





Servo-assisted 2/2 way diaphragm valve

- Servo-assisted diaphragm valve with diameter of up to DN50
- Hard-coupled diaphragm opens without differential pressure
- Vibration-proof, block screwed coil system
- Damped design for quiet closing
- Energy-saving power reduction in all DC versions



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 ▶
	Type 1078 Timer Unit ▶

Type description

The 0290 valve is a servo-assisted solenoid valve of the S.EV series. The valve opens without differential pressure. The opening process is supported by the fixed coupling of the diaphragm to the plunger. In the process, the integrated 'soft-kick' function opens in a manner that is gentle on the material. Various diaphragm material combinations are available depending on the application. The range of housings is rounded off by stainless steel and cast iron versions. The solenoid coils are encapsulated with a chemically resistant epoxy. 'Kick and drop' electronics are moulded into all DC versions for reduced electrical power consumption. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65 and when in combination with a stainless steel or plastic housing then NEMA 4X.

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1. General technical data

Product characteristics	
Nominal diameter	
Standard	DN12 ... DN50 mm
With approval according to DIN EN 161	DN12 ... DN25 mm
Materials	
Body	Brass, stainless steel 1.4581
Coil	Epoxide
Inner valve parts	Brass, stainless steel
Seal	NBR, FKM, EPDM
Switching times [ms]	
Measurement at the valve outlet 6 bar and 20 °C	
Opening	Pressure build-up 0 ... 90 %
Closing	Pressure reduction 100 ... 10 %
Pressure data [bar]	Overpressure with respect to atmospheric pressure
Thermal insulation class coil	H
Electrical data	
Electrical connection	Cable plug for cable Ø 7 mm, according to DIN EN 175 301 - 803 Form A (included in delivery)
Nominal operating mode	Continuous operation 100 % duty cycle
Voltage tolerance	± 10 %
Protection class	IP65 with cable plug
Performance data	
Flow	Measurement at +20 °C, 1 bar pressure at the valve inlet and free outlet
Media data	
Media	
NBR	Neutral media, compressed air, water, hydraulic oil
FKM	Per solutions, hot oils
EPDM	Oil and grease-free media, e.g. hot water
NBR with approval according to DIN EN 161	Fuel gases of the 1st, 2nd and 3rd gas family
Media temperature¹⁾	
NBR	-10 °C to +80 °C
FKM	0 °C to +120 °C
EPDM	-30 °C to +120 °C
NBR with approval according to DIN EN 161	0 °C to +80 °C
Environment and installation	
Ambient temperature	
Standard	Max. +55 °C
With approval according to DIN EN 161	0 °C to +55 °C
Installation position	Any, preferably actuator face up

1.) Max. medium temperature for variants with high-performance electronics (encryption .../UC) is 90 °C.

1.1. Performance data

Standard

Nominal diameter	K _v value water P→A	Port connection A/B and P	Pressure range	Electrical power consumption				Switching times		Weight
				Inrush AC	UC	Operation AC	UC	Opening	Closing	
[mm]	[m ³ /h]		[bar]	[VA]	[W]	[VA/W]	[W]	[ms]	[ms]	[kg]
12	1.8	G ½	0 ... 16	100	80	25/10	6	100 to 250	700 to 2000	1.0
20	6.5	G ¾	0 ... 16	120	100	32/16	9	300 to 1000	700 to 4000	1.4
25	10.0	G 1	0 ... 16	120	100	32/16	9			1.8
32	16.0	G 1¼	0 ... 12	120	100	32/16	9	300 to 1000	700 to 4000	2.7
40	16.0	G 1½	0 ... 12	120	100	32/16	9			3.1
50	38.0	G 2	0 ... 12	-	30	-	30			6.5

Gas valve according to DIN EN 161 (variable code PO17)


Nominal diameter [mm]	K _v value water P→A [m³/h]	Port connection A/B and P	Pressure range [bar]	Electrical power consumption				Switching times		Weight [kg]
				Inrush AC [VA]	UC [W]	Operation AC [VA/W]	UC [W]	Opening [ms]	Closing [ms]	
12	1.8	G ½	0...5	100 to 120	80	25/10	6	120 to 150	130 to 250	1.0
20	6.5	G ¾	0...5		100	32/16	9			1.4
25	10.0	G 1	0...5		100	32/16	9			1.8

2. Circuit functions

Circuit function	Description
	Type: A, Solenoid valve 2/2 way Servo-assisted Normally closed

