DATA SHEET

Type 6011

bürkert
FLUID CONTROL SYSTEMS









Plunger valve 2/2 way direct-acting

- Direct-acting and compact small-format valve with diameter of up to DN 2.4
- Screwed coil system
- Simple and quick flange or manifold installation
- Quick coupling (push-in fitting) for plug-in hose connections

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

Can be combined with



Type 2507 ▸
Cable plug - industry standard plug Form B



Type 2516 ▸
Cable plug DIN EN 175301-803 - form C

Type description

Valve 6011 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. A Bürkert-specific flange design (SFB) enables space-saving arrangement of valves on a manifold. Push-in fittings can be selected for flexible hose connection. In combination with a cable plug in accordance with industry standard Form B or DIN EN 175301-803 Form C, the valves satisfy protection class IP65.

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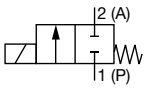
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1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter "4. Dimensions" on page 5.
Material	
Seal	FKM
Body	Standard version: Brass, polyamide (PA), stainless steel 1.4305 Analytical version: Brass, stainless steel 1.4305
Weight	Ca. 125 g
Performance data	
Duty cycle/single valve when mounted as a block on a manifold	100 % continuous rating Intermittent operation 60 % (30 min) or with 2 W coil (on request)
Circuit function	A
Electrical data	
Operating voltage	
Standard version	24 V DC, 24 V/50 Hz, 110/230 V/50 Hz
Analytical version	24 V DC, 230 V/50 Hz
Voltage tolerance	±10 %
Medium data	
Medium	
Standard version	Technical vacuum, neutral gases and fluids (e.g. compressed air, water, hydraulic oil)
Analytical version	Neutral/aggressive medium that do not attack the body and seal materials
Viscosity	Max. 21 mm^2/s
Medium temperature	-10…+100 °C
Approvals and certificates	
Degree of protection	IP65 with cable plug
Process/Port connection & communication	
Port connection	
Standard version	M5, G ⅛, sub-base
Analytical version	G ⅛, sub-base
Electrical connection	To DIN EN 175 301-803 Form C for cable plug Type 2516 (see "5.4. Ordering chart accessories" on page 11) To industry standard connector Form B for cable plug Type 2507 (see "5.4. Ordering chart accessories" on page 11)
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature (max.)	+55 °C
Installation instructions	No oil, grease or silicones to be used as installation aids

2. Circuit functions

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

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3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp



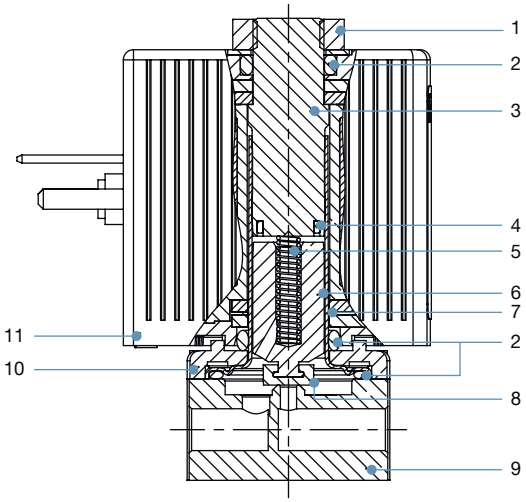
Bürkert resistApp – Chemical Resistance Chart

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

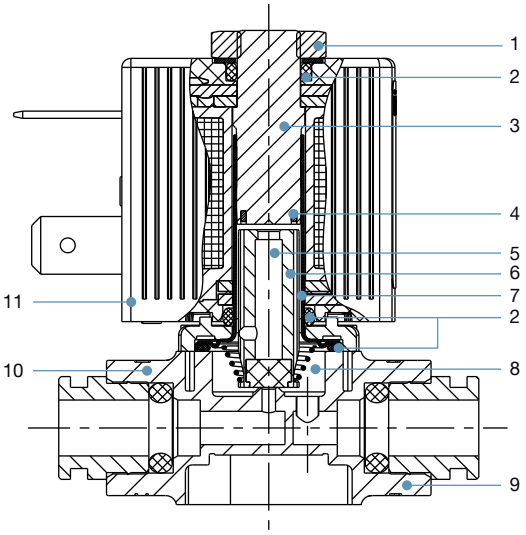
Standard version



No.	Element	Material
1	Locknut	9SMnPb28K Thick-film passivated
2	O-ring	FKM
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper, Silver
5	Spring	Stainless steel 1.4310
6	Core	Stainless steel 1.4105
7	Guide tube	Stainless steel 1.4303
8	Armature seal	FKM
9	Body	Brass, stainless steel 1.4305, PA (polyamide)
10	Sub-base	Thick-film passivated (brass version) Nickel-plated surface (stainless steel version)
11	Coil	DIN EN 175301 - 803[1.)] Form C: PA Industry standard connector Form B: Epoxy

