



Servo-assisted 2/2-way piston valve

- Servo-assisted piston valve with an orifice up to DN 50
- Explosion proof versions for Cat. 2
- Suitable for gas and steam applications up to 180 °C
- Relief valves for compressors
- Energy-saving double coil technology with kick and drop variant

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

Can be combined with



- Type 2518**
Cable plug,
form A according to
DIN EN 175301 - 803



- Type 2509**
Cable plug,
form A according to
DIN EN 175301 - 803

Type description

The 5404 valve is a servo-assisted piston valve available in NC and NO versions. A minimum differential pressure is required for the valve switching function. The solenoid coils are moulded with high-quality epoxy resin. To reduce power consumption in operation, coils with "Kick and Drop" (KD) electronics assembly (double coil technology) are available. In combination with a plug to DIN EN 175301 - 803 Form A, the valves satisfy degree of protection IP65. The cable plug is not included and must be ordered separately.

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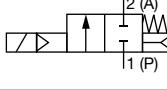
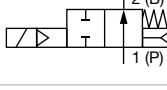
1. General technical data

Product properties	
Dimensions	Further information can be found in chapter " 5. Dimensions " on page 11.
Material	
Seal	PTFE seat seal + FKM PTFE seat seal + Graphite (steam version) PTFE seat seal + EPDM (on request)
Body	Brass
Coil	Epoxy resin (polyamide on request)
Valve inner parts	Stainless steel, brass
Orifice	DN 12...DN 50
Circuit function	A and B Further information can be found in chapter " 2. Circuit functions " on page 5.
Thermal insulation class of solenoid coil	Epoxy resin coil class H (class B on request)
Performance data	
Duty cycle	100 % continuous operation
Switching time	
DN 12...DN 25	Opening: 20...400 ms Closing: 100...1500 ms
DN 32...DN 50	Opening: 200...1500 ms Closing: 1000...3000 ms
Electrical data	
Operating voltage	24 V/DC, 24 V/50 Hz, 24 V/60 Hz, 110 V/50 Hz, 120 V/60 Hz, 230 V/50 Hz, 240 V/60 Hz (further voltages on request)
Power consumption	
Circuit function A, DN 12...DN 25 (not in combination with high pressure PN08)	Inrush AC: 24 VA Hold AC (hot coil): 14 VA/8 W Hold DC (hot/cold coil): 8/9.5 W
Circuit function B, DN 12...DN 25	Inrush AC: 24 VA Hold AC (hot coil): 14 VA/8 W Hold DC (hot/cold coil): 8/9.5 W
ATEX/IECEx version	Inrush AC: 9 VA Hold AC (hot coil): 9 VA Hold DC (hot/cold coil): 9 W
Circuit function A, DN 32...DN 50 and DN 12 as high pressure PN08	Inrush AC: 24 VA Hold AC (hot coil): 16 VA/10 W Hold DC (hot/cold coil): 12/13 W
Voltage tolerance	± 10 %
Medium data	
Operating medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil and steam)
Medium temperature	
Standard version	+14 °F...+248 °F (from -40 °F on request)
Steam version	+302 °F (at max. ambient temp. +131 °F) +320 °F (at max. ambient temp. +113 °F) "6.1. Temperature/duty cycle derating diagram for steam version NA07" on page 22
Viscosity	Max. 21 cSt
Process/Port connection & communication	
Electrical connection	Plug contacts according to DIN EN 175 301-803 form A for cable plug Type 2518 ►. Further information can be found in chapter " Cable plug Type 2518, form A according to DIN EN 175301-803 " on page 31.
Port connection	Plug contacts according to DIN EN 175 301-803 form A for cable plug Type 2509 ►. Further information can be found in chapter " Cable plug Type 2509, form A according to DIN EN 175301-803 " on page 31.
Degree of protection	IP65 with cable plug Type 2518 ► (IP67 on request) NEMA 4X with cable plug Type 2509 ► with stainless steel screws and epoxy coil
Explosion protection	Further information can be found in chapter " 3.4. Explosion protection " on page 6.
North America (USA/Canada)	Further information can be found in chapter " 3.5. North America (USA/Canada) " on page 6.
Others	Further information can be found in chapter " 3.6. Others " on page 7.

Environment and installation

Installation position	As required, preferably with actuator upright
Ambient temperature	+14 °F...+131 °F (from -40 °F on request)

2. Circuit functions

Symbol	Description
	Circuit function A (CF A) 2/2-way solenoid valve Servo-controlled Normally closed
	Circuit function B (CF B) 2/2-way solenoid valve Servo-controlled Normally open

3. Approvals and conformities

3.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available verions can be supplied with the below mentioned approvals or conformities.

3.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

3.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.



3.4. Explosion protection

Approval	Description										
	Optional: Explosion protection according to category 2 (zone 1/21) Ex marking of the components according to the following table:										
	<table border="1"> <thead> <tr> <th>Coil Type AC10</th> <th>Coils with cable outlet</th> <th>Coils with terminal box</th> </tr> </thead> <tbody> <tr> <td>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</td><td>ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</td><td>IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</td></tr> <tr> <td>IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</td><td></td><td>IECEx: IECEx EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db</td></tr> </tbody> </table>		Coil Type AC10	Coils with cable outlet	Coils with terminal box	ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db	ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db	IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db	IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db		IECEx: IECEx EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db
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	Optional: Explosion protection according to category 3 (zone 2/22) Ex marking of the components according to the following table:										
	<table border="1"> <thead> <tr> <th>Coil Type AC10</th> <th>Coil with plug contacts form A and cable plug Type 2509</th> </tr> </thead> <tbody> <tr> <td>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</td><td></td></tr> <tr> <td>IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</td><td></td></tr> </tbody> </table>		Coil Type AC10	Coil with plug contacts form A and cable plug Type 2509	ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db		IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db				
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IECEx: IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db											

3.5. North America (USA/Canada)

Approval	Description
	Optional: UL Listed for the USA (valid for valves) The valves are UL Listed for the USA according to: <ul style="list-style-type: none">UL 429 (electrically operated valves) and UL 429A (Electrically Operated Valves for Fire Protection Service)
	Optional: UL Hazardous Locations – Explosion Protection (valid for coils) UL Listed for Hazardous Locations for USA and Canada Class I, Zone 1 Class I, Division 2, Group A, B, C and D Class II + III, Division 2, Group F and G
	Optional: UL Recognized for the USA (valid for valves) The valves are UL Recognized for the USA according to: <ul style="list-style-type: none">UL 429 (electrically operated valves) and UL 429A (Electrically Operated Valves for Fire Protection Service)
	Optional: CSA for Canada (valid for valves) The valves are CSA approved for Canada according to: <ul style="list-style-type: none">CSA 139 (electrically operated valves)
	Optional: FM (Factory Mutual) – Explosion Protection (valid for coils) FM for Hazardous Locations for USA and Canada Class I, Zone 1 Class I, Division 1, Groups A, B, C and D Class II + III, Division 1, Groups E, F and G

3.6. Others

Oxygen

Conformity	Description
O ₂	Optional: Suitability for oxygen (valid for the variable code NL02) The products are suitable for use with gaseous oxygen, according to the manufacturer's declaration.

4. Materials

4.1. Burkert resistApp



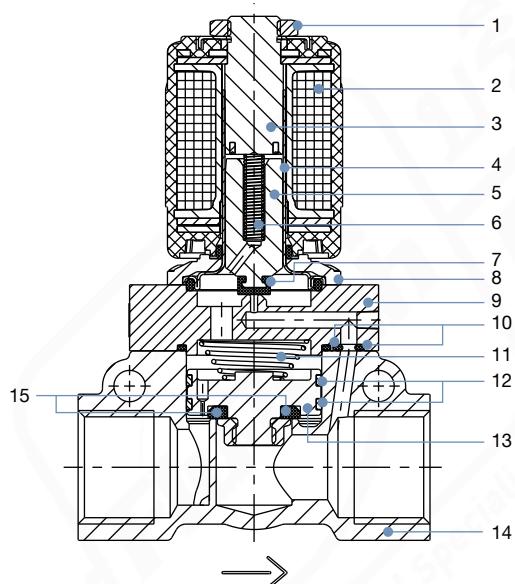
Burkert resistApp – Chemical resistance chart

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](#)

4.2. Material specifications standard version

DN 12, circuit function A

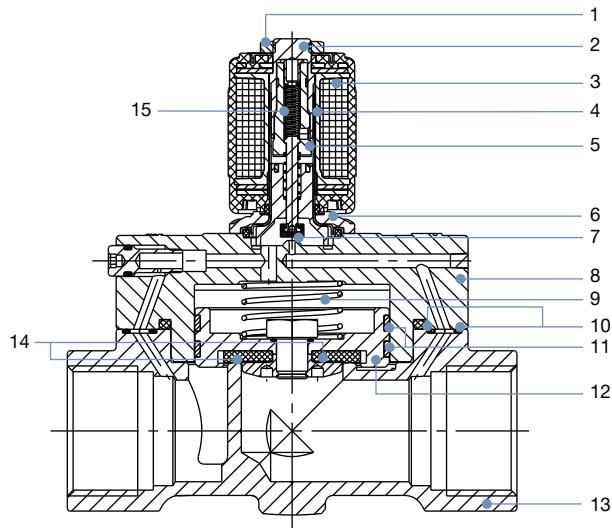


No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Coil	Epoxy (polyamide optional)
3	Stopper	Stainless steel 1.4105/303 ¹⁾
4	Armature guide tube	Stainless steel 1.4303/305 ¹⁾ /308 ¹⁾
5	Plunger	Stainless steel 1.4105/430F ¹⁾
6	Spring	Stainless steel 1.4310/301 ¹⁾
7	Plunger seal	FKM (EPDM optional)
8	Flange	Steel (thick-film passivated according to RoHS)
9	Cover	Brass
10	O-Rings	FKM (EPDM optional)
11	Spring	Stainless steel 1.4310/301 ¹⁾
12	Piston rings	PTFE
13	Piston	Brass
14	Valve body	Brass
15	Piston seal	PTFE

