



Direct-acting 2/2 way plunger valve

- Direct-acting, powerful valve with diameter of up to DN 13
- Vibration-proof, bolted coil system
- Increased leak-tightness with welded plunger guide tube
- Explosion proof versions
- High pressure variants for gases and liquids

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with



Type 2518 ▶
Cable Plug
DIN EN 175301 - 803 -
Form A



Type 2513 ▶
Cable plug acc. to
DIN EN 175301 - 803
Form A

Type description

Valve 6027 is a direct-acting plunger valve. The stopper and plunger guide tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The coils are moulded with chemically resistant epoxy. An optional sliding ring bearing increases the service life with dry gases. Special seal technology is used for high-pressure applications. In combination with a plug in accordance with DIN EN 175301 - 803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

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1. General technical data

Product properties	
Dimensions	Detailed information can be found in chapter "4. Dimensions" on page 9.
Materials	
Body	Brass or stainless steel 1.4404
Coil	Epoxy
Nominal diameter	DN 1.0...DN 13.0
Coil insulation class	Epoxy class H
Performance data	
Duty cycle / single valve	100 % continuous rating
Response times ¹⁾	
Response times AC	Opening: 10...30 ms Closing: 50...80 ms
Response times DC	Opening: 20...30 ms Closing: 50...80 ms
Circuit function	A and B
Electrical data	
Voltage tolerance	± 10 %
Voltages	24 V/DC, 24 V/50 Hz, 230 V/50 Hz, others on request
Medium data	
Operating medium ²⁾	
Standard	Vacuum, neutral gases and liquids (e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol) and slightly aggressive medium, Hot liquids and steam
Oil burner version (PF15)	Heating oil (EL, L, M, S) acc. to DIN 51603 part 1...6, shipping fuels acc. to ISO 8217 Only with stainless steel body: Fatty acid methyl ester (FAME) acc. to DIN EN 14213, rapeseed oil acc. to DIN V 51605
Viscosity (max.)	21 mm ² /sec 1.6...76 cSt (DN 2, 2 NC 1.6...22 cSt) (Oil burner version PF15)
Medium temperature	
Standard version ³⁾	Seat seal/external seal FKM/FKM: -10 °C...+140 °C EPDM/EPDM: -30 °C...+120 °C NBR/NBR: -10 °C...+80 °C PTFE/FKM: -10 °C...+140 °C PTFE/PEEK: -40 °C...+180 °C
High pressure version up to 250 bar (MX32) or 160 bar (MX31)	PEEK/FKM: -10 °C...+80 °C PEEK/EPDM: -30 °C...+80 °C PEEK/PEEK: -40 °C...+80 °C
Approval DIN EN 161 (PO19)	NBR/NBR: 0 °C...+80 °C FKM/FKM: 0 °C...+80 °C
Oil burner version (PF15)	0 °C...160 °C
Approvals and certificates	
Protection class	IP65 with cable plug
DIN CERTCO registration (Oil burner version PF15)	DN 2.2 (NO) Reg. No.: 5S255 DN 3.0 (NC) Reg. No.: 5S255 DN 3.5 (NC) Reg. No.: 5S255 DN 10.0 (NC) Reg. No.: 5S255
Process/Port connection & communication	
Port connection	G ¼, G ⅜, G ½, G ⅝ (NPT and RC on request) G ¼, G ⅜, G ½, G ⅝ (Oil burner version PF15)
Electrical connection	Acc. to DIN EN 175 301 - 803 Form A for cable plug Type 2508 (see "Cable plug Type 2518, form A acc. to DIN EN 175301 - 803" on page 26)
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature (max.)	55 °C -15 °C...+60 °C (Oil burner version PF15)

1.) Response times [ms]: Measured at valve outlet at 6 bar and +20 °C, opening: pressure build-up 0...90 %, closing: pressure relief 100...10 %

2.) Medium resistance according to material combination

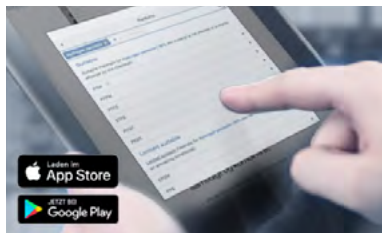
3.) Circuit function normally open in conjunction with AC voltage is limited to max. 100 °C

2. Circuit functions

Circuit functions	Description
	Type: A, solenoid valve 2/2 way Direct-acting Normally closed
	Type: B, solenoid valve 2/2 way Direct-acting Normally open

3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp



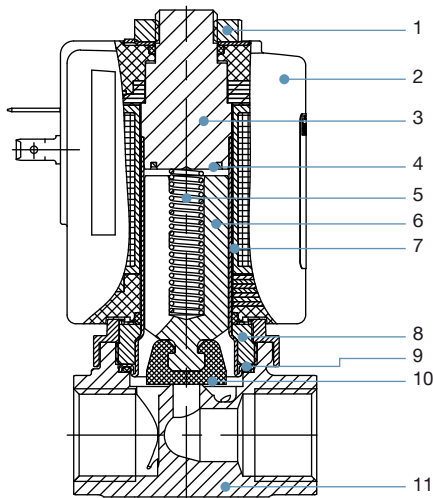
Bürkert resistApp – Chemical Resistance Chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start Chemical Resistance Check](#)