1.) previously DIN 43650

Plastic version with plug-in coupling



No.	Element	Material
1	Locknut	9SMnPb28K Thick-film passivated
2	O-ring	FKM, EPDM
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper, Silver
5	Spring	Stainless steel 1.4310
6	Core	Stainless steel 1.4105
7	Guide tube	Stainless steel 1.4303
8	Armature seal	FKM, EPDM
9	Body	PA (polyamide)
10	Sub-base	Thick-film passivated (brass version) Nickel-plated surface (stainless steel version)
11	Coil	DIN EN 175301 - 803[1.)] Form C: PA Industry standard connector Form B: Epoxy

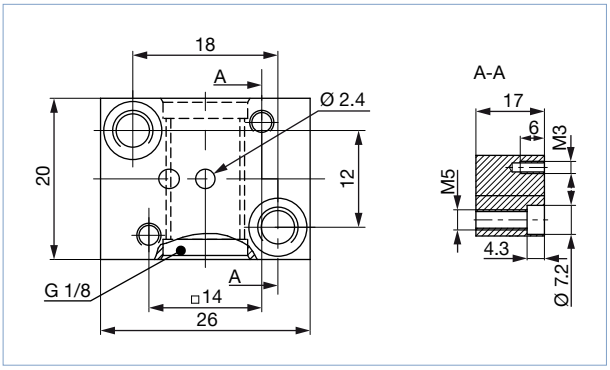
1.) previously DIN 43650

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4. Dimensions

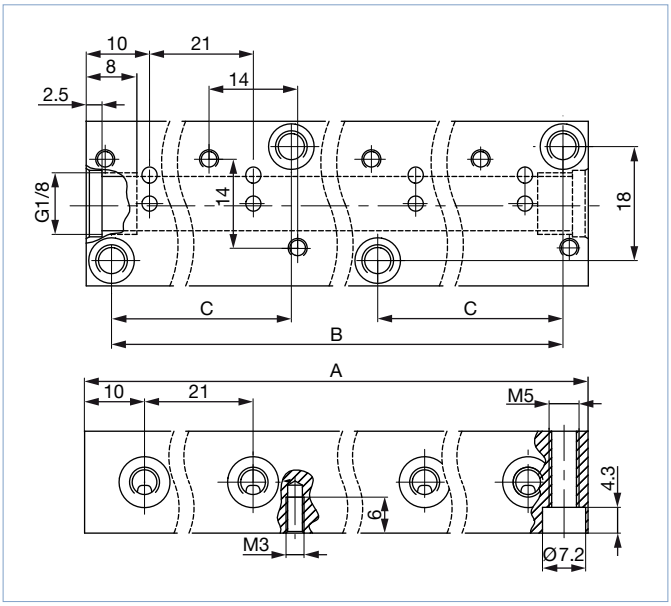
4.1. Single manifold

Note:
Dimensions in mm



4.2. Multiple manifold

Note:
Dimensions in mm



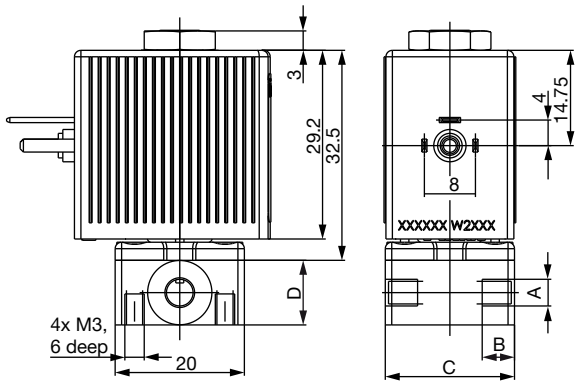
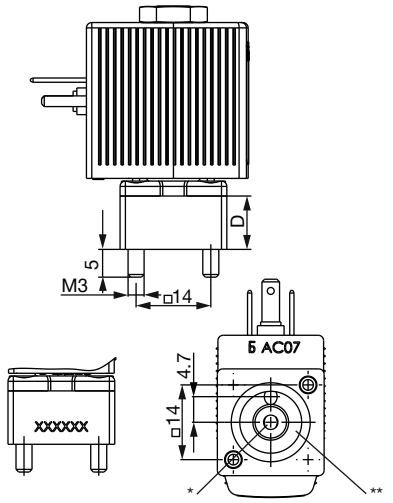
No. of valves	A	B	C
	[mm]	[mm]	[mm]
1	20	12	–
2	41	33	–
3	62	54	–
4	83	75	–
5	104	96	–
6	125	117	–
7	146	138	–
8	167	159	54
9	188	180	54
10	209	201	75
11	230	222	75
12	251	243	96