1.) Material designation according to AISI



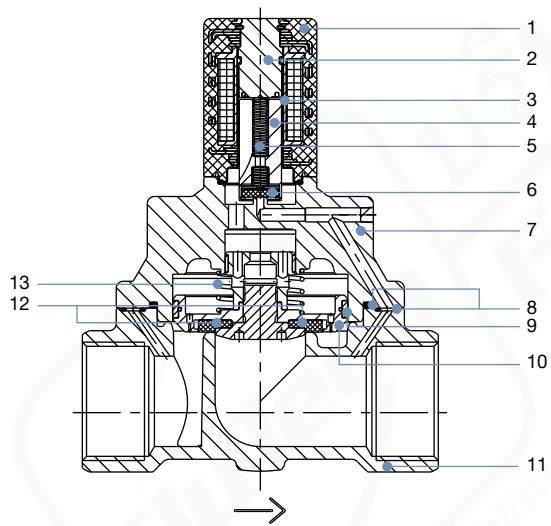
DN 25, circuit function B



No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Stopper	Stainless steel 1.4113/434 ¹⁾
3	Coil	Epoxy
4	Armature guide tube	Stainless steel 1.4303/305 ^{1,1)} /308 ¹⁾
5	Plunger	Stainless steel 1.4113/434 ^{1,1)} /1.4305/303 ¹⁾
6	Flange	Steel (thick-film passivated according to RoHS)
7	Plunger seal	FKM (EPDM optional)
8	Cover	Brass
9	Spring	Stainless steel 1.4310/301 ¹⁾
10	O-Rings	FKM (EPDM optional)
11	Piston rings	PTFE
12	Piston	Brass
13	Valve body	Brass
14	Piston seal	PTFE
15	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

DN 32, circuit function A

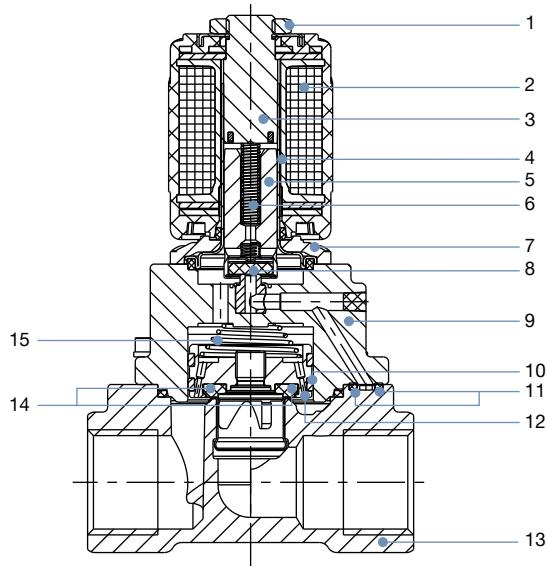


No.	Element	Material
1	Coil	Epoxy
2	Stopper	Stainless steel 1.4105/430F ¹⁾
3	Armature guide tube	Stainless steel 1.4303/305 ^{1,1)} /308 ¹⁾
4	Plunger	Stainless steel 1.4105/430F ¹⁾
5	Spring	Stainless steel 1.4310/301 ¹⁾
6	Plunger seal	FKM
7	Cover	Brass
8	O-Rings	FKM
9	Piston rings	PTFE
10	Piston	Brass
11	Valve body	Brass
12	Piston seal	PTFE
13	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

4.3. Material specifications steam version NA07

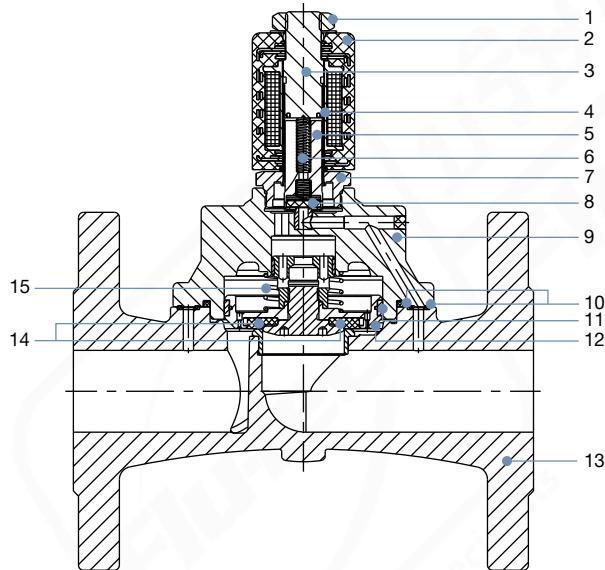
DN 13, circuit function A



No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Coil	Epoxy
3	Stopper	Stainless steel 1.4113/434 ¹⁾
4	Armature guide tube	Stainless steel 1.4303/305 ¹⁾
5	Plunger	Stainless steel 1.4113/434 ¹⁾
6	Spring	Stainless steel 1.4310/301 ¹⁾
7	Flange	Steel (thick-film passivated according to RoHS)
8	Plunger seal	PTFE
9	Cover	Brass
10	Piston rings	PTFE
11	O-Rings	Graphite
12	Piston	Brass
13	Valve body	Brass
14	Piston seal	PTFE
15	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

DN 32, circuit function A, flange body

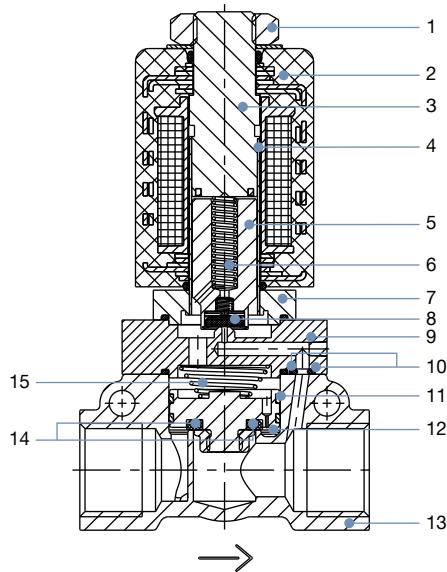


No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Coil	Epoxy
3	Stopper	Stainless steel 1.4113/434 ¹⁾
4	Armature guide tube	Stainless steel 1.4571/316Ti ¹⁾
5	Plunger	Stainless steel 1.4113/434 ¹⁾
6	Spring	Stainless steel 1.4310/301 ¹⁾
7	Threaded tube	Stainless steel 1.4401/316 ¹⁾ or 1.4571/316Ti ¹⁾
8	Plunger seal	PTFE
9	Cover	Brass
10	O-Rings	Graphite
11	Piston rings	PTFE
12	Piston	Brass
13	Valve body	Stainless steel 1.4581/similar 316Ti ¹⁾
14	Piston seal	PTFE
15	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

4.4. Material specifications high pressure version PN08

DN 12, circuit function A

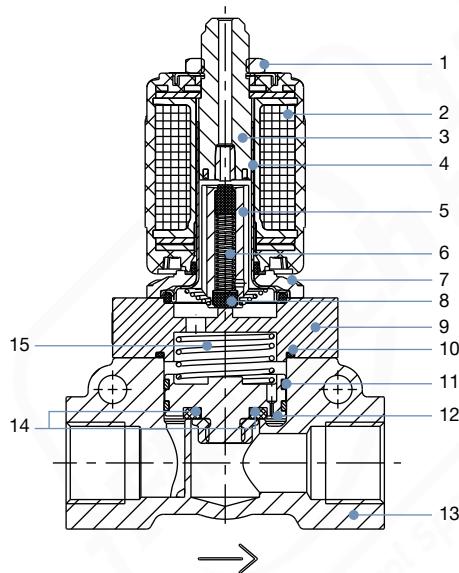


No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Coil	Epoxy (polyamide)
3	Stopper	Stainless steel 1.4113/434 ¹⁾
4	Armature guide tube	Stainless steel 1.4571/316Ti ¹⁾
5	Plunger	Stainless steel 1.4113/434 ¹⁾
6	Spring	Stainless steel 1.4310/301 ¹⁾
7	Flange	Stainless steel 1.4401/316 ¹⁾
8	Plunger seal	PTFE
9	Cover	Brass
10	O-Rings	FKM
11	Piston rings	PTFE
12	Piston	Brass
13	Valve body	Brass
14	Piston seal	PTFE
15	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

4.5. Material specifications discharge valve for compressor systems CF05

DN 12, circuit function B



No.	Element	Material
1	Nut	Steel (thick-film passivated according to RoHS)
2	Coil	Epoxy (polyamide optional)
3	Stopper	Stainless steel 1.4105/430F ¹⁾
4	Armature guide tube	Stainless steel 1.4303/305 ¹⁾
5	Plunger	Stainless steel 1.4105/430F ¹⁾
6	Spring	Stainless steel 1.4310/301 ¹⁾
7	Flange	Steel (thick-film passivated according to RoHS)
8	Plunger seal	FKM
9	Cover	Brass
10	O-Rings	FKM
11	Piston rings	PTFE
12	Piston	Brass
13	Valve body	Brass
14	Piston seal	PTFE
15	Spring	Stainless steel 1.4310/301 ¹⁾