3.2. Material specifications standard version

Elastomer seal version up to 30 bar

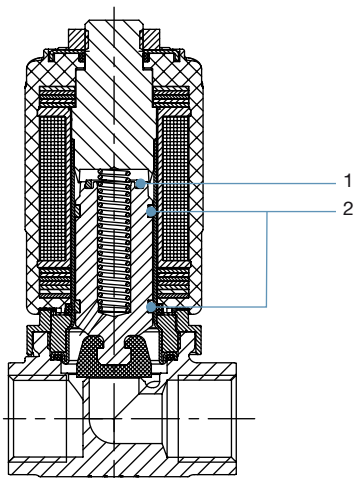


No.	Element	Material
1	Locknut	DIN 176 thick-film passivated or stainless steel
2	Coil	Epoxy
3	Stopper	Stainless steel 1.4113
4	Shading ring	Copper (brass body) Silver (stainless steel body)
5	Spring	Stainless steel 1.4310
6	Plunger	Stainless steel 1.4113
7	Guide tube	Stainless steel 1.4303
8	Nipple	Brass, stainless steel 1.4305
9	Seal	FKM, PEEK (EPDM on request)
10	Seat seal	FKM, PTFE (EPDM on request)
11	Housing	Brass, stainless steel 1.4404 (CF3M)

Version with increased lifespan (NF39)

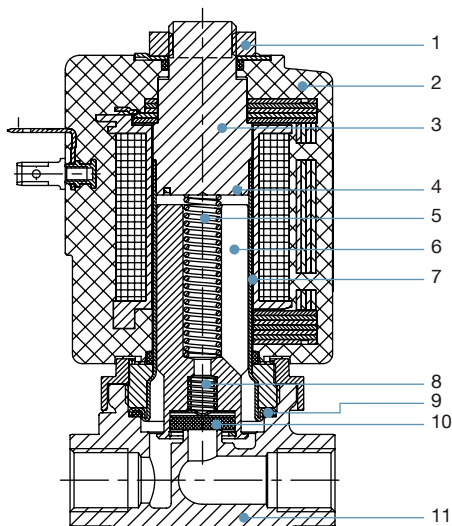
Note:

All parts are the same as standard, but with two additional parts as follows.



No.	Element	Material
1	Damping ring	PEEK
2	Glider	PTFE carbon filled

Version PTFE pendulum seal up to 100 bar



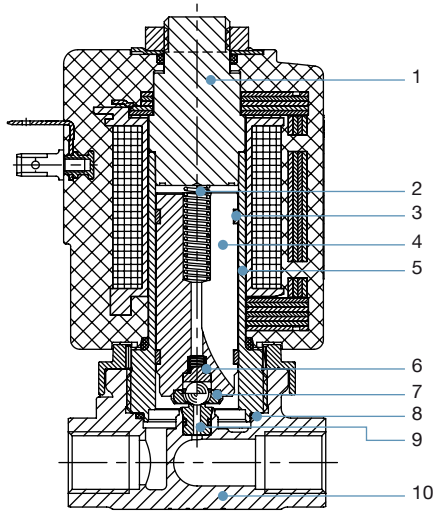
No.	Element	Material
1	Locknut	DIN 176 thick-film passivated or stainless steel
2	Coil	Epoxy
3	Stopper	Stainless steel 1.4113
4	Shading ring	Silver (stainless steel body)
5	Spring	Stainless steel 1.4310
6	Core	Stainless steel 1.4113
7	Guide tube	Stainless steel 1.4303
8	Spring	Stainless steel 1.4310
9	Seat	FKM
10	Seat seal	PTFE pendulum seal
11	Housing	Brass, stainless steel 1.4404 (CF3M)

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3.3. Materials high pressure version up to 250 bar (MX32) or 160 bar (MX31)

Note:

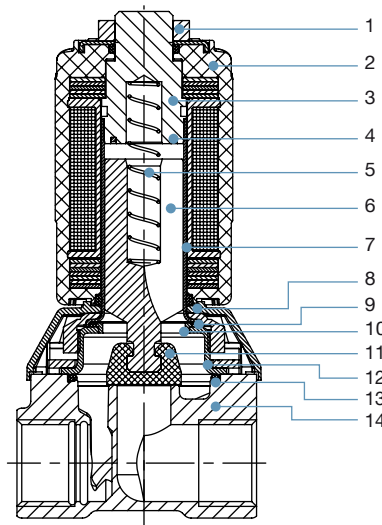
High pressure version from 135 bar, circuit function A



No.	Element	Material
1	Stopper	1.4523
2	Compression springs	1.4310
3	Glider	PTFE
4	Plunger	Stainless steel 1.4113
5	Armature guide tube	1.4571
6	Ball seat	1.4305
7	Seat seal	Ceramic ball
8	O-rings	FKM
9	Seat	PEEK
10	Housing	Stainless steel 1.4404 (CF3M) only in ¼" G and NPT