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4.3. Version with coil acc. to DIN EN 175301-803 Form C for cable plug Type 2516

Note:

- The previous standard DIN 43650 has been replaced by DIN EN 175301-803 Form C.
- Dimensions in mm

Threaded version	Flange version
	

Port connection	A	B	C	D
Thread	M5	5	20	10
Thread	G⅛	8	25	15
Sub-base	–	–	20	11

PIN Assignments

For the positions marked with * or ** in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function.

Circuit function	Connection Type	
	*	**
A	P	A

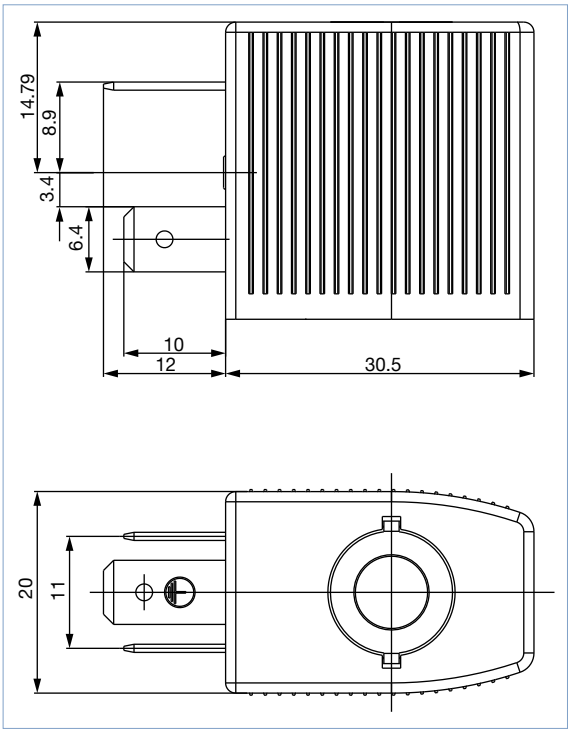
Pin assignment vacuum applications
In vacuum applications the existing flow direction must be maintained. Vacuum must therefore always be applied to A.
(Other terminal assignment on request)

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4.4. Version with coil acc. to industry standard connector Form B for cable plug Type 2507

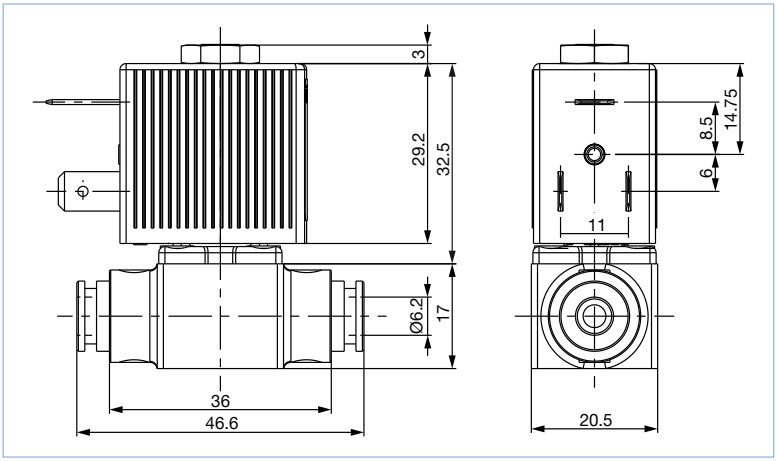
Threaded version

Note:
Dimensions in mm



4.5. Plastic version with plug-in coupling

Note:
Dimensions in mm



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5. Ordering information

5.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast delivery

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Order online now

5.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

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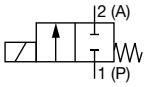
Try out our product filter

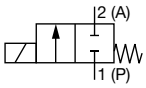
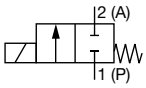
5.3. Ordering chart

Standard version

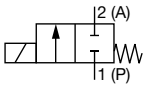
Note:

- All valves complete with coil and FKM seal material; without cable plug
- Other versions on request
- The previous standard DIN 43650 has been replaced by DIN EN 175301-803 Form C.