1.) Material designation according to AISI

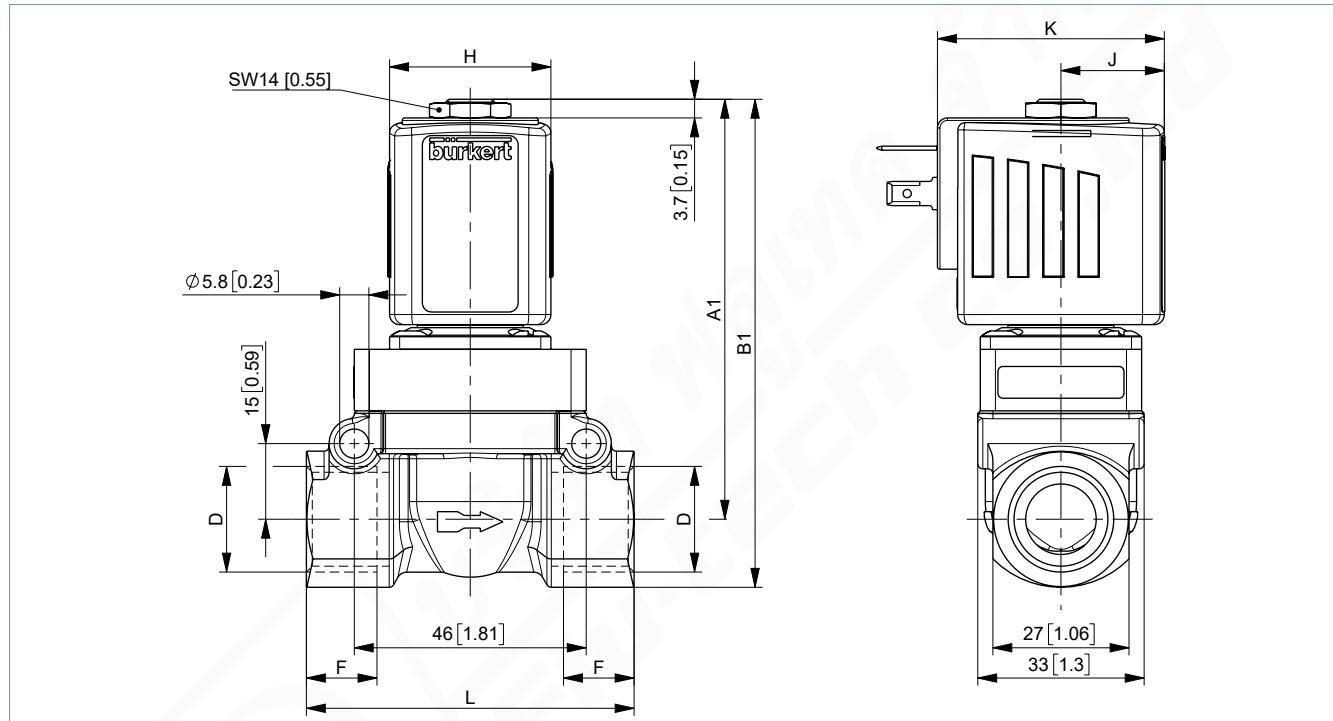
5. Dimensions

5.1. Standard version

Threaded version DN 12

Note:

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.
- The dimensions D3 and F3 apply to Rc-threads.

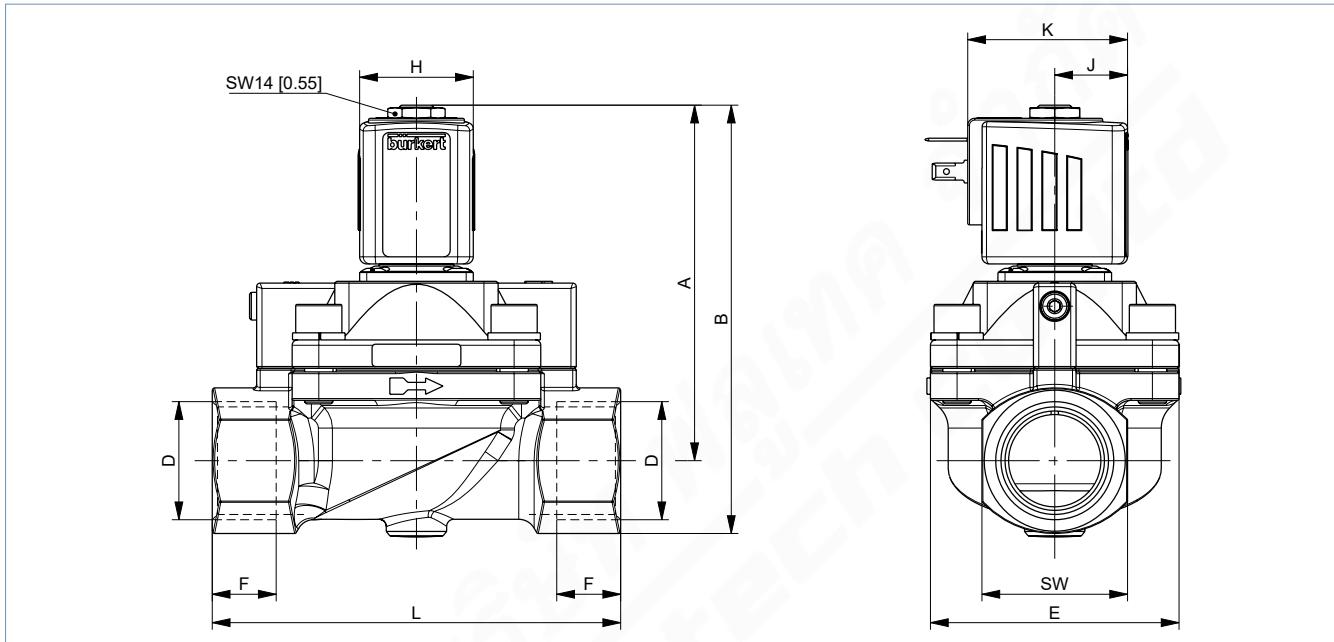


Coil size	DN	WWA				WWB			
		A1		B1		A1		B1	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
5	12.0	83	3.27	97	3.82	86	3.39	100	3.94
6		83	3.27	97	3.82	86	3.39	100	3.94

Coil size	DN	G thread				NPT thread				Rc thread				L		H		J		K	
		D1	F1	D2	F2	D3	F3														
		[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	
5	12.0	G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52	65	2.56	32	1.26	20.5	0.81	45	1.77			
6		G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52	65	2.56	40	1.57	23.5	0.93	51	2.01			

Threaded version DN 20 and DN 25**Note:**

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.
- The dimensions D3 and F3 apply to Rc-threads.

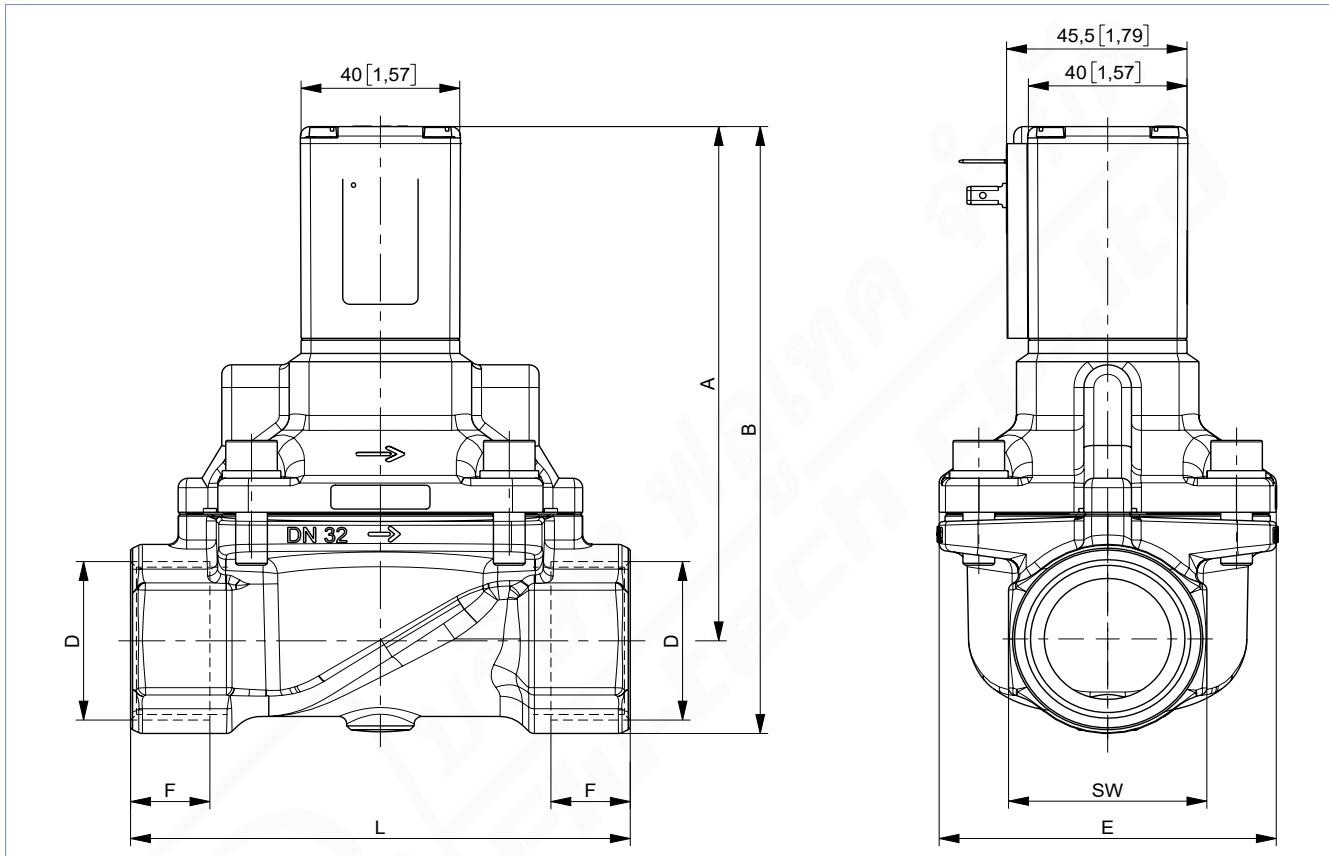


Coil size	DN	WWA / WWB				G thread				NPT thread				Rc thread			
		A [mm]		B [mm]		D1 [Zoll]		F1 [mm]		D2 [Zoll]		F2 [mm]		D3 [Zoll]		F3 [mm]	
		[mm]	[in]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]
5	20.0	96	3.78	112	4.41	G ¾	16	0.63	NPT ¾	14	0.55	—	—	—	—	—	—
	25.0	100	3.94	121	4.76	G 1	18	0.71	NPT 1	16.8	0.66	Rc 1	16.8	0.66	—	—	—
6	20.0	96	3.78	112	4.41	G ¾	16	0.63	NPT ¾	14	0.55	—	—	—	—	—	—
	25.0	100	3.94	121	4.76	G 1	18	0.71	NPT 1	16.8	0.66	—	—	—	—	—	—

Coil size	DN	E [mm]		L [mm]		SW [mm]		H [mm]		J [mm]		K [mm]	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
5	20.0	60	2.36	100	3.94	32	1.26	32	1.26	20.5	0.81	45	1.77
	25.0	70	2.76	115	4.53	41	1.61			—	—	—	—
6	20.0	60	2.36	100	3.94	32	1.26	40	1.57	23.5	0.93	51	2.01
	25.0	70	2.76	115	4.53	41	1.61			—	—	—	—

Threaded version DN 32 and DN 50**Note:**

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.