3.4. Materials version DN 13

Version DN 13 standard



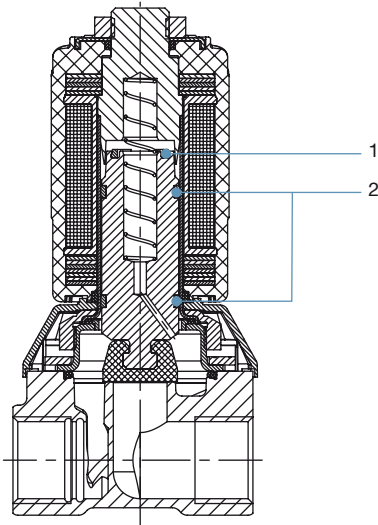
No.	Element	Material
1	Locknut	DIN 176 thick-film passivated or stainless steel
2	Coil	Epoxy
3	Stopper	Stainless steel 1.4113
4	Shading ring	Copper (brass body) Silver (stainless steel body)
5	Spring	Stainless steel 1.4310
6	Core	Stainless steel 1.4113
7	Guide tube	Stainless steel 1.4303
8	Hood	PA6
9	Seal	FKM, EPDM
10	Support ring	PPS Fortron
11	Core seal	FKM, EPDM, NBR
12	Cover	DN 10...DN 25 stainless steel 1.4301
13	Seal	FKM, EPDM
14	Housing	Brass, stainless steel 1.4408

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Version DN 13 with increased lifespan (NF39)

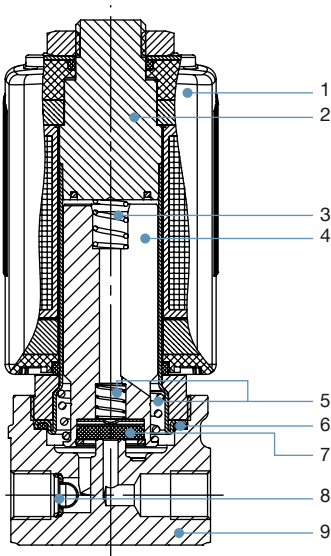
Note:

All parts are the same as standard, but with two additional parts as follows.



