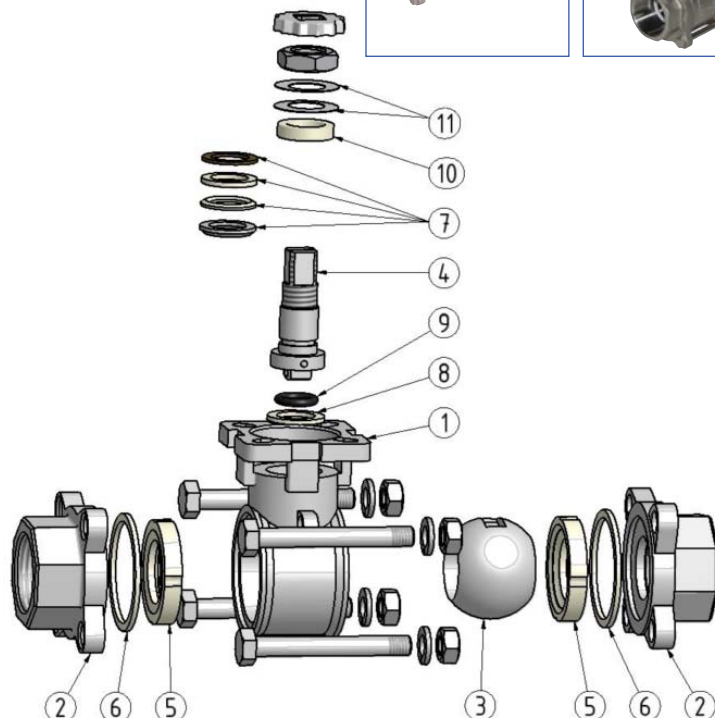
Operating-variants:



Pos.	Description	Material
1	Body	Stainless steel 1.4408
2	Threaded end	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)



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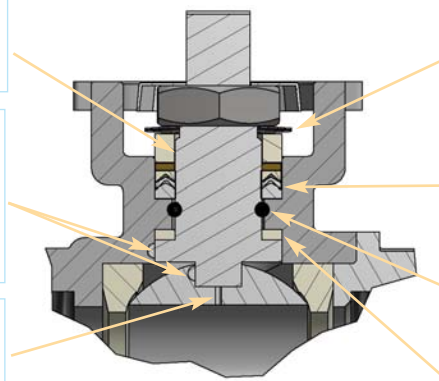
- Design Standard: DIN EN 12516-1
- Housing strength: DIN EN 12516-2
- Design pressure: PN 68 / PN 63 / PN 50 (depending on nominal diameter)
- Marking: EN 19, MSS SP-25
- Inspection / test: DIN EN 12266 P10 / P11 / P12

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.

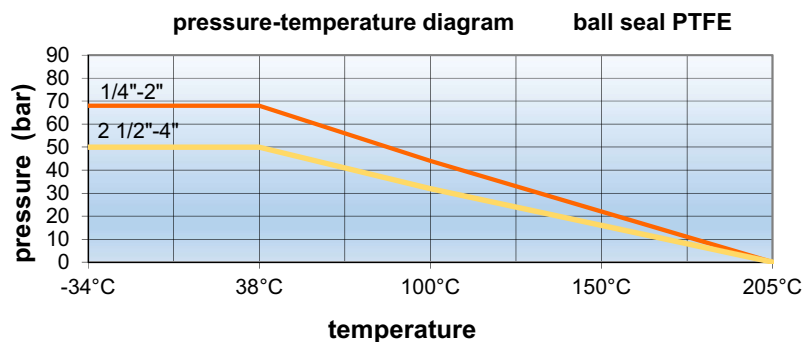
primary shaft seal 3-ply V-ring chevron packing set (PTFE)

secondary shaft seal (O-ring FPM)