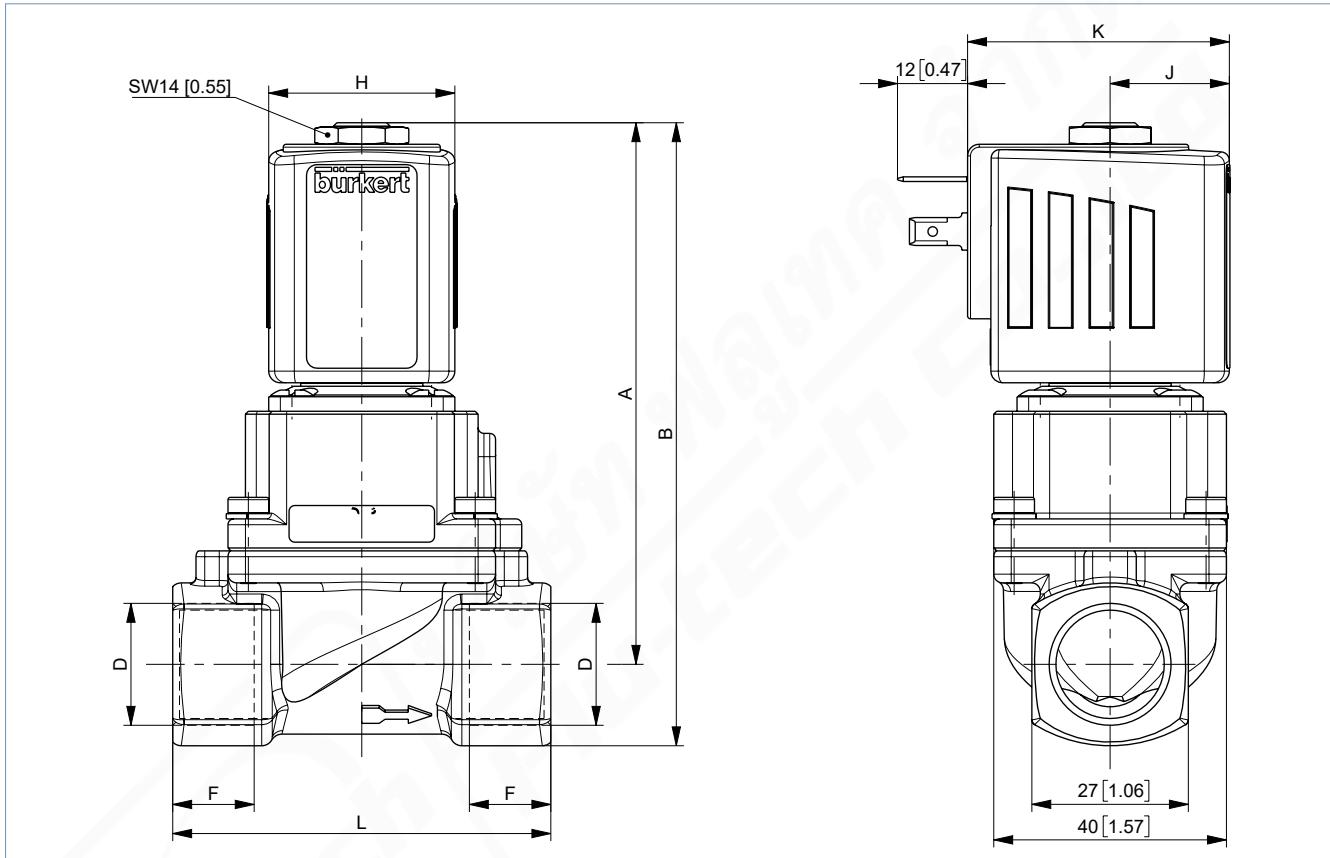
DN	A		B		G thread				NPT thread				E		L		SW	
					D1	F1	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]						
	[mm]	[in]	[mm]	[in]						[mm]	[in]		[mm]	[in]	[mm]	[in]	[mm]	[in]
32.0	136	5.35	161	6.34	G 1 ¼	20	0.79		NPT 1 ¼	17.3	0.68		85	3.35	126	4.96	50	1.97
40.0	140	5.51	170	6.69	G 1 ½	22	0.87		NPT 1 ½	17.3	0.68		85	3.35	126	4.96	60	2.36
50.0	163	6.42	198	7.80	G 2	24	0.94		NPT 2	17.6	0.69		115	4.53	164	6.46	70	2.76

5.2. Steam version NA07

Threaded version DN 13

Note:

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.
- The dimensions D3 and F3 apply to Rc-threads.

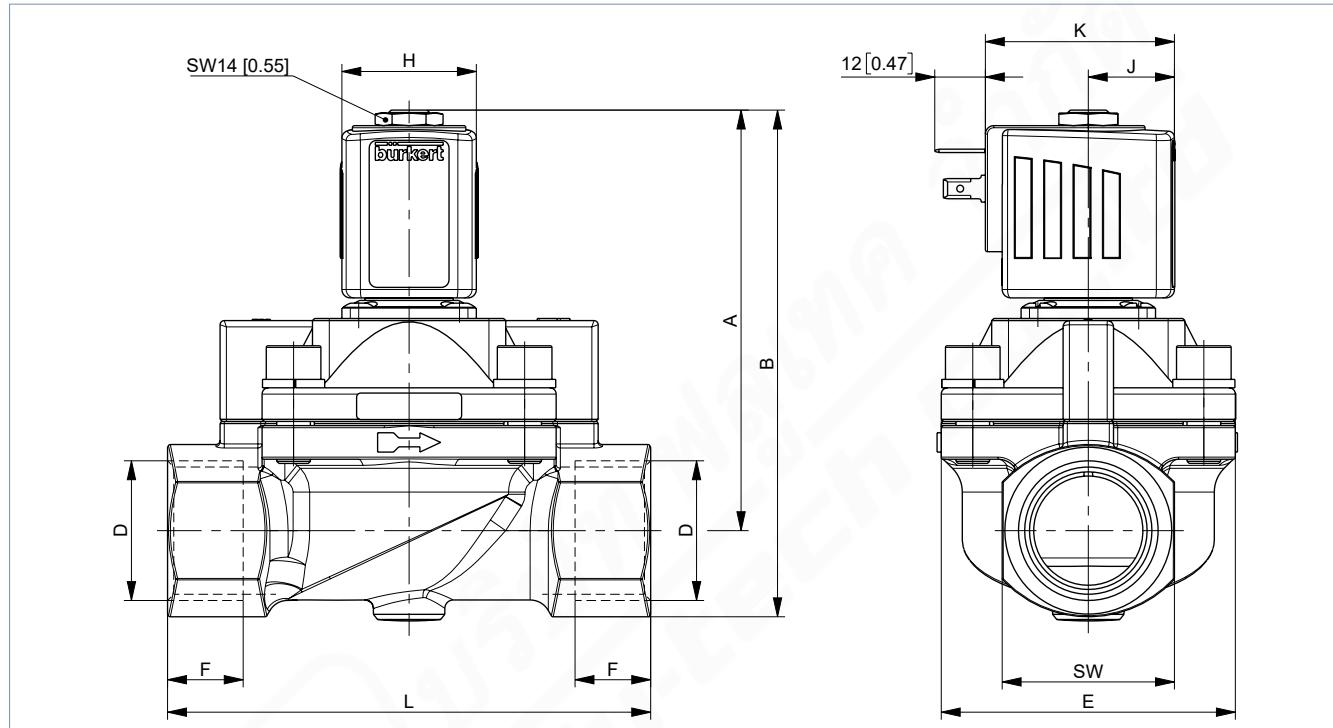


Coil size	DN	A		B		G thread			NPT thread			Rc thread				
		[mm]	[in]	[mm]	[in]	D1	F1	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]
5	13.0	93.1	3.67	107.1	4.20	G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52		
6		93.1	3.67	107.1	4.20	G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52		

Coil size	DN	L		H		J		K	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
5	13.0	65	2.56	32	1.26	20.5	0.81	45	1.77
6		65	2.56	40	1.57	23.5	0.93	51	2.01

Threaded version DN 20 and DN 25**Note:**

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.
- The dimensions D3 and F3 apply to Rc-threads.