No.	Element	Material
1	Damping ring	PEEK
2	Glider	PTFE carbon filled

3.5. Materials oil burner version (PF15)

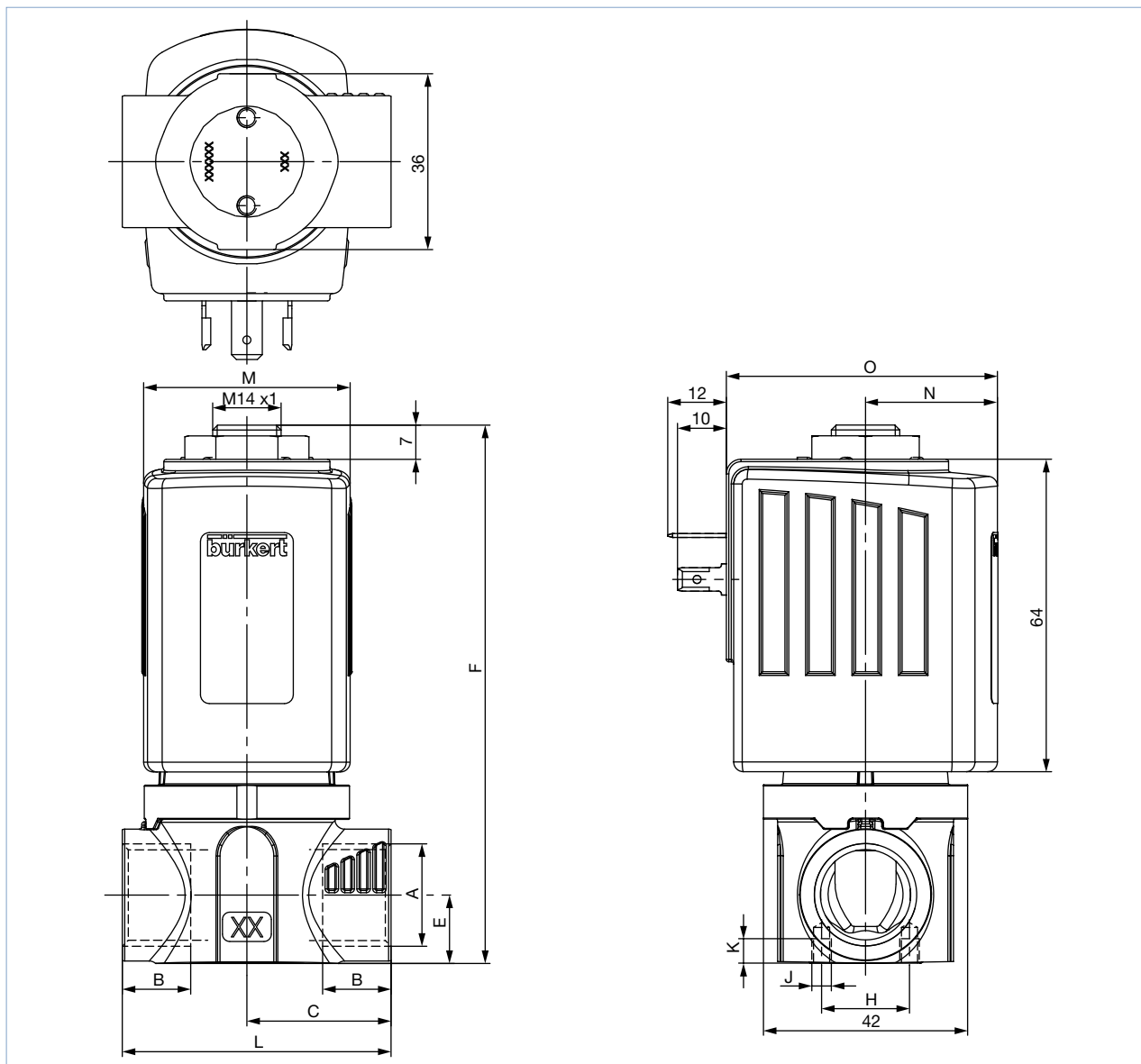


No.	Element	Material
1	Coil	Epoxy
2	Stopper	1.4113
3	Spring	1.4310
4	Plunger	1.4105
5	Spring	1.4310
6	Seal ring	FKM
7	Seat seal	PTFE
8	Strainer	Stainless steel only DN 3 and DN 3.5
9	Valve body	Brass