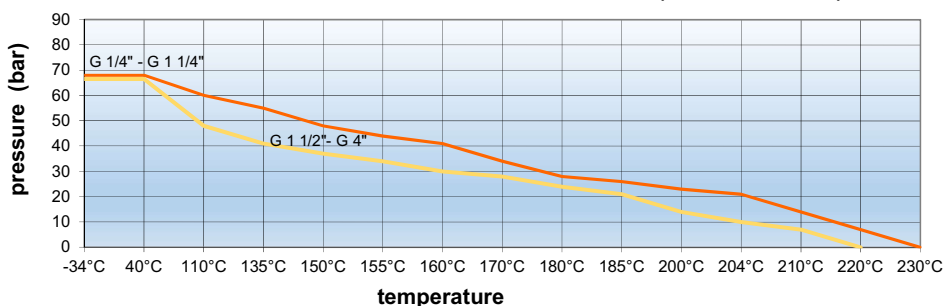
tertiary shaft feedthrough (PTFE sealing washer)

Seal kit PTFE (standard)

Diameter	Article-No.
G 1/4"	215.7821.18.61
G 1/8"	215.7821.18.62
G 3/8"	215.7821.18.63
G 1/2"	215.7821.18.65
G 3/4"	215.7821.18.67
G 1"	215.7821.18.68
G 1 1/2"	215.7821.18.69
G 2"	215.7821.18.71
G 2 1/2"	215.7821.18.72
G 3"	215.7821.18.73
G 4"	215.7821.18.75



pressure-temperature diagram ball seal TFM 4215 (steam execution)



Seal kit TFM 4215

Diameter	Article-No.
G 1/4"	215.7821.18.61-DTF
G 3/8"	215.7821.18.62-DTF
G 1/2"	215.7821.18.63-DTF
G 3/4"	215.7821.18.65-DTF
G 1"	215.7821.18.67-DTF
G 1 1/4"	215.7821.18.68-DTF
G 1 1/2"	215.7821.18.69-DTF
G 2"	215.7821.18.71-DTF
G 2 1/2"	215.7821.18.72-DTF
G 3"	215.7821.18.73-DTF
G 4"	215.7821.18.75-DTF

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2-way ball valve, Article 470-VA with pneumatic actuator Diameter G 1/4" up to G 4"

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:

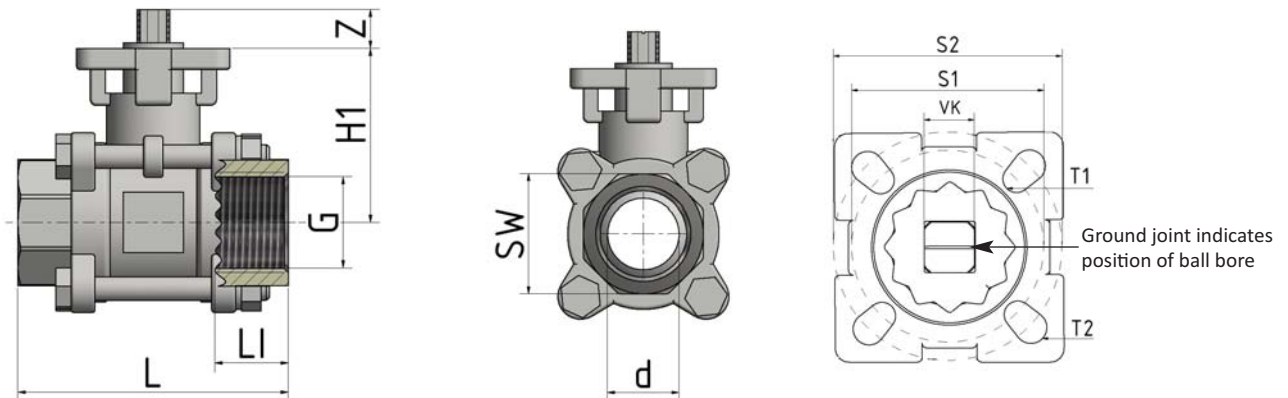
Function double-acting = Pressurization of the air chambers alternately on both sides

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.