3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp

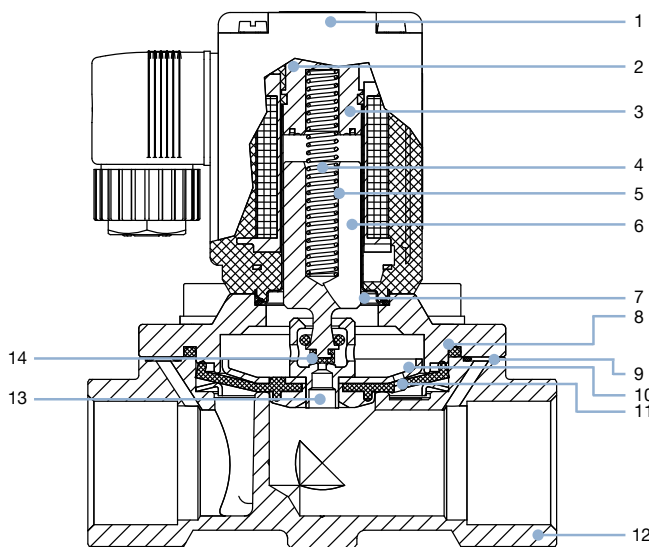


Bürkert resistApp – Chemical Resistance Chart

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](#)

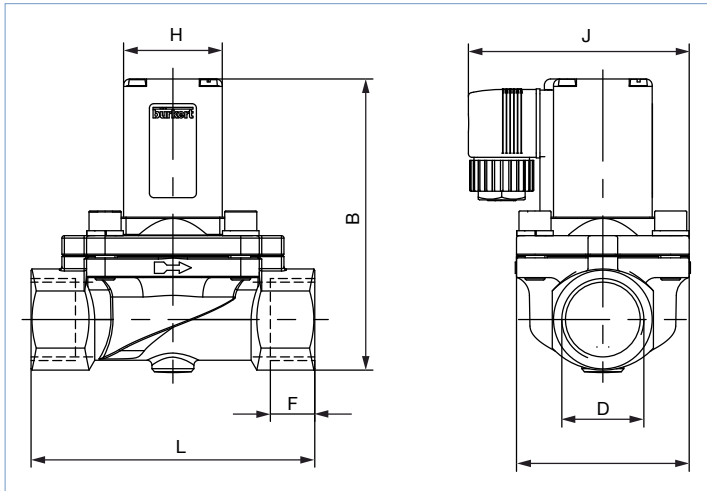
3.2. Material specifications



No.	Element	Material
1	Coil	Epoxide
2	Stopper	1.4105 or 1.4113
3	Shading ring (AC variant only)	Brass variant: Copper Stainless steel variant: Silver
4	Spring	1.4310
5	Magnetic core	1.4105
6	Core guide tube	1.4303
7	O-ring	(see order table)
8	O-ring	(see order table)
9	O-ring	(see order table)
10	Diaphragm plate	Brass variant: CuZn37 Stainless steel variant: 1.4401
11	Diaphragm	(see order table)
12	Body	Brass or stainless steel 1.4581
13	Pilot valve seat and nipple	Brass variant: CuZn39Pb3 Stainless steel variant: 1.4401
14	Seat seal	(see order table)

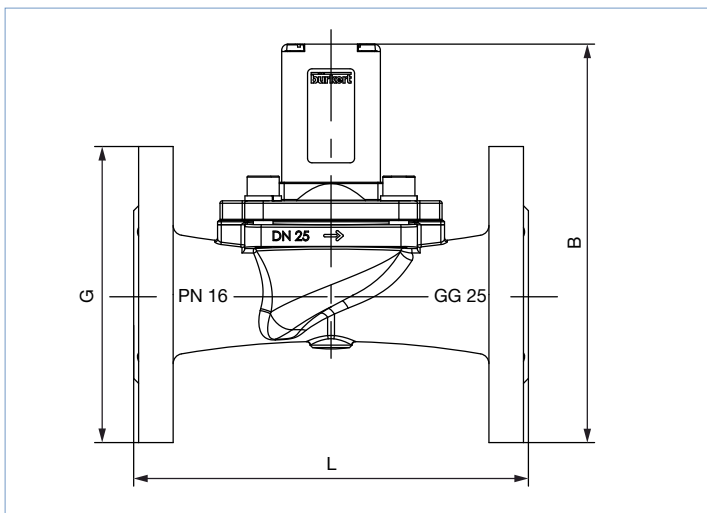
4. Dimensions

4.1. Threaded version



DN	D	B	E	R	H	Y	L
12	G 1/2	95.5	40	14	40	73	74.5
20	G 3/4	122	60	16	49	86.5	100
25	G 1	131	70	18	49	91.5	115
32	G 1 1/4	145	85	20	49	99	126
40	G 1 1/2	154	85	22	49	99	126
50	G 2	211	115	24	72	126	164