4. Dimensions

4.1. Standard version

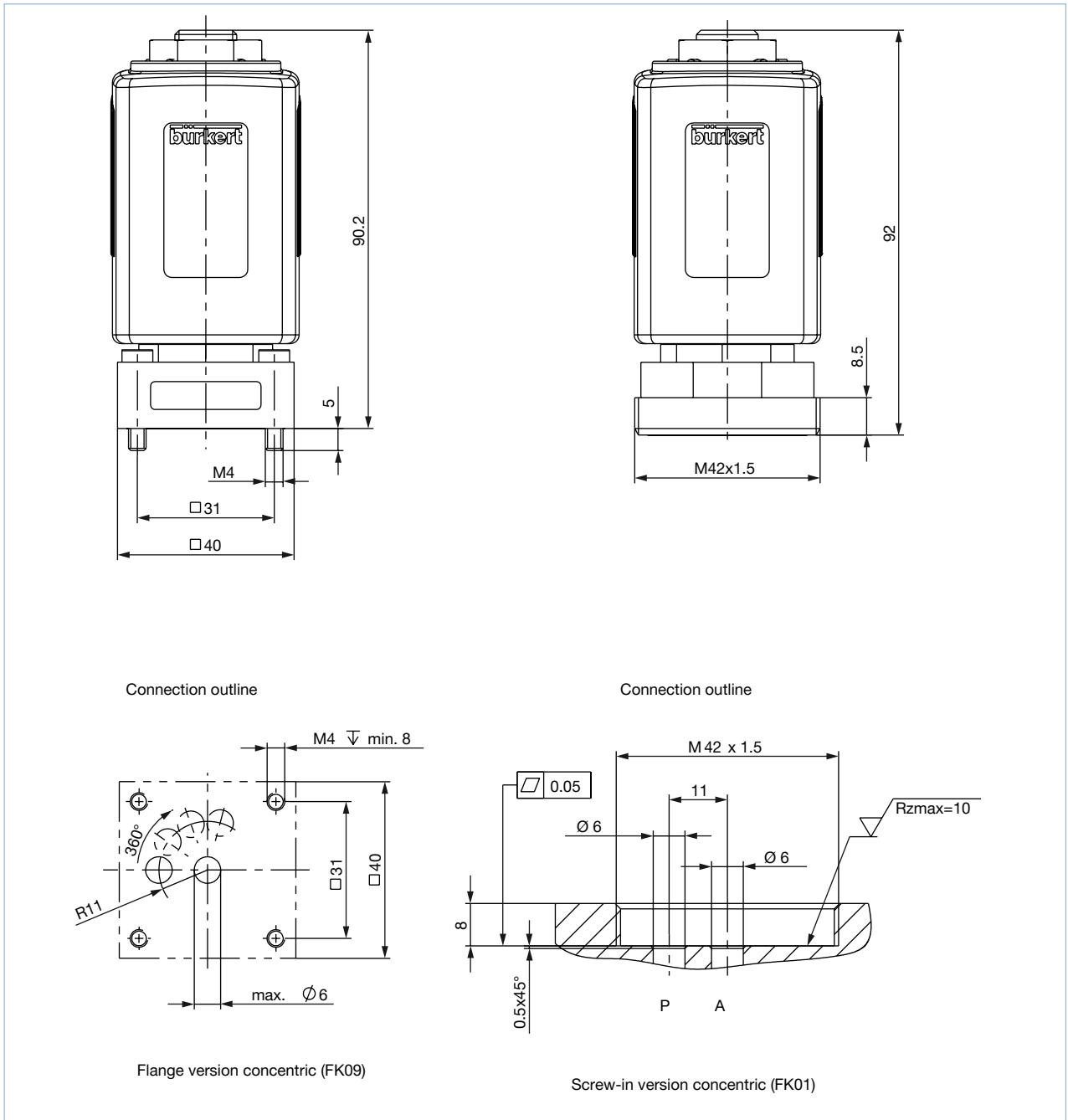
Threaded version



Version	L	A	B	C	E	F	H	J	K
Standard	55	Rc 1/2	13.2	29.5	14	110	18	M4	5
		NPT 1/2	13.7						
		G 1/2	14						
	55	Rc 3/8	10.1	27.5	12	108	18	M4	5
		NPT 3/8	10.3						
		G 3/8	12						
55	Rc 1/4	9.7	27.5	10	105	18	M4	5	
	NPT 1/4	10							
	G 1/4	12							
Version AG39	75	G 1/2	14.5	37.5	14	110	-	-	-
	75	G 3/8	12	37.5	14	110	-	-	-
Version AG48	40	G 1/4	12	20	10	105	15	M5	7
	40	G 1/8	8	20	10	105	15	M5	7

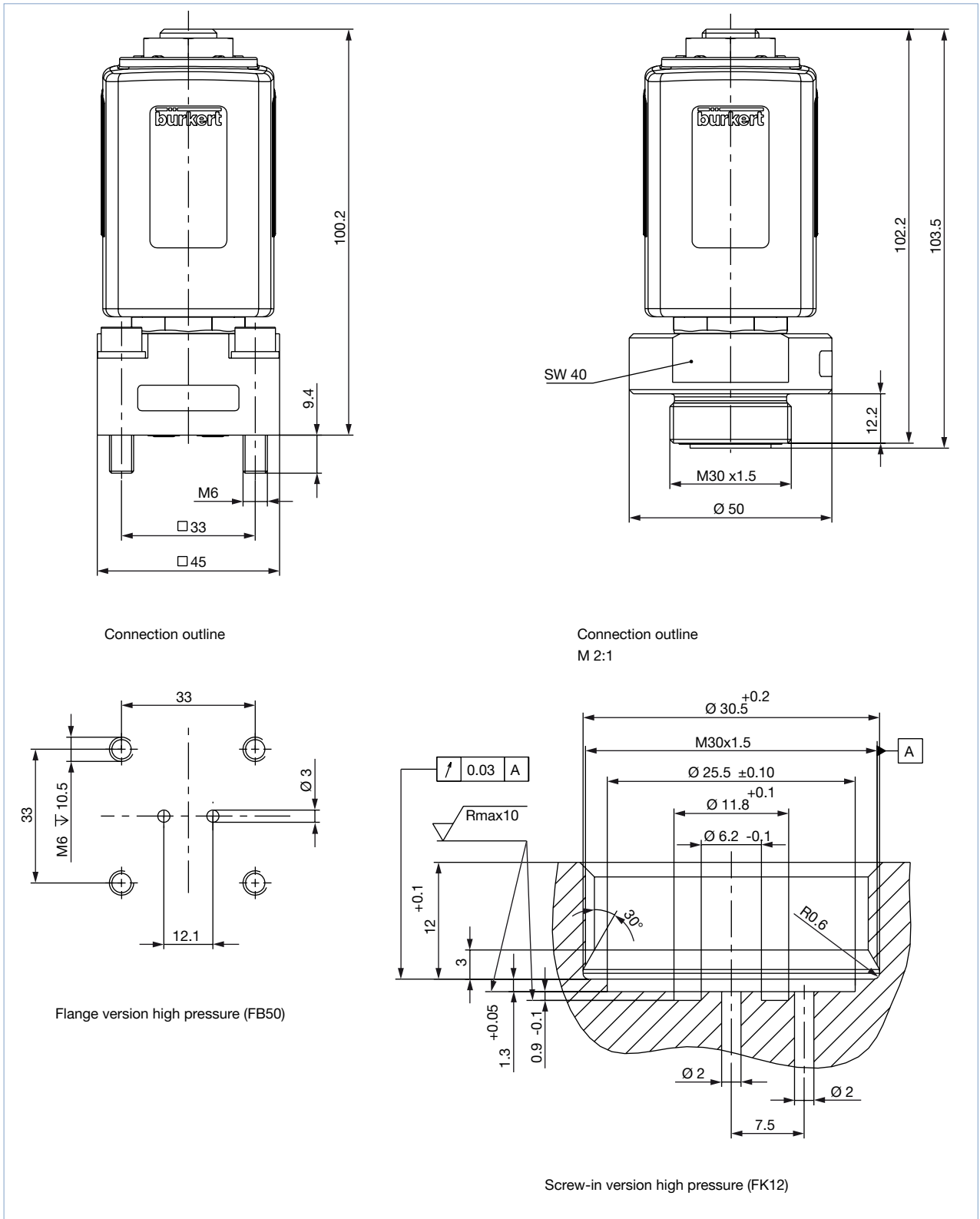
DTS 1000089742 EN Version: AC Status: RL (released | freigegeben | valide) printed: 26.11.2020