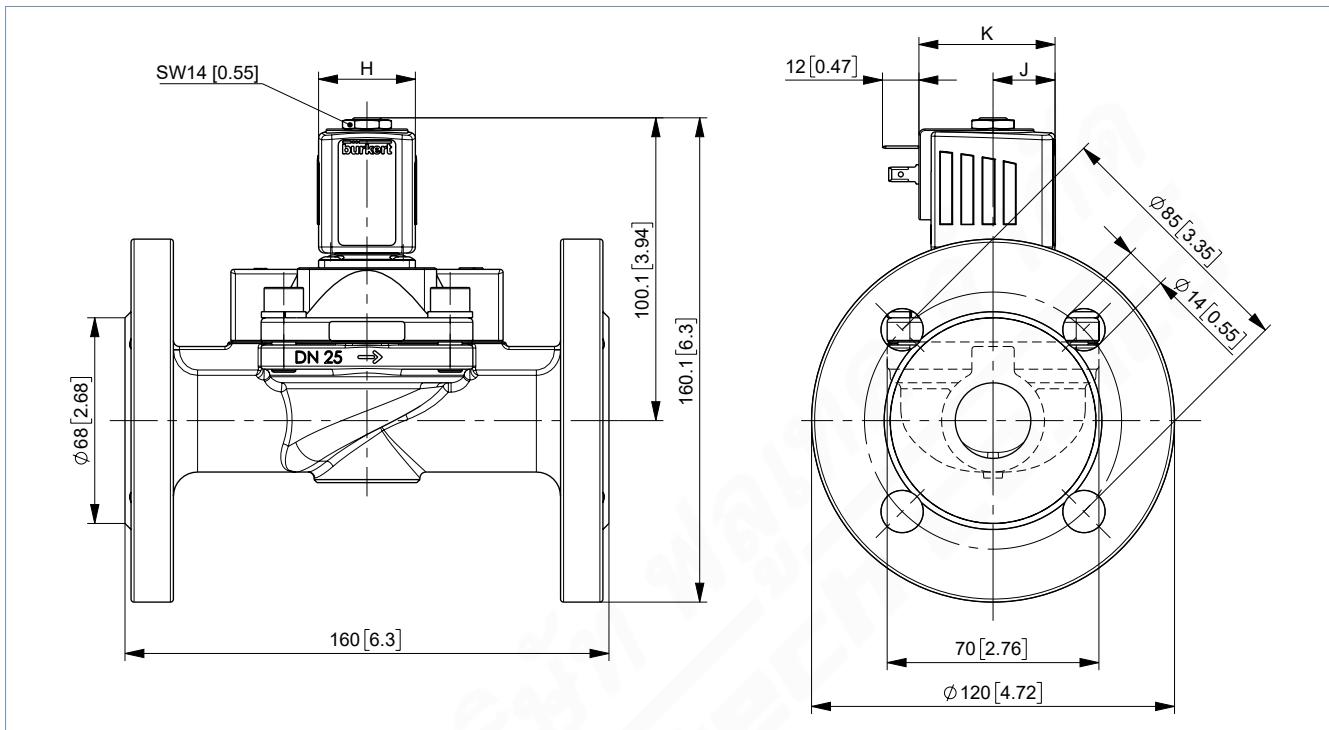


Coil size	DN	A		B		G thread			NPT thread			Rc thread				
		[mm]		[in]		D1	F1	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]
		[mm]	[in]	[mm]	[in]	G 1/4	G 1	G 1/4	16	0.63	NPT 1/4	14	0.55	Rc 1/4	14.5	0.57
5	20.0	96.1	3.78	112.1	4.41	G 1/4	G 1	G 1/4	16	0.63	NPT 1/4	14	0.55	Rc 1/4	16.8	0.66
	25.0	100.1	3.94	120.6	4.75				18	0.71	NPT 1	16.8	0.66	Rc 1	16.8	0.66
6	20.0	96.1	3.78	112.1	4.41	G 1/4	G 1	G 1/4	16	0.63	NPT 1/4	14	0.55	Rc 1/4	14.5	0.57
	25.0	100.1	3.94	120.6	4.75				18	0.71	NPT 1	16.8	0.66	Rc 1	16.8	0.66

Coil size	DN	E		L		SW		H		J		K	
		[mm]	[in]										
5	20.0	60	2.36	100	3.94	32	1.26	32	1.26	20.5	0.81	45	1.77
	25.0	70	2.76	115	4.53	41	1.61						
6	20.0	60	2.36	100	3.94	32	1.26	40	1.57	23.5	0.93	51	2.01
	25.0	70	2.76	115	4.53	41	1.61						

Flange version DN 25**Note:**

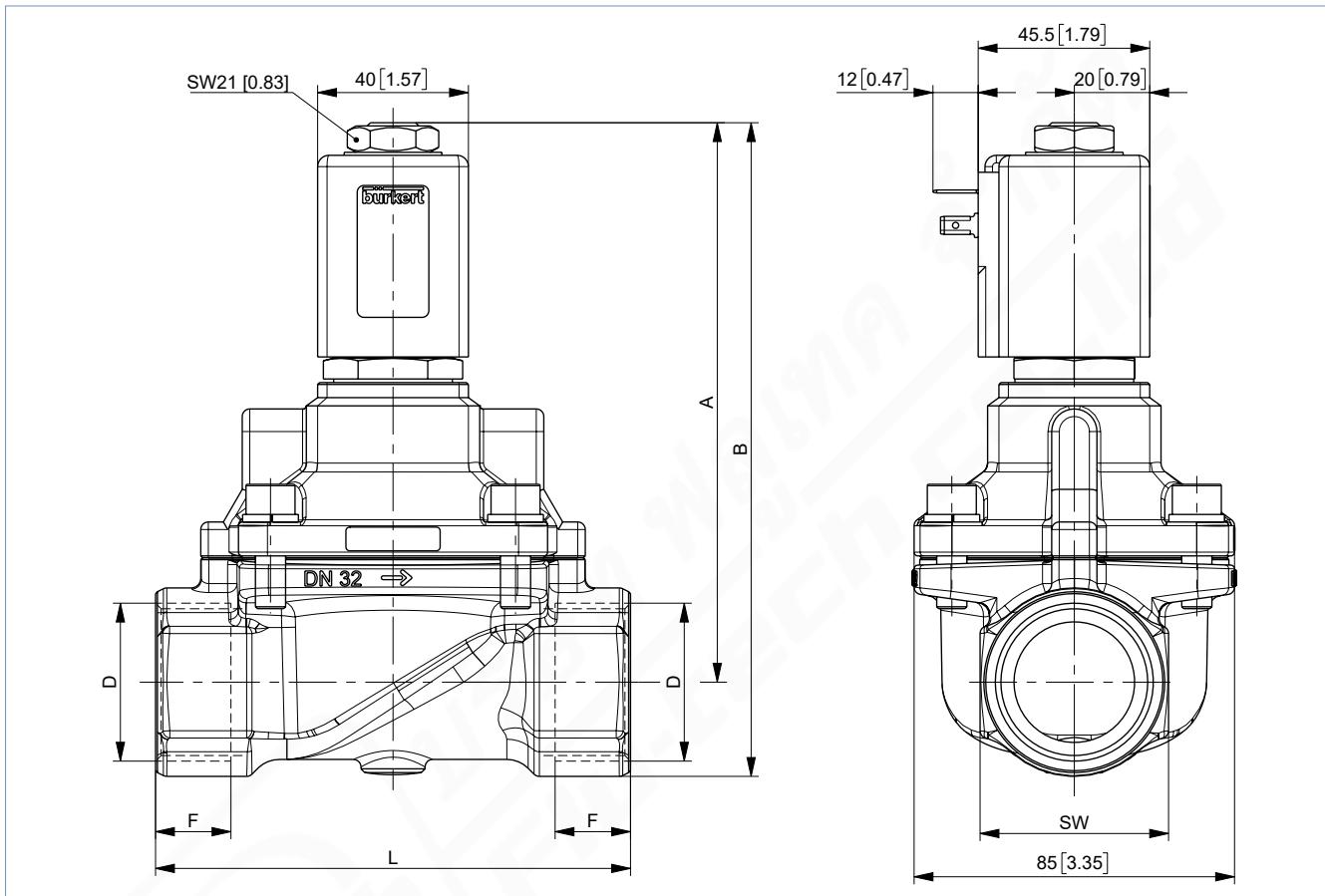
Dimensions in mm [inch]



Coil size	DN	H		J		K	
		[mm]	[in]	[mm]	[in]	[mm]	[in]
5	25	32	1.26	20.5	0.81	45	1.77
6	25	40	1.57	23.5	0.93	51	2.01

Threaded version DN 32 and DN 40

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.

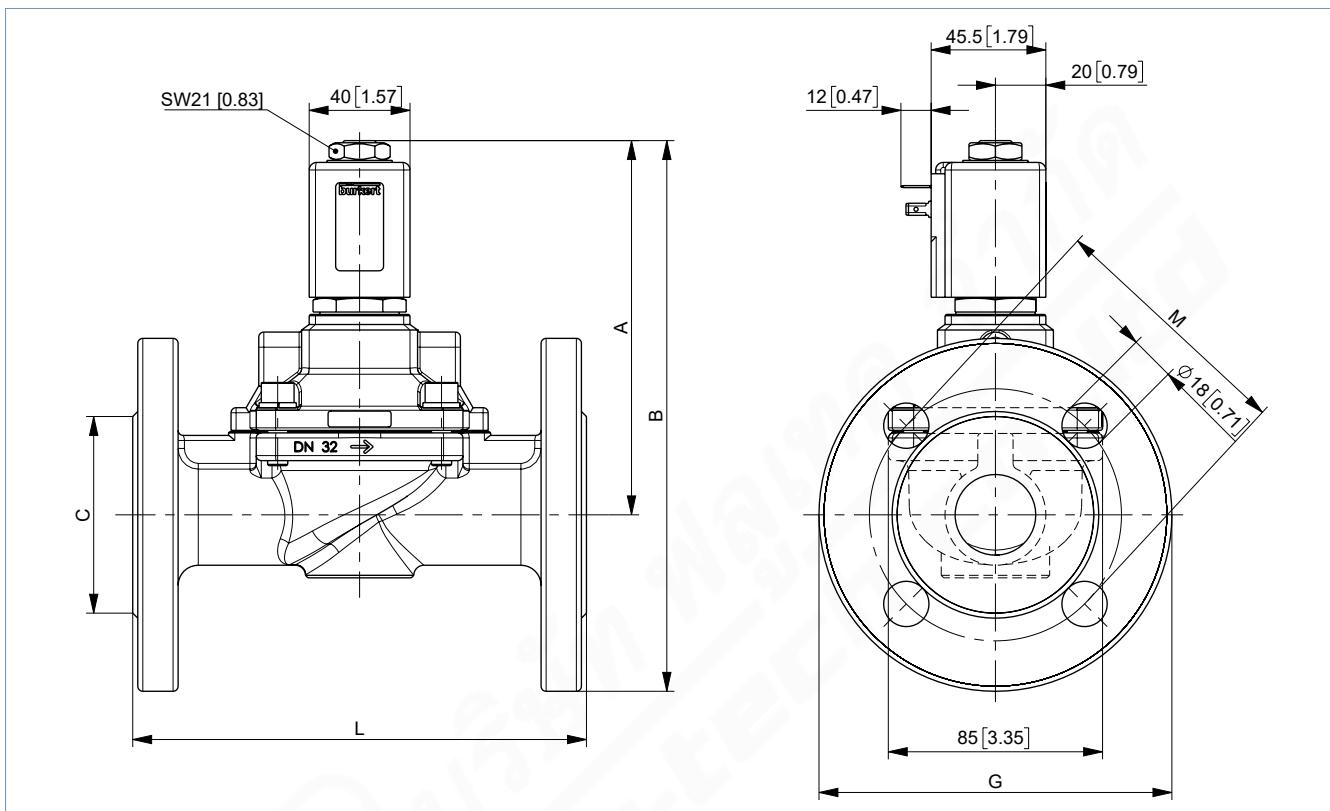


Coil size	DN	A		B		G thread		NPT thread		L		SW	
		[mm]	[in]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[mm]	[in]
C	32.0	148	5.83	173	6.81	G 1 ¼	20	0.79	NPT 1 ¼	17.3	0.68	126	4.96
	40.0	153	6.02	181	7.13	G 1 ½	22	0.79	NPT 1 ½	17.3	0.68	50	1.97
												60	2.36

Flange version DN 32 and DN 40

Note:

Dimensions in mm [inch]