actuator design up to max. 20 bar

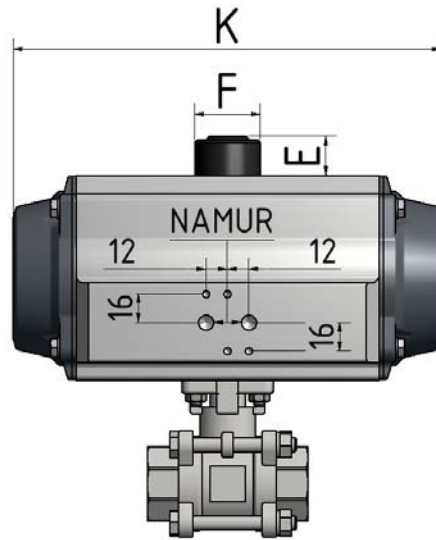
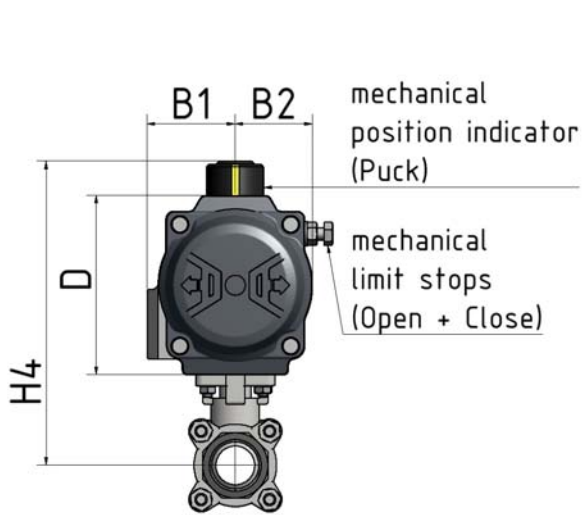
Diameter	L (mm)	LI (mm)	H1 (mm)	SW (mm)	d (mm)	Z (mm)	VK (mm)	T1 (mm)	T2 (mm)	LK ISO 5211 S1 / S2	Pressure rating max. (bar)	Starting torque (Nm)	
												10,0 bar	50,0 bar
G 1/4"	75,0	13,8	42,0	28	10,6	9	9	6,0	6,0	F03 / F04	68	4,5	4,5
G 3/8"	75,0	14,2	42,0	28	12,7	9	9	6,0	6,0	F03 / F04	68	4,5	4,5
G 1/2"	75,0	14,5	42,0	28	15,0	9	9	6,0	6,0	F03 / F04	63	5,0	5,5
G 3/4"	80,0	16,7	48,5	32	20,0	9	9	6,0	6,0	F03 / F04	63	6,0	8,5
G 1"	90,0	20,5	58,0	41	25,0	11	11	6,0	6,0	F04 / F05	63	10,0	11,0
G 1 1/4"	110,0	21,8	63,0	50	32,0	11	11	6,0	7,0	F04 / F05	63	13,0	17,0
G 1 1/2"	120,0	23,5	71,0	57	38,0	14	14	7,0	9,0	F05 / F07	63	19,0	24,0
G 2"	140,0	24,2	78,0	70	50,0	14	14	7,0	9,0	F05 / F07	63	29,0	35,0
G 2 1/2"	185,5	26,6	100,0	86	63,5	17	17	9,0	11,0	F07 / F10	50	45,0	54,0
G 3"	205,0	28,7	109,0	101	76,0	17	17	9,0	11,0	F07 / F10	50	72,0	90,0
G 4"	240,0	32,4	140,0	132	100,0	22	22	-	11,0	F10	50	110,0	138,0

Diameter	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Ø	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 with pneumatic actuator

Diameter G 1/4" up to G 4"