4.2. Flange version according to DIN EN 1092-1



DN	B	G	L
25	175	120	160
32	190	140	180
40	199	150	200
50	259	165	230

5. Ordering information

5.1. Bürkert eShop – Easy ordering and quick delivery

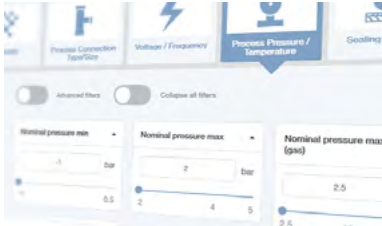


Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert 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](#)

5.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

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

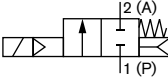
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5.3. Ordering chart

Brass body

Note:

All valves with cable plug.

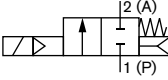
Circuit function	Port connection	Orifice	K _v value water [m ³ /h]	Pressure range [bar]	Diaphragm material	Article no. per voltage/frequency [V/Hz]			
						024/50	024/UC/DC ^{1.)}	230/50	110/50
A, Solenoid valve 2/2 way Servo-assisted Normally closed 	G ½	12	1.8	0 ... 16	NBR	043816	050294	044373	049500
					FKM	048707	049229	042886	059240
					EPDM	045931	049050	044816	049055
	G ¾	20	6.5	0 ... 16	NBR	058766	049518	045292	057127
					FKM	053910	053674	049745	067973
					EPDM	065033	058427	045290	069138
	G 1	25	10.0	0 ... 16	NBR	048171	053675	045293	053869
					FKM	066270	066981	058627	067974
					EPDM	054245	057155	045291	064887
	G 1¼	32	16.0	0 ... 12	NBR	085290	085291	052513	085292
					FKM	120631	017457	087203	137478
					EPDM	087204	072962	085259	073763
G 1½	40	16.0	0 ... 12	NBR	085294	085295	085297	085296	
				FKM	228118	089619	087663	–	
				EPDM	073290	079629	087732	–	
G 2	50	38.0	0 ... 12	NBR	–	085299	085301	085300	
				EPDM	–	120104	077494	121308	
				FKM	–	120952	088551	–	

1.) The coil for UC (universal current) has internal high-performance electronics. Please check that adequate performance is available (see "1. General technical data" on page 3).

2.) The valve is supplied with a cable plug with integrated rectifier.

3.) DC only

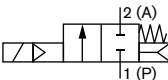
Stainless steel body

Circuit function	Port connection	Orifice	K _v value water [m ³ /h]	Pressure range [bar]	Diaphragm material	Article no. per voltage/frequency [V/Hz]			
						024/50	024/UC/DC ¹⁾	230/50	110/50
A, Solenoid valve 2/2 way Servo-assisted Normally closed 	G ½	12	1.8	0 ... 16	NBR	043659	053595	043654	052358
					FKM	048708	049987	042888	058407
					EPDM	045765	048606	043553	049053
	G ¾	20	6.5	0 ... 16	NBR	068338	018754	065121	-
					FKM	065362	066381	064701	066594
					EPDM	066460	059910	065025	025870
	G 1	25	10.0	0 ... 16	NBR	068510	061974	065414	067696
					FKM	018121	065542	066125	069477
					EPDM	059890	018348	059901	054044

Gas valve according to DIN EN 161 (variable code PO17)

Note:

All valves with cable plug.

Circuit function	Port connection	Orifice	K _v value water [m ³ /h]	Pressure range [bar]	Diaphragm material	Article no. per voltage/frequency [V/Hz]		
						024/UC	230/50	230/UC
A, Solenoid valve 2/2 way Servo-assisted Normally closed 	G ½	12	1.8	0 ... 5	NBR	280855	266512	281001
	G ¾	20	6.5			280877	266513	280878
	G 1	25	10.0			280879	266515	280880

Other versions on request

 Approval UL, UR, CSA	 Voltage 042/50, 110/50, 240/60
 Process connection Flange connection according to DIN EN 1092 - 1 (DN25 ... DN50)	