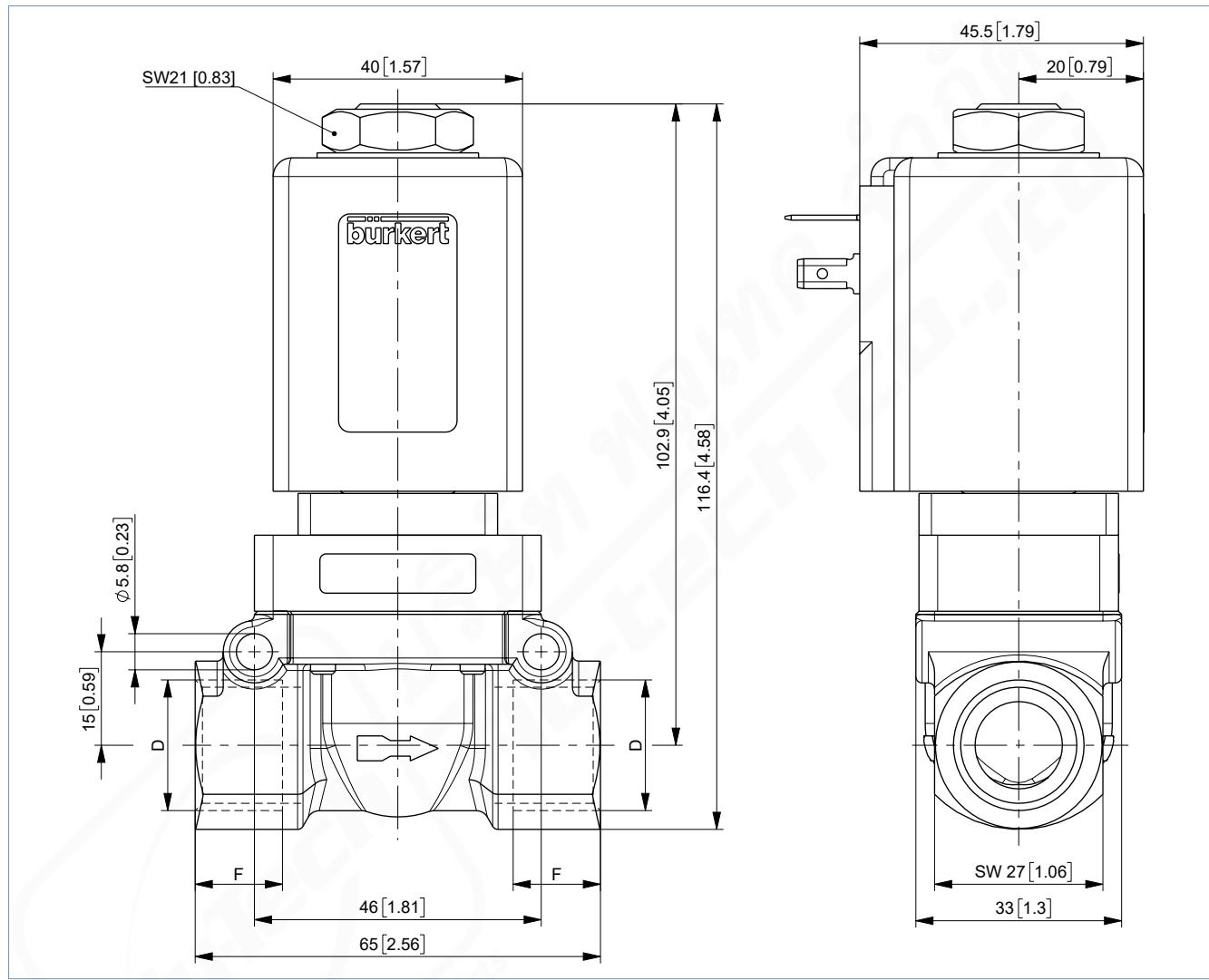


Coil size	DN	A		B		C		G		L		M	
		[mm]	[in]										
C	32	148	5.83	218	8.58	78	3.07	140	5.51	180	7.09	100	3.94
	40	153	6.02	227	8.94	88	3.46	150	5.91	200	7.87	110	4.33

5.3. High pressure version up to 1160 psi (PN08)

Note:

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.



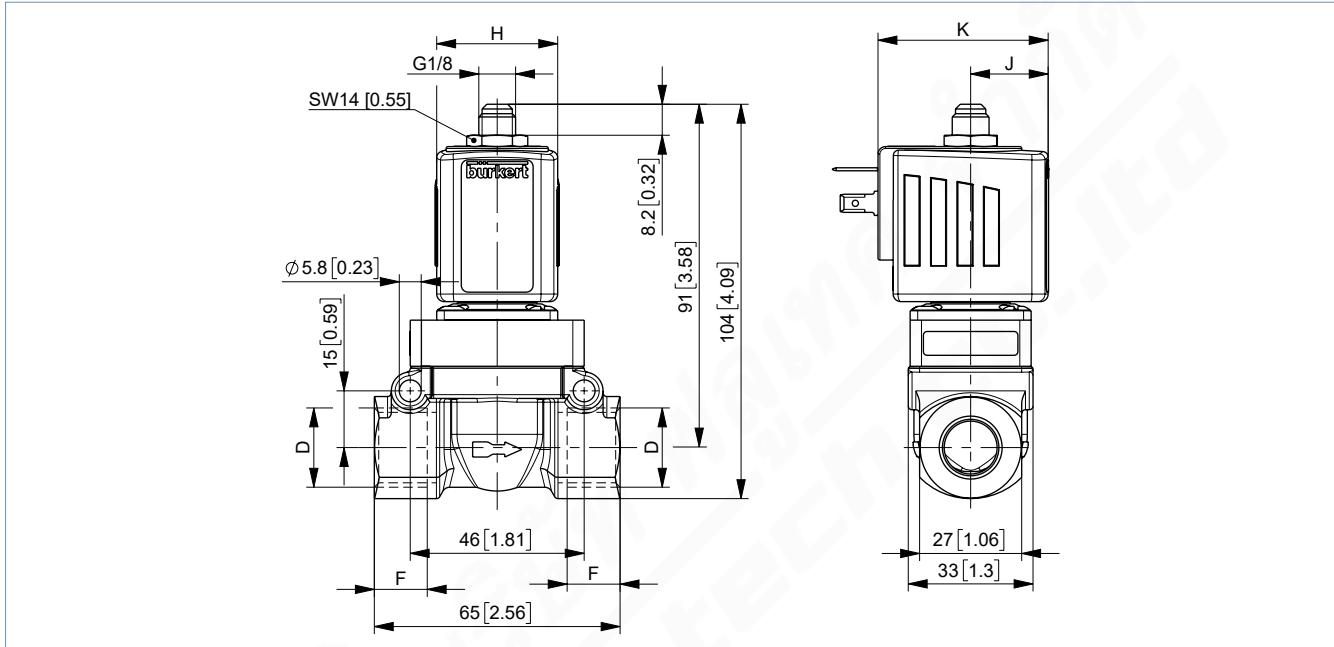
G thread			NPT thread		
D1	F1		D2	F2	
[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]
G 1/2	14	0.55	NPT 1/2	13.7	0.54

5.4. Discharge valve for compressor systems CF05

Plug version with ventilation

Note:

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.

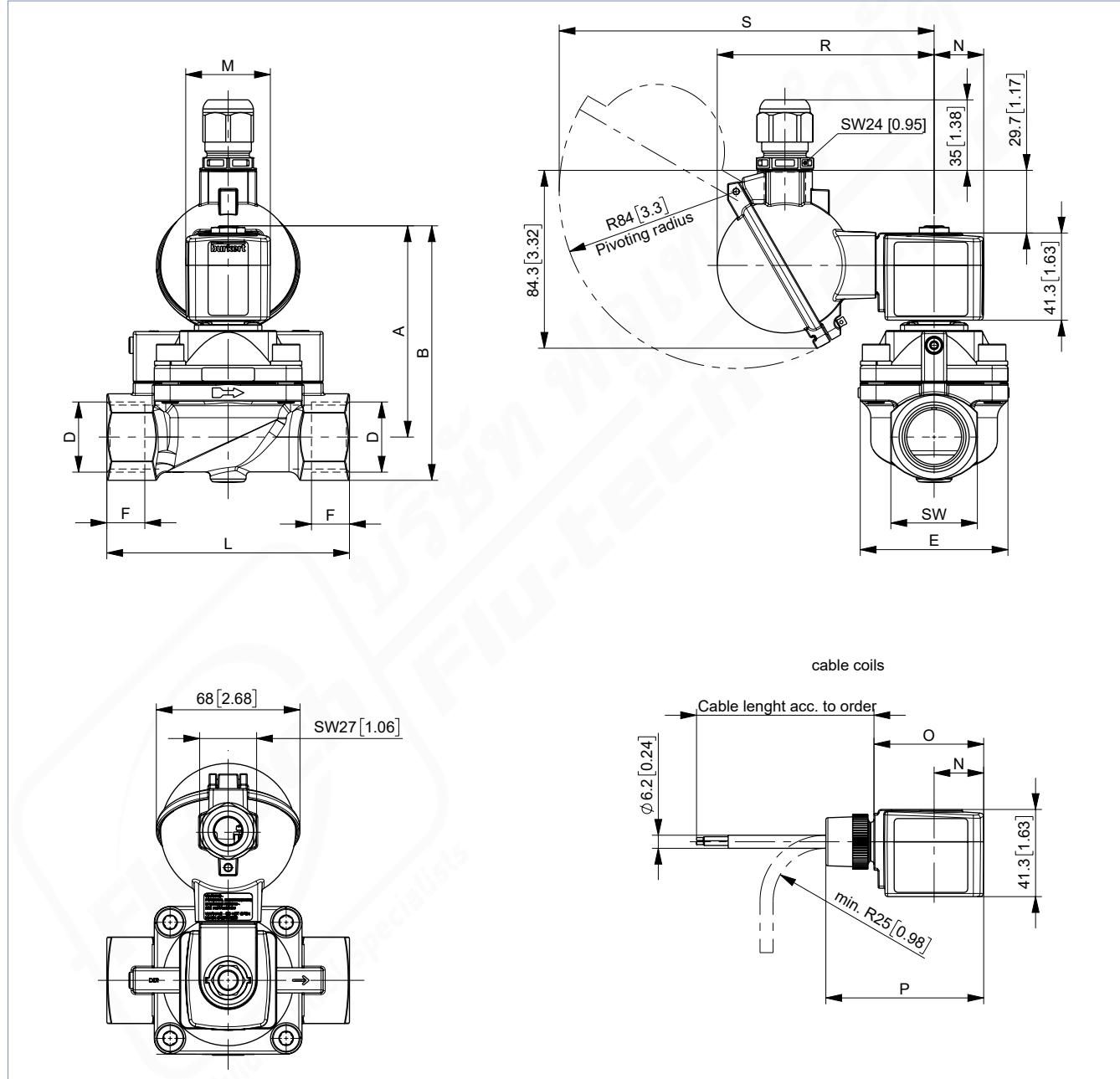


Coil size	G thread				NPT thread				H		J		K	
	D1	F1	D2	F2	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[mm]	[in]	[mm]	[in]
5	G 1/4	12	0.47	NPT 1/4	10	0.39		32	1.26	20.5	0.81	45	1.77	
	G 1/2	14	0.55	NPT 1/2	13.7	0.54								
6	G 1/2	14	0.55	NPT 1/2	13.7	0.54	40	1.57	23.5	0.93	51	2.01		

5.5. Coil UL Listed for hazardous locations, Class I, Division 2

Note:

- Dimensions in mm [inch]
- The dimensions D1 and F1 apply to G-threads.
- The dimensions D2 and F2 apply to NPT-threads.
- The dimensions D3 and F3 apply to Rc-threads.