Flange and screw-in version



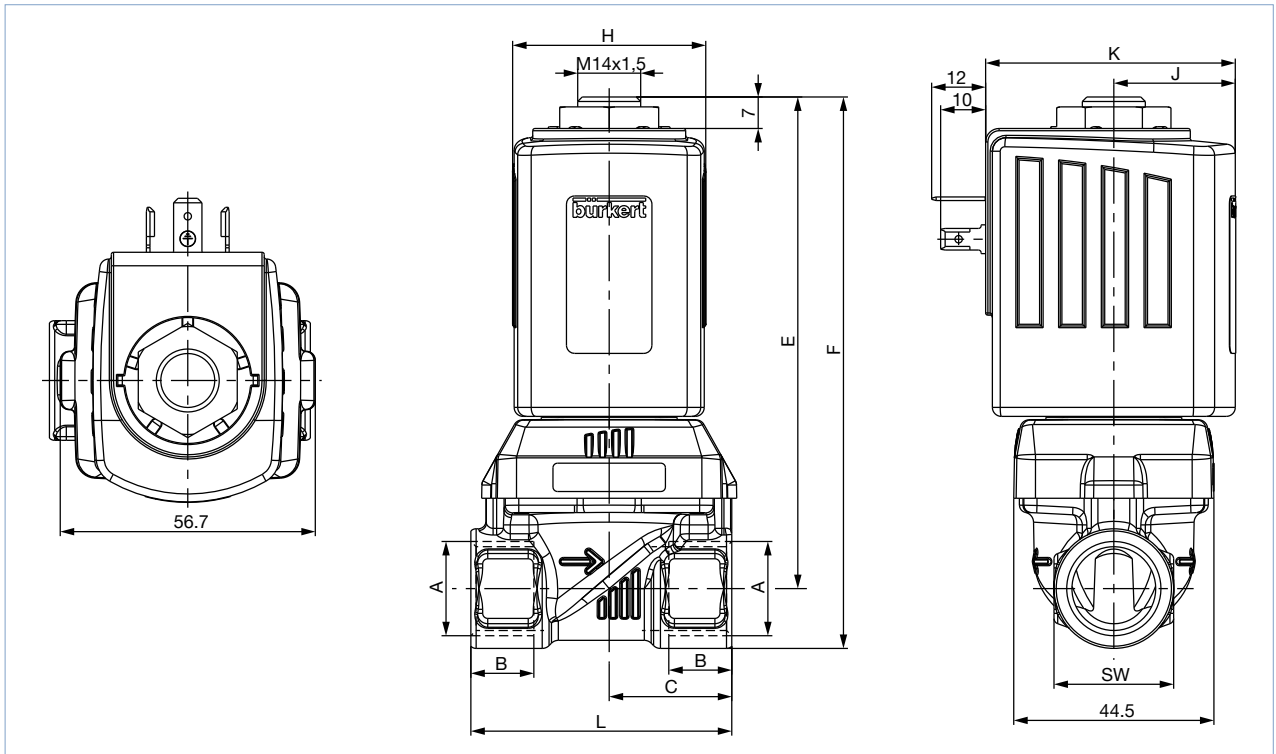
DTS 1000089742 EN Version: AC Status: RL (released | freigegeben | valide) printed: 26.11.2020

Flange and screw-in version high pressure up to 250 bar (MX32) or 160 bar (MX31)



DTS 1000089742 EN Version: AC Status: RL (released | freigegeben | validé) printed: 26.11.2020