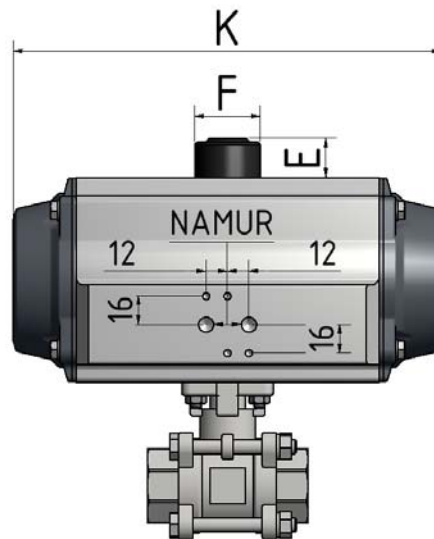
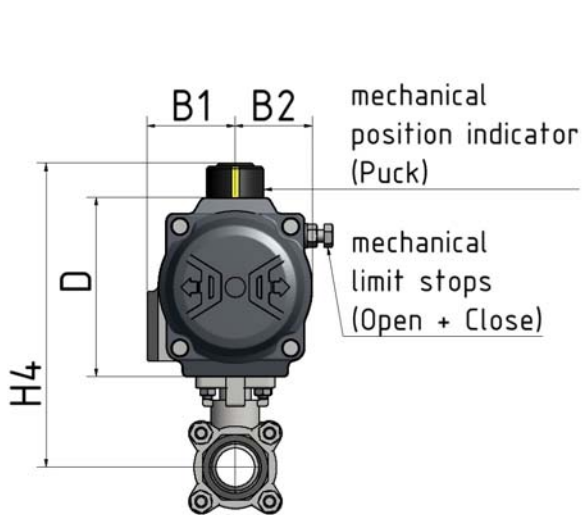
actuator longitudinal mounted as standard, if transverse mounting desired, please indicate at ordering.

- double acting -

Diameter	Article-No.:	Actuator design up to max. 20 bar								
	470-VA Female thread	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
G 1/4"	215.3710.6.61	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
G 3/8"	215.3710.6.62	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
G 1/2"	215.3710.6.63	128,0	66	35,5	26,5	118,0	37	20	G 1/8"	1,45
DR 10	86.8200.5.10									
G 3/4"	215.3710.6.65	134,5	66	35,5	26,5	118,0	37	20	G 1/8"	1,65
DR 10	86.8200.5.10									
G 1"	215.3710.6.67	147,0	69	43,0	29,0	136,0	37	20	G 1/8"	2,50
DR 15	86.8200.5.15									
G 1 1/4"	215.3710.6.68	168,0	85	48,5	36,0	153,5	37	20	G 1/8"	3,71
DR 30	86.8200.5.30									
G 1 1/2"	215.3710.6.69	176,0	85	48,5	36,0	153,5	37	20	G 1/8"	4,61
DR 30	86.8200.5.30									
G 2"	215.3710.6.71	200,0	102	50,5	42,5	203,5	37	20	G 1/8"	6,98
DR 60	86.8200.5.60									
G 2 1/2"	215.3710.6.72	222,0	102	50,5	42,5	203,5	37	20	G 1/8"	10,98
DR 60	86.8200.5.60									
G 3"	215.3710.6.73	244,0	115	56,5	49,5	241,0	37	20	G 1/8"	15,72
DR 100	86.8200.5.100									
G 4"	215.3710.6.75	315,0	145	56,5	49,5	304,0	51	30	G 1/4"	30,77
DR 220	86.8200.5.220									

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

Diameter G 1/4" up to G 4"



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

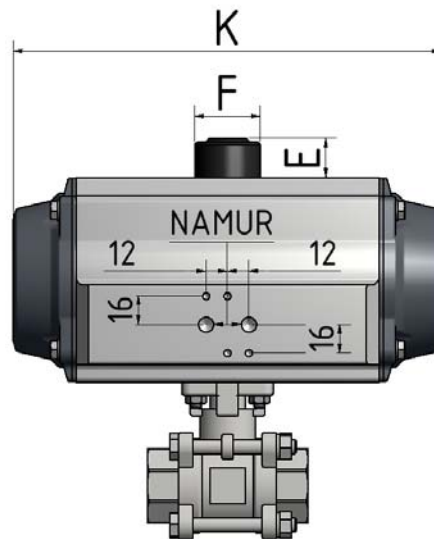
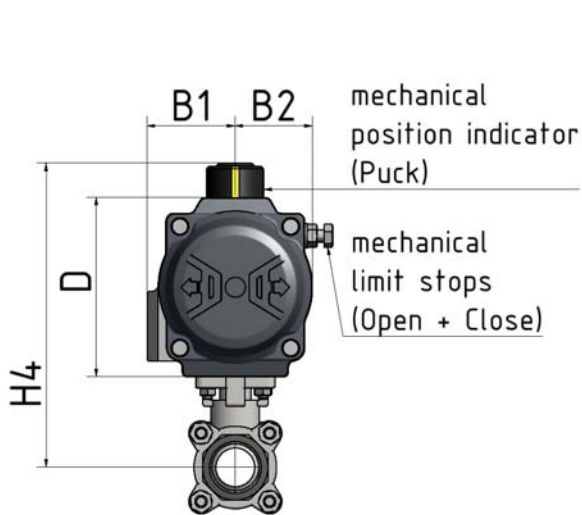
- single acting -