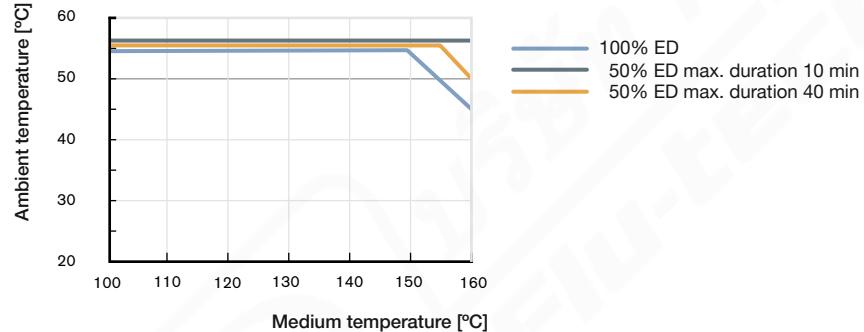


Coil size	DN	WWA				WWB				G thread				NPT thread				Rc thread			
		A		B		A		B		D1		F1		D2		F2		D3		F3	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]	[Zoll]	[mm]	[in]
5	12.0	83	3.27	96.5	3.80	90.8	3.57	104.3	4.11	G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52			
	20.0	93	3.66	109	4.29	—	—	—	—	G 3/4	16	0.63	NPT 3/4	14	0.55	Rc 3/4	14.5	0.57			
	25.0	99.5	3.92	119	4.69					G 1	18	0.71	NPT 1	16.8	0.66	Rc 1	16.8	0.66			
6	12.0	83	3.27	96.5	3.80	90.8	3.57	104.3	4.11	G 1/2	14	0.55	NPT 1/2	13.7	0.54	Rc 1/2	13.2	0.52			
	20.0	93	3.66	109	4.29	—	—	—	—	G 3/4	16	0.63	NPT 3/4	14	0.55	Rc 3/4	14.5	0.57			
	25.0	99.5	3.92	119	4.69					G 1	18	0.71	NPT 1	16.8	0.66	Rc 1	16.8	0.66			

Coil size	DN	E		L		SW		M		N		O		P		R		S	
		[mm]	[in]	[mm]	[in]	[mm]	[in]												
5	12.0	33	1.30	65	2.56	27	1.06	32	1.26	20.5	0.81	46	1.81	68.8	2.71	99.8	3.93	174.7	6.88
	20.0	60	2.36	100	3.94	32	1.26												
	25.0	70	2.76	115	4.53	41	1.61												
6	12.0	33	1.30	65	2.56	27	1.06	40	1.57	23.5	0.93	52	2.05	74.8	2.94	102.8	4.05	177.7	7.00
	20.0	60	2.36	100	3.94	32	1.26												
	25.0	70	2.76	115	4.53	41	1.61												

6. Performance specifications

6.1. Temperature/duty cycle derating diagram for steam version NA07



6.2. Characteristic values of intermittent operation

$$t_{sp} [s] = \frac{60}{SH [\text{1}/\text{min}]}$$

t_{SD} – Cycle time

$$t_{ED} [s] = \frac{ED [\%]}{100} \times t_{sp} [s]$$

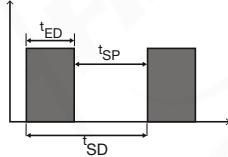
t_{ED} – Duty cycle

$$t_{sp} [s] = t_{sd} [s] - t_{ED} [s]$$

t_{SP} – De-energized pause

ED – Relative duty cycle relative

SH – Switching frequency



7. Product accessories

7.1. Special tool to turn the terminal box

Note:

Detailed ordering information can be found in chapter “Special tool to turn the terminal box” on page 31.

8. Ordering information

8.1. Burkert eShop



Burkert eShop – Easy ordering and quick delivery

You want to find your desired Burkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

8.2. Burkert product filter



Burkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Burkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

8.3. Burkert Product Enquiry Form

Burkert Product Enquiry Form – Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Burkert contact. This will enable us to provide you with the best possible advice.

[Fill out the form now](#)

8.4. Ordering chart

Standard version DN 12...DN 25, UL Recognized and CSA certified

Note:

- Please note that the cable plug Type 2518 ► is included. UL Listed and other versions are available on request. For details see “[Cable plug Type 2518, form A according to DIN EN 175301-803](#)” on page 31.
- Further versions with alternative voltages, G or UN inner thread are available on request.

Circuit function	Port connection	Orifice	C_v value water	Pressure range (MAWP ^{1.)})	Article no.			
					024/DC 9 Watt	024/DC 10 Watt	024/60	120/60
Seal material PTFE/FKM								
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	12	2.31	14.5...363 14.5...464	o. r. –	– o. r.	– o. r.	– o. r.
	NPT 3/4	20	8.09	14.5...290	o. r.	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...290	o. r.	o. r.	o. r.	o. r.
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2	12	2.31	14.5...464	–	o. r.	o. r.	o. r.
	NPT 3/4	20	8.09	14.5...290	–	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...290	–	o. r.	o. r.	o. r.

o. r. = on request

– = not available

1.) Maximum allowable working pressure

Standard version DN 32...DN 50, UL Recognized and CSA certified

Circuit function	Port connection	Orifice	C_v value water	Pressure range (MAWP ^{1.)})	Article no.		
					024/DC	024/60	120/60
Seal material PTFE/FKM							
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1 1/4	32	20.81	14.5...232 14.5...290	o. r. –	– o. r.	– o. r.
	NPT 1 1/2	40	20.81	14.5...232 14.5...290	o. r. –	– o. r.	– o. r.
	NPT 2	50	41.62	14.5...145 14.5...290	o. r. –	– o. r.	– o. r.

o. r. = on request

– = not available

1.) Maximum allowable working pressure



Standard version DN 12...DN 25, UL Listed and CSA certified

Note:

- Please note that the cable plug Type 2509 ▶ is included. UL Listed and other versions are available on request. For details see “[Cable plug Type 2509, form A according to DIN EN 175301-803](#)” on page 31.
- Further versions with alternative voltages, G or UN inner thread are available on request.

Circuit function	Port connection	Orifice [mm]	C _v value water [gal/min]	Pressure range (MAWP ^{1.)} [psi]	Article no.			
					024/DC 9 Watt [V/Hz]	024/DC 10 Watt [V/Hz]	024/60 [V/Hz]	120/60 [V/Hz]
Seal material PTFE/FKM								
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	12	2.31	14.5...363 14.5...464	o. r. —	— o. r.	— o. r.	— o. r.
	NPT 3/4	20	8.09	14.5...290	o. r.	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...290	o. r.	o. r.	o. r.	o. r.
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2	12	2.31	14.5...464	—	o. r.	o. r.	o. r.
	NPT 3/4	20	8.09	14.5...290	—	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...290	—	o. r.	o. r.	o. r.

o. r. = on request

— = not available

1.) Maximum allowable working pressure

Standard version DN 32...DN 50, UL Listed and CSA certified

Circuit function	Port connection	Orifice [mm]	C _v value water [gal/min]	Pressure range (MAWP ^{1.)} [psi]	Article no.		
					024/DC [V/Hz]	024/60 [V/Hz]	120/60 [V/Hz]
Seal material PTFE/FKM							
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1 1/4	32	20.81	14.5...232 14.5...290	o. r. —	— o. r.	— o. r.
	NPT 1 1/2	40	20.81	14.5...232 14.5...290	o. r. —	— o. r.	— o. r.
	NPT 2	50	41.62	14.5...145 14.5...290	o. r. —	— o. r.	— o. r.

o. r. = on request

— = not available

1.) Maximum allowable working pressure

Steam version NA07, DN 13...DN 40, UL Recognized with coil UL Recognized (cURus)
Note:

- Please note that the cable plug **Type 2518 ▶** is included. UL Listed and other versions are available on request. For details see "[Cable plug Type 2518, form A according to DIN EN 175301-803" on page 31.](#)
- Due to the temperature range, the cable plug with silicone seal is provided for steam versions NA07.
- Please also note the derating diagram, see "[6.1. Temperature/duty cycle derating diagram for steam version NA07" on page 22.](#)
- Further versions with alternative voltages, G or UN inner thread and higher medium temperature are available on request.

Circuit function	Port connection	Orifice	C _v value water	Pressure range (MAWP ^{1.)}	Max. medium temperature	Article no.			
						024/DC	024/60	120/60	240/60
Seal material PTFE/graphite									
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	13	4.28	14.5...73	302	00342015 ▶	-	-	-
				14.5...174		-	00466912 ▶	00466911 ▶	o. r.
	NPT 3/4	20	8.09	14.5...73	302	00466918 ▶	-	-	-
				14.5...174		-	00342016 ▶	00342017 ▶	o. r.
	NPT 1	25	11.56	14.5...73	302	00342018 ▶	-	-	-
				14.5...174		-	00342019 ▶	00342020 ▶	o. r.
	NPT 1 1/4	32	20.81	14.5...58	302	00342021 ▶	-	-	-
				14.5...174		-	00342022 ▶	00467419 ▶	o. r.
	NPT 1 1/2	40	20.81	14.5...58	302	00326598 ▶	-	-	-
				14.5...174		-	00342023 ▶	00467420 ▶	o. r.

o. r. = on request

- = not available

1.) Maximum allowable working pressure

Steam version NA07, DN 13...DN 40, UL Listed with coil UL Recognized (cURus)
Note:

- Please note that the cable plug **Type 2509 ▶** is included. UL Listed and other versions are available on request. For details see "[Cable plug Type 2509, form A according to DIN EN 175301-803" on page 31.](#)
- Please also note the derating diagram, see "[6.1. Temperature/duty cycle derating diagram for steam version NA07" on page 22.](#)
- Further versions with alternative voltages, G or UN inner thread and higher medium temperature are available on request.