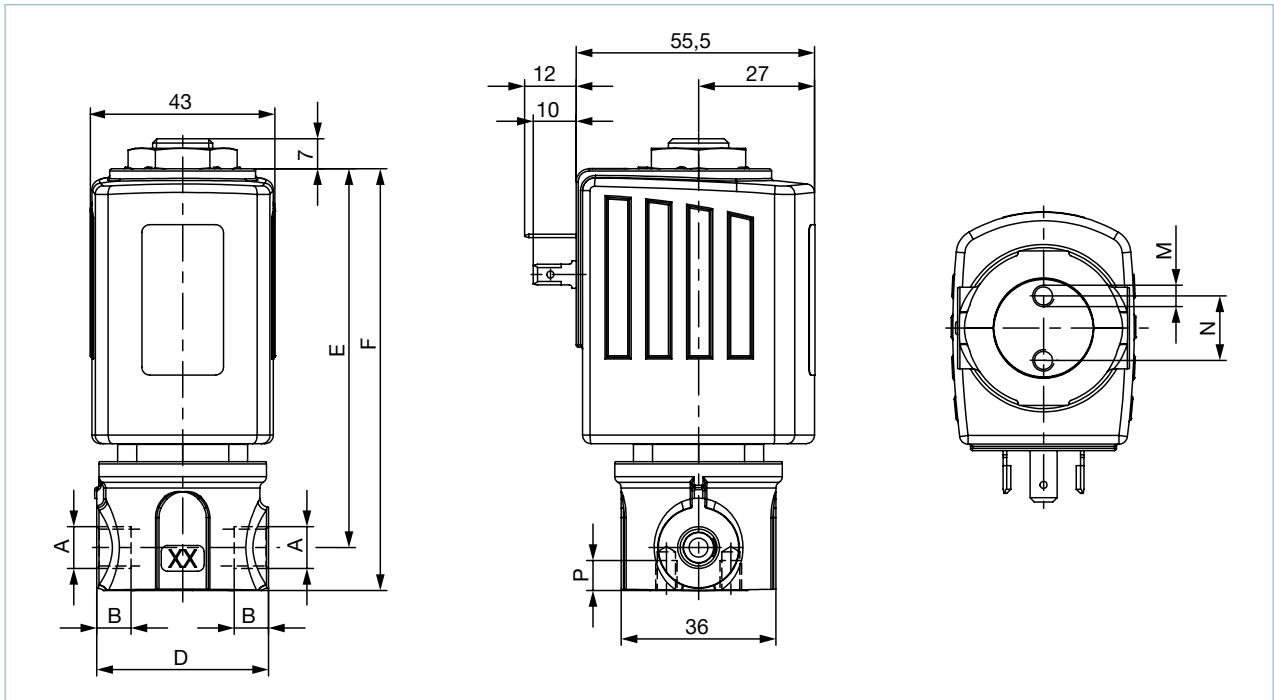
4.2. Version DN 13



Materials	A	B	C	E	F	L	SW
Brass / Stainless steel	Rc 3/4	14.5	32.5	111.3	127.3	65	32
	NPT 3/4	14					
	G 3/4	16					
Stainless steel	Rc 1/2	13.2	32.5	109.3	122.6	65	27
	NPT 1/2	13.7					
	G 1/2	14					
Brass	Rc 1/2	13.2	27.25	109.3	122.6	58	27
	NPT 1/2	13.7					
	G 1/2	14					