Diameter	Article-No.:	Actuator design up to max. 20 bar								
	Spring closing	H4 (mm)	D (mm)	B1 (mm)	B2 (mm)	K (mm)	F (mm)	E (mm)	Air connection	Weight (kg)
G 1/4"	215.3710.6.61	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
G 3/8"	215.3710.6.62	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
G 1/2"	215.3710.6.63	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8201.5.30-08									
G 3/4"	215.3710.6.65	153,5	85	48,5	36,0	153,5	37	20	G 1/8"	2,67
SC 30	86.8201.5.30-08									
G 1"	215.3710.6.67	180,0	102	50,5	42,5	203,5	37	20	G 1/8"	4,32
SC 60	86.8201.5.60-08									
G 1 1/4"	215.3710.6.68	185,0	102	50,5	42,5	203,5	37	20	G 1/8"	5,08
SC 60	86.8201.5.60-10									
G 1 1/2"	215.3710.6.69	206,0	115	56,5	49,5	241,0	37	20	G 1/8"	7,32
SC 100	86.8201.5.100-10									
G 2"	215.3710.6.71	213,0	115	56,5	49,5	241,0	37	20	G 1/8"	8,67
SC 100	86.8201.5.100-11									
G 2 1/2"	215.3710.6.72	275,0	145	72,0	64,0	304,0	51	30	G 1/4"	17,47
SC 220	86.8201.5.220-10									
G 3"	215.3710.6.73	296,0	157	77,0	69,5	333,0	51	30	G 1/4"	23,87
SC 300	86.8201.5.300-10									
G 4"	215.3710.6.75	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 with pneumatic actuator

Diameter G 1/4" up to G 4"



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)
G 1/4"	215.3710.6.61	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
G 3/8"	215.3710.6.62	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
G 1/2"	215.3710.6.63	147,0	85	48,5	36,0	153,5	37	20	G 1/8"	2,47
SC 30	86.8202.5.30-08									
G 3/4"	215.3710.6.65	153,5	85	48,5	36,0	153,5	37	20	G 1/8"	2,67
SC 30	86.8202.5.30-08									
G 1"	215.3710.6.67	163,0	85	48,5	36,0	153,5	37	20	G 1/8"	3,19
SC 30	86.8202.5.30-09									
G 1 1/4"	215.3710.6.68	185,0	102	50,5	42,5	203,5	37	20	G 1/8"	5,02
SC 60	86.8202.5.60-08									
G 1 1/2"	215.3710.6.69	193,0	102	50,5	42,5	203,5	37	20	G 1/8"	5,92
SC 60	86.8202.5.60-08									
G 2"	215.3710.6.71	213,0	115	56,5	49,5	241,0	37	20	G 1/8"	8,62
SC 100	86.8202.5.100-08									
G 2 1/2"	215.3710.6.72	247,0	127	63,0	55,5	259,0	37	20	G 1/4"	14,01
SC 150	86.8202.5.150-08									
G 3"	215.3710.6.73	284,0	145	72,0	64,0	304,0	51	30	G 1/4"	20,85
SC 220	86.8202.5.220-08									
G 4"	215.3710.6.75	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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