Circuit function	Port connection	Orifice	C _v value water	Pressure range (MAWP ^{1.)}	Max. medium temperature	Article no.			
						024/DC	024/60	120/60	240/60
Seal material PTFE/graphite									
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	13	4.28	14.5...73	302	o. r.	-	-	-
				14.5...174		-	o. r.	o. r.	o. r.
	NPT 3/4	20	8.09	14.5...73	302	o. r.	-	-	-
				14.5...174		-	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...73	302	o. r.	-	-	-
				14.5...174		-	o. r.	o. r.	o. r.
	NPT 1 1/4	32	20.81	14.5...58	302	o. r.	-	-	-
				14.5...174		-	o. r.	o. r.	o. r.
	NPT 1 1/2	40	20.81	14.5...58	302	o. r.	-	-	-
				14.5...174		-	o. r.	o. r.	o. r.

o. r. = on request

- = not available

1.) Maximum allowable working pressure



Fire Protection service valve, UL Recognized with Fire Protection / UL Listed with Fire Protection
Note:

- Please note that for UL recognized version the cable plug **Type 2518 ▶** is included. UL Listed and other versions are available on request. For details see "[Cable plug Type 2518, form A according to DIN EN 175301-803](#)" on page 31.
- Please note that for UL listed version the cable plug **Type 2509 ▶** is included. For details see "[Cable plug Type 2509, form A according to DIN EN 175301-803](#)" on page 31.
- Further versions with G inner thread are available on request.

Circuit function	Port connection	Orifice	C_v value water [mm]	Pressure range (MAWP ¹⁾ [psi]	Medium temp. range [°F]	Ambient temp. range [°F]	Certification	Article no.	
								024/DC	024/56
								[V/Hz]	[V/Hz]
Seal material PTFE/graphite									
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	12	2.31	14.5...363	41...194	41...131	UL recognized UL listed	o. r. 00324566	o. r. o. r.

o. r. = on request

1.) Maximum allowable working pressure

High pressure version up to 1160 psi (PN08), coil UL Recognized (cURus)
Note:

- Please note that the cable plug **Type 2518 ▶** is included. UL Listed and other versions are available on request. For details see "[Cable plug Type 2518, form A according to DIN EN 175301-803](#)" on page 31.
- Please note: fluids and high differential pressure may cause high pressure surges.

Circuit function	Port connection	Orifice	C_v value water [mm]	Pressure range (MAWP ¹⁾ [psi]	Article no.			
					024/DC	024/60	120/60	240/60
					[V/Hz]	[V/Hz]	[V/Hz]	[V/Hz]
Seal material PTFE/FKM								
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	12	2.31	14.5...1160	o. r.	o. r.	o. r.	o. r.

o. r. = on request

1.) Maximum allowable working pressure



Discharge valve for compressor systems (CF05), UL Recognized and CSA certified
Note:

- Please note that the cable plug Type 2518 ► is included. UL Listed and other versions are available on request. For details see “[Cable plug Type 2518, form A according to DIN EN 175301-803](#)” on page 31.
- Further versions with alternative voltages and G inner thread are available on request.

Circuit function	Port connection	Orifice	C_v value water	Pressure range (MAWP ¹⁾)	Article no.		
					024/DC	024/60	120/60
		[mm]	[gal/min]	[psi]	[V/Hz]	[V/Hz]	[V/Hz]
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2	12	2.31	14.5...464	o. r.	o. r.	o. r.

o. r. = on request

1.) Maximum allowable working pressure

Discharge valve for compressor systems (CF05), UL Listed and CSA certified
Note:

- Please note that for UL listed version the cable plug Type 2509 ► is included. For details see “[Cable plug Type 2509, form A according to DIN EN 175301-803](#)” on page 31.
- Further versions with alternative voltages and G inner thread are available on request.

Circuit function	Port connection	Orifice	C_v value water	Pressure range (MAWP ¹⁾)	Article no.		
					024/DC	024/60	120/60
		[mm]	[gal/min]	[psi]	[V/Hz]	[V/Hz]	[V/Hz]
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2	12	2.31	14.5...464	o. r.	o. r.	o. r.

o. r. = on request

1.) Maximum allowable working pressure



Coil UL Listed (cULus) for hazardous locations, Class I, Division 2 cable version**Note:**

- Further versions with G inner thread on request.
- With 3 m/9'10" cable as standard. Other lengths on request.

Circuit function	Port connection	Orifice	C _v value water	Pressure range (MAWP ¹⁾)		Article no.			
				Liquids	Gases	12/AC/DC	24/AC/DC	120/AC	240/AC
		[mm]	[gal/min]	[psi]	[psi]	[V/Hz]	[V/Hz]	[V/Hz]	[V/Hz]
Seal material PTFE/FKM									
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2	12	2.31	14.5...725	14.5...725	o. r.	o. r.	o. r.	o. r.
	NPT 3/4	20	8.09	14.5...362	14.5...464	o. r.	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...362	14.5...464	o. r.	20027923	o. r.	o. r.
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2	12	2.31	14.5...464	14.5...464	o. r.	o. r.	o. r.	o. r.
	NPT 3/4	20	8.09	14.5...362	14.5...362	o. r.	o. r.	o. r.	o. r.
	NPT 1	25	11.56	14.5...362	14.5...362	o. r.	o. r.	o. r.	o. r.

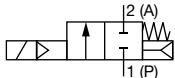
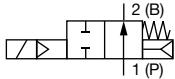
o. r. = on request

1.) Maximum allowable working pressure

Labeling explosion protection cable coil	
NEC 500	Class I, Division 2, Groups A,B,C,D T4 Class I,II, Division 2, Groups F,G T4
NEC 505 CEC 18	Class I, Zone 1, AEx mb IIC T4 Gb Zone 21, AEx mb IIC T275 °F Db

Coil UL Listed (cULus) for hazardous locations, Class I, Division 2 terminal box version
Note:

Further versions with G inner thread on request.

Circuit function	Port connection	Orifice	C _v value water	Pressure range (MAWP ^{1.)})		Article no.			
				Liquids	Gases	12/AC/DC	24/AC/DC	120/AC	240/AC
				[mm]	[gal/min]	[psi]	[psi]	[V/Hz]	[V/Hz]
Seal material PTFE/FKM									
CF A 2/2-way solenoid valve Servo-controlled Normally closed	NPT 1/2 NPT 3/4 NPT 1	12 20 25	2.31 8.09 11.56	14.5...725 14.5...362 14.5...464	14.5...725 14.5...362 14.5...464	o. r. o. r. o. r.			
									
CF B 2/2-way solenoid valve Servo-controlled Normally open	NPT 1/2 NPT 3/4 NPT 1	12 20 25	2.31 8.09 11.56	14.5...464 14.5...362 14.5...362	14.5...464 14.5...362 14.5...362	o. r. o. r. o. r.			
									

o. r. = on request

1.) Maximum allowable working pressure

Labeling explosion protection terminal box	
NEC 500	Class I, Division 2, Groups A,B,C,D T4 Class I,II, Division 2, Groups F,G T4
NEC 505 CEC 18	Class I, Zone 1, AEx eb mb IIC T4 Gb Zone 21, AEx mb tb IIC T275 °F Db

Further versions on request

	Approval Further information can be found in chapter " 3. Approvals and conformities " on page 5.		Temperature Special temperature ranges
	Process connection <ul style="list-style-type: none"> • G • UN 		Voltage 110/50, further voltages on request

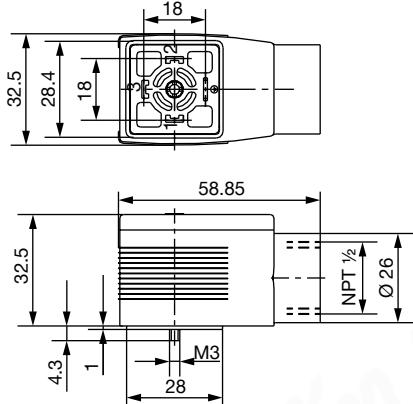


8.5. Ordering chart accessories

Cable plug Type 2509, form A according to DIN EN 175301 - 803

Note:

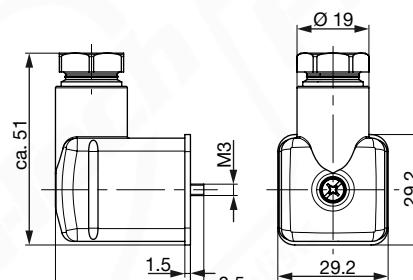
- Dimensions in mm
- Without circuitry (standard)
- The cable plug meets the requirements for UL hazloc Div. 2.
- The cable plug Type 2509 meets the requirements in accordance with UL Listed (UL 429) in assembly with a Burkert solenoid valve.
- Refer to data sheet **Type 2509** ► for more information about the cable plug.

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry	0...250 V AC/DC	137943 ☰

Cable plug Type 2518, form A according to DIN EN 175301 - 803

Note:

- Dimensions in mm
- For further versions see data sheet **Type 2518** ►.

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry (AC/DC) With LED (AC/DC) With LED and varistor (AC/DC) With rectifier, LED and varistor Without circuitry (AC/DC) with silicone seal for higher ambient temperature, e.g. steam version (NA07)	0...250 V AC/DC 12...24 V AC/DC 12...24 V AC/DC 12...24 V AC/DC 0...250 V AC/DC	314802 ☰ 314812 ☰ 314820 ☰ 314816 ☰ 361687 ☰

Special tool to turn the terminal box

Note:

This special tool is not supplied with the valve.

Description	Components of the set	Article no.
Set SC02-AC10 	<ul style="list-style-type: none"> • Special wrench • Service manual 	293488 ☰