Circuit function	Orifice	Port connection	K_V value water	Pressure range	Voltage/ Frequency	Article no. Brass body	Article no. Stainless steel body
	[mm]		[m³/h]	[bar][1.]	[V/Hz]		
Solenoid valve complete in ported or flanged version with electrical coil connection to DIN EN 175 301-803 Form C for cable plug Type 2516							
A, solenoid valve 2/2 way Direct-acting Normally closed 	1.2	M5	0.045	0…12	24/DC	134084	–
				0…21	24/50	134085	–
				0…21	110/50	134086	–
				0…21	230/50	134087	–
	1.6	M5	0.06	0…6	24/DC	134088	–
				0…12	24/50	134089	–
				0…12	110/50	134090	–
				0…12	230/50	134091	–
		G ⅛	0.06	0…6	24/DC	134071	134103
				0…12	24/50	134092	134104
				0…12	110/50	134093	134105
				0…12	230/50	134094	134106
	2.0	G ⅛	0.11	0…4.5	24/DC	134095	134107
				0…8	24/50	134096	134108
				0…8	110/50	134097	134109
				0…8	230/50	134098	134110

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h]	Pressure range [bar][1.]	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steel body
A, solenoid valve 2/2 way Direct-acting Normally closed 	2.4	G ⅛	0.13	0…3	24/DC	134099	134111
				0…6	24/50	134100	134112
				0…6	110/50	134101	134113
				0…6	230/50	134102	134114
	1.2	Sub-base	0.045	0…12	24/DC	134115	–
				0…21	24/50	134116	–
				0…21	110/50	134117	–
				0…21	230/50	134118	–
	1.6	Sub-base	0.06	0…6	24/DC	134119	134131
				0…12	24/50	134120	134132
				0…12	110/50	134121	134133
				0…12	230/50	134122	134134
	2.0	Sub-base	0.11	0…4.5	24/DC	134123	134135
				0…8	24/50	134124	134136
				0…8	110/50	134125	134137
				0…8	230/50	134126	134138
	2.4	Sub-base	0.13	0…3	24/DC	134127	–
				0…6	24/50	134128	–
				0…6	110/50	134129	–
				0…6	230/50	134130	–
Solenoid valve complete in ported or flanged version with electrical coil acc. to industry standard connector Form B for cable plug Type 2507							
A, solenoid valve 2/2 way Direct-acting Normally closed 	1.2	M5	0.045	0…12	24/DC	163491	–
				0…21	24/50	163492	–
				0…21	110/50	163493	–
				0…21	230/50	163494	–
	1.6	M5	0.06	0…6	24/DC	163495	–
				0…12	24/50	163496	–
				0…12	110/50	163497	–
				0…12	230/50	163498	–
		G ⅛	0.06	0…6	24/DC	163499	163509
				0…12	24/50	163500	163510
				0…12	110/50	163501	163511
				0…12	230/50	163502	163512
	2.0	G ⅛	0.11	0…4.5	24/DC	163503	163513
				0…8	24/50	163504	163514
				0…8	110/50	163505	163515
				0…8	230/50	163506	163516
	2.4	G ⅛	0.13	0…3	24/DC	161193	163517
				0…6	24/50	163507	163518
				0…6	110/50	163508	163519
				0…6	230/50	161194	163520
	1.2	Sub-base	0.045	0…12	24/DC	163521	–
				0…21	24/50	163522	–
				0…21	110/50	163523	–
				0…21	230/50	163524	–
	1.6	Sub-base	0.06	0…6	24/DC	163525	163537
				0…12	24/50	163526	163538
				0…12	110/50	163527	163539
				0…12	230/50	163528	163540

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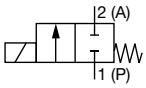
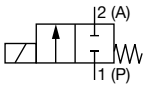
Circuit function	Orifice	Port connection	K_V value water	Pressure range	Voltage/ Frequency	Article no. Brass body	Article no. Stainless steel body
	[mm]		[m³/h]	[bar][1.]	[V/Hz]		
A, solenoid valve 2/2 way Direct-acting Normally closed 	2.0	Sub-base	0.11	0…4.5	24/DC	163529	163541
				0…8	24/50	163530	163542
				0…8	110/50	163531	163543
				0…8	230/50	163532	163544
	2.4	Sub-base	0.13	0…3	24/DC	163533	–
				0…6	24/50	163534	–
				0…6	110/50	163535	–
				0…6	230/50	163536	–

1.) Pressure data: Overpressure with respect to atmospheric pressure

Analytical version

Note:

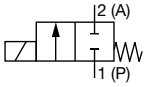
- All valves complete with coil (4 W) and FKM seal material; without cable plug
- Other versions on request
- The previous standard DIN 43650 has been replaced by DIN EN 175301 - 803 Form C.

