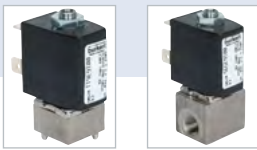






## Plunger valve 3/2 way direct-acting

- Direct-acting, compact small-format valve with diameter of up to DN 1.6
- Screwed coil system
- Banjo threaded connection for direct mounting on pneumatic valves
- Simple and quick push-in, flange, or manifold installation
- Service-friendly manual override



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

### Can be combined with

- |   |  |   |
|---|--|---|
|   | <b>Type 2507</b><br>Cable plug - industry standard plug Form B | ▶ |
|  | <b>Type 2516</b><br>Cable plug DIN EN 175301-803 - form C      | ▶ |

### Type description

Valve 6012 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. A banjo connection with banjo bolt is the ideal solution for easy direct mounting on a pneumatic drive. Optional manual actuation enables quick commissioning and optimal maintenance. In combination with a cable plug in accordance with industry standard Form B or DIN EN 17301-803 Form C, the valves satisfy protection class IP65.

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## 1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter <a href="#">“4. Dimensions”</a> on page 6.
Material	
Body	Brass, polyamide (PA), stainless steel 1.4305
Seal	FKM, NBR
Weight	
Standard version	125 g (G 1/8)
Banjo version	135 g
Thermal insulation class of solenoid	Polyamide: class B Epoxy: class H
Manual override	Optional, as a standard feature (for Type 6012, banjo version)
Performance data	
Duty cycle/single valve for block assembly on multiple manifold	100 % continuous rating Intermittent operation 60 % (30 min) With 2 W coil 100 % (on request)
Response times <sup>1)</sup>	
Standard version	DN 1.2 mm: Opening 7...10 ms, Closing 9...12 ms DN 1.6 mm: Opening 7...12 ms, Closing 7...12 ms
Banjo version	DN 1.2 mm, 4 W AC: Opening 7...10 ms, Closing 9...12 ms DN 1.2 mm, 4 W DC: Opening 7...12 ms, Closing 7...12 ms
Circuit function	C and D (see <a href="#">“2. Circuit functions”</a> on page 4)
Electrical data	
Operating voltage	24 V DC, 24 V / 50 Hz, 110 / 230 V / 50 Hz
Voltage tolerance	± 10 %
Medium data	
Viscosity (max.)	21 mm <sup>2</sup> /s
Medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical Vacuum)
Medium temperature	
Standard version	- 10 °C... + 100 °C
Banjo version	- 10 °C... + 60 °C
Approvals and certificates	
Degree of protection	IP65 with cable plug
Process/Port connection & communication	
Port connection	
Standard version	M5, G 1/8, Flange
Banjo version	G 1/8, G 1/4 and tube fitting Ø 6 mm
Electrical connection	<ul style="list-style-type: none"> <li>• Acc. to DIN EN 175301-803 Form C for cable plug Type 2516 (see <a href="#">“6.4. Ordering chart accessories”</a> on page 13)</li> <li>• Acc. to industry standard connector Form B for cable plug Type 2507 (see <a href="#">“6.4. Ordering chart accessories”</a> on page 13)</li> <li>• Flying leads on request</li> </ul>
Environment and installation	
Installation instructions	As required, preferably with actuator upright
Ambient temperature	
Standard version	Max. +55 °C
Banjo version	- 10 °C... + 40 °C

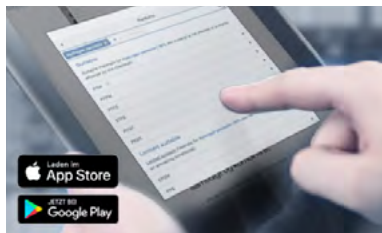
1.) Response times [ms]: Measures at valve outlet at 6 bar and +20 °C acc. to ISO 12238, opening: pressure build up 0 to 90 %, closing: pressure relief 100 to 10 %

## 2. Circuit functions

Circuit functions	Description
	<b>Type: C, solenoid valve</b> 3/2 way Direct-acting Normally closed
	<b>Type: D, solenoid valve</b> 3/2 way Direct-acting Normally open

## 3. Materials

### 3.1. Chemical Resistance Chart – Bürkert resistApp



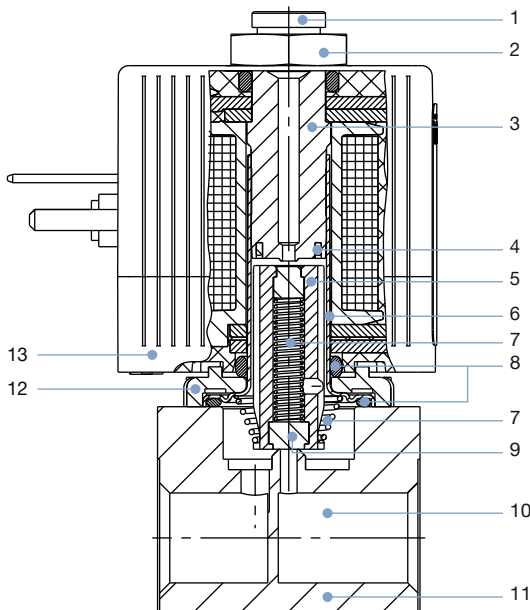
#### Bürkert resistApp – Chemical Resistance Chart

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](#)

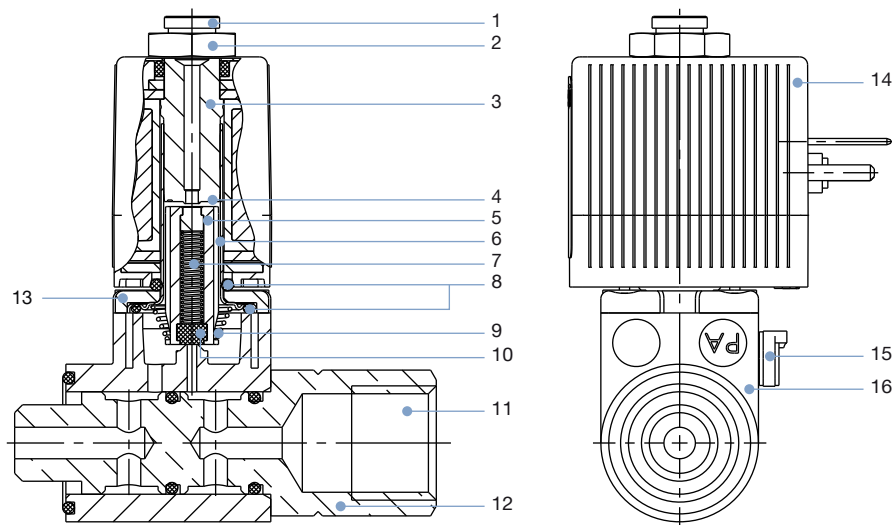
### 3.2. Material specifications

#### Standard version



No.	Element	Material
1	Pressure inlet P	With circuit function D
2	Locknut	DIN 176-9SMnPb28K (surface Zn5g1cA)
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper (silver optional)
5	Core	Stainless steel 1.4105
6	Guide tube	Stainless steel 1.4303
7	Spring	Stainless steel 1.4310
8	O-Ring	FKM/EPDM
9	Armature seal	FKM/EPDM
10	Pressure inlet P	With circuit function C
11	Body	Brass, stainless steel 1.4305 PA (polyamide)
12	Sub-base	Zn3 gl cC surface (brass version) Nickel-plated surface (St. st. version)
13	Coil	DIN EN 175301-803 Form C: PA Industry standard connector Form B: Epoxy

Banjo version



No.	Element	Material
1	Pressure inlet P	With circuit function D
2	Locknut	DIN 176-9SMnPb28K (surface Zn5glcA)
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper (silver optional)
5	Core	Stainless steel 1.4105
6	Guide tube	Stainless steel 1.4303
7	Spring	Stainless steel 1.4310
8	O-Ring	FKM
9	Spring	Stainless steel 1.4310
10	Armature seal	FKM
11	Pressure inlet P	With circuit function C
12	Banjo bold	Nickel-plated brass
13	Sub-base	Zn3 gl cC surface (brass version) Nickel-plated surface (St. st. version)
14	Coil	DIN EN 175301 -803 Form C: PA Industry standard connector Form B: Epoxy
15	Hand lever	Durethan
16	Body	PA (polyamide)

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