Coil size	H	J	K
L	65	37.5	72
K	42	27	55.5

4.3. Oil burner version (PF15)

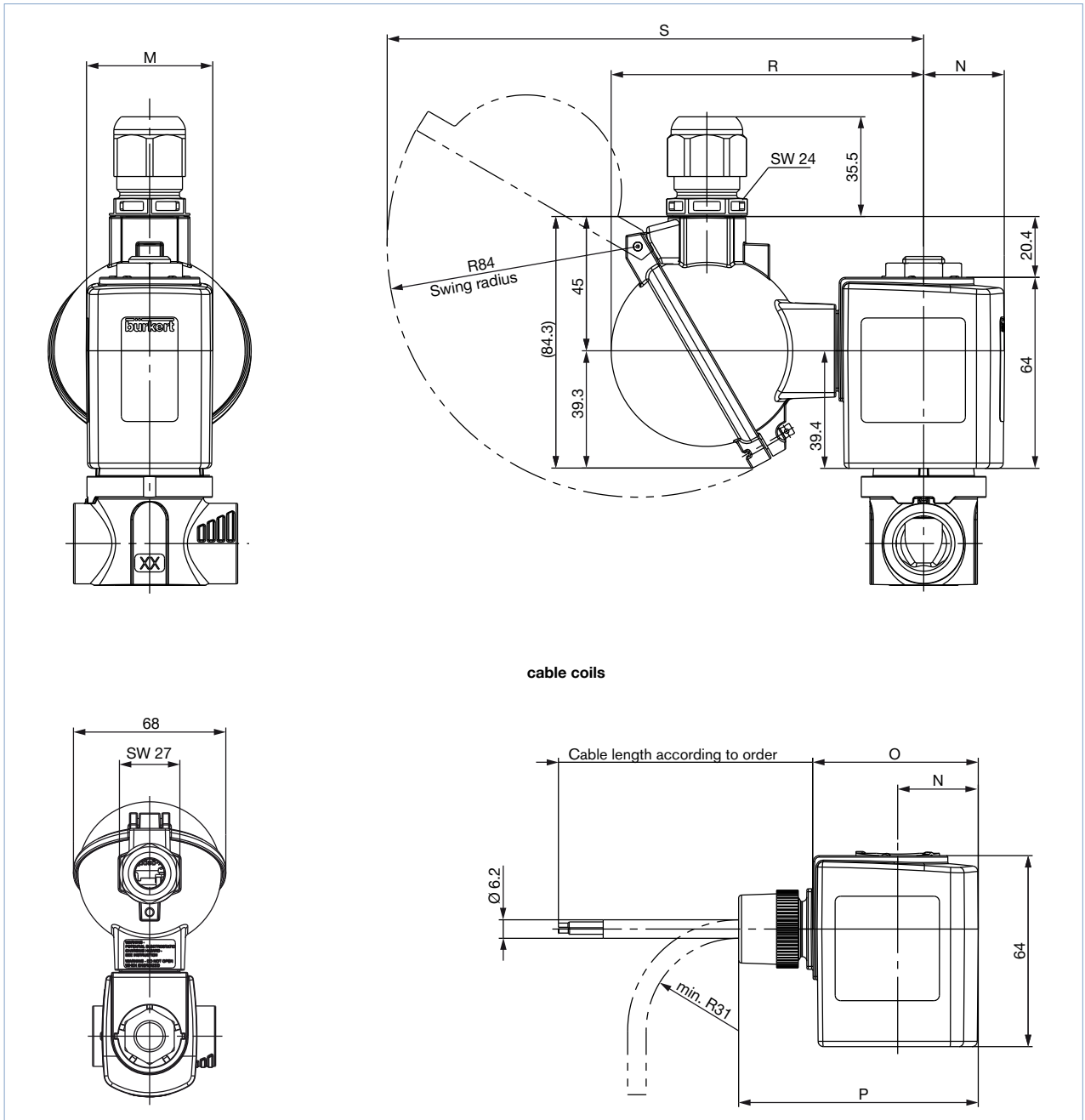


DN	Function	A	B	D	E	F	M	N	P	SW
2.2	NO	G 1/8	8	40	88.2	98.2	M5	15	7	-
	NO	G 1/4	12							
3	NC	G 1/8	8	40	88.2	98.2	M5	15	7	-
3.5	NC	G 1/4	12	40	88.2	98.2	M5	15	7	-
10	NC	G 3/8	12	75	89.2	103.2	-	-	-	27
	NC	G 1/2	14.5							

4.4. ATEX/IECEX version

Note:

Dimensions apply exclusively to ATEX/IECEX version of the solenoid coil. For other dimensions see previous versions.



Coil dimensions						
Coil size	M	N	O	P	R	S
L	65	37.5	72	97	110.8	185.8
K	42	27	55.5	80.3	104.8	179.8

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5. Performance specifications

5.1. Power consumption

Coil size	AC			DC		KD coil AC/DC ^{1.)}		
	Inrush power	Holding power		Cold performance	Warm performance	Cold performance inrush power	Cold performance holding power	Warm performance holding power
[mm]	[VA]	[VA]	[W]	[W]	[W]	[W] 500 ms	[W]	[W]
42 (K)	150	37	16	21	16	85	8.5	7
42 (K) ATEX	–	–	–	15	12	44	6.5	5.5
65 (L)	–	–	–	28	21	–	–	–


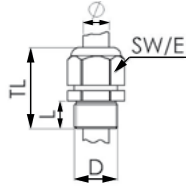

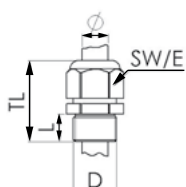
1.) "Kick and Drop" coil (KD coil): Integrated electronics for short-term power increase and reduction in dual coil technology

6. Product accessories

6.1. Cable glands for ATEX/IECEX terminal box

Note:

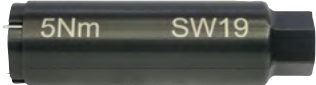
- A cable gland in polyamide version is included in the delivery. A nickel-plated brass version can be ordered at a surcharge, see "7.11. Ordering chart accessories" on page 26.
- This special tool is not supplied with the valve (see "Cable glands for ATEX/IECEX terminal box" on page 27)

Description	Ex approvals		Dimensions										
	Certification	Identification											
Ex cable gland, Brass, nickel-plated, 6...13 mm 	PTB 04 ATEX 1112 X, IECEX PTB 13.0027X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	 <table border="1"> <tr><td>TL</td><td>29...37 mm</td></tr> <tr><td>L</td><td>6 mm</td></tr> <tr><td>D</td><td>20 mm</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>27 mm</td></tr> </table>	TL	29...37 mm	L	6 mm	D	20 mm	SW	24 mm	E	27 mm
TL	29...37 mm												
L	6 mm												
D	20 mm												
SW	24 mm												
E	27 mm												
Ex cable gland, Polyamide, 7...13 mm 	PTB 13 ATEX 1015 X, IECEX PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	 <table border="1"> <tr><td>TL</td><td>36...45 mm</td></tr> <tr><td>L</td><td>10 mm</td></tr> <tr><td>D</td><td>20 mm</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>28 mm</td></tr> </table>	TL	36...45 mm	L	10 mm	D	20 mm	SW	24 mm	E	28 mm
TL	36...45 mm												
L	10 mm												
D	20 mm												
SW	24 mm												
E	28 mm												

6.2. Special tool to turn the junction box

Note:

- This special tool is not supplied with the valve (see "7.11. Ordering chart accessories" on page 26).
- This special tool can only be used with ATEX AC10 coils.

Set SC02-AC10	Set includes:
	<ul style="list-style-type: none"> • Special wrench • Service manual