Circuit function	Orifice	Port connection	K_V value water	Pressure range	Voltage/ Frequency	Article no. Brass body	Article no. Stainless steel body
	[mm]		[m³/h]	[bar][1.]	[V/Hz]		
Solenoid valve complete in threaded or flanged version with electrical coil connection to DIN EN 175 301 - 803 Form C for cable plug Type 2516							
A, solenoid valve 2/2 way Direct-acting Normally closed 	1.6	G ⅛	0.06	0…6	24/DC	137794	137800
				0…12	230/50	137795	137801
	2.0	G ⅛	0.11	0…4.5	24/DC	137796	137802
				0…8	230/50	137797	137803
	2.4	G ⅛	0.13	0…3	24/DC	137798	137804
				0…6	230/50	137799	137805
	1.2	Sub-base	0.045	0…12	24/DC	137806	137812
				0…21	230/50	137807	137813
	1.6	Sub-base	0.06	0…6	24/DC	137808	137814
				0…12	230/50	137809	137815
	2.0	Sub-base	0.11	0…4.5	24/DC	137810	137816
				0…8	230/50	137811	137817
Solenoid valve complete in threaded or flanged version with electrical coil acc. to industry standard connector Form B for cable plug Type 2507							
A, solenoid valve 2/2 way Direct-acting Normally closed 	1.6	G ⅛	0.06	0…6	24/DC	163545	163551
				0…12	230/50	163546	163552
	2.0	G ⅛	0.11	0…4.5	24/DC	163547	163553
				0…8	230/50	163548	163554
	2.4	G ⅛	0.13	0…3	24/DC	163549	163555
				0…6	230/50	163550	163556
	1.2	Sub-base	0.045	0…12	24/DC	163557	163563
				0…21	230/50	163558	163564
	1.6	Sub-base	0.06	0…6	24/DC	163559	163565
				0…12	230/50	163560	163566
	2.0	Sub-base	0.11	0…4.5	24/DC	163561	163567
				0…8	230/50	163562	163568

1.) Pressure data: Overpressure with respect to atmospheric pressure

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Plastic version with plug-in coupling

Circuit function	Orifice [mm]	Seal material	K_v value water [m³/h]	Pressure range [bar][1.)]	Voltage/requency [V/Hz]	Article no.
Solenoid valve complete with seal material FKM and plastic housing with hose plug connection for external hose with diameter 6 mm and coil acc. to industry standard connector Form B for cable plug Type 2507						
A, solenoid valve 2/2 way Direct-acting Normally closed 	1.5	FKM	0.06	6	230/50	319647
	2.7	FKM	0.15	3	230/50	319650

1.) Pressure data: Overpressure with respect to atmospheric pressure

5.4. Ordering chart accessories

Manifolds

Material	No. of valves	Article no.
Aluminium, anodized	1	005312
	2	005355
	3	005313
	4	005314
	5	005315
	6	005316
	7	005893
	8	005166
	9	005241
	10	005819
	11	005242
	12	005222

Accessories for manifolds

Accessory	Features	Article no.
Blanking plug	with seal ring, G ⅛	005041
Cover plate	for unused valves	005100

Cable plug Type 2516 acc. to DIN EN 175301-803 Form C

Note:

- Delivery of cable plug includes a flat seal and a fixing screw.
- Further versions of cable plug with circuitry acc. to DIN EN 175 301-803 Form C as well as detailed technical data, see data sheet **Type 2516 ▸.**

Cable plug	Version	Voltage	Current	Article no.
	Without circuitry	0…250 V AC/DC	Max. 6 A	303141
	With LED	12…24 V AC/DC	Max. 3 A	303145
	With LED and varistor	12…24 V AC/DC	Max. 3 A	303148
	With rectifier, LED and varistor	12…24 V AC/DC	Max. 1 A	303142

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Cable plug Type 2507 acc. to industry standard connector Form B

Note:

- Delivery of cable plug includes a flat seal and a fixing screw.
- Further versions of cable plug with circuitry acc. to industry standard connector Form B as well as detailed technical data, see data sheet **Type 2507 ▶**.

Cable plug	Version	Voltage	Article no.
	Without circuitry (standard)	2…250 V AC/DC	423845
	With LED	24 V AC/DC	423849
	With LED and free-wheeling diode	12…24 V AC/DC	423851
	With rectifier, LED and varistor	12…24 V AC/DC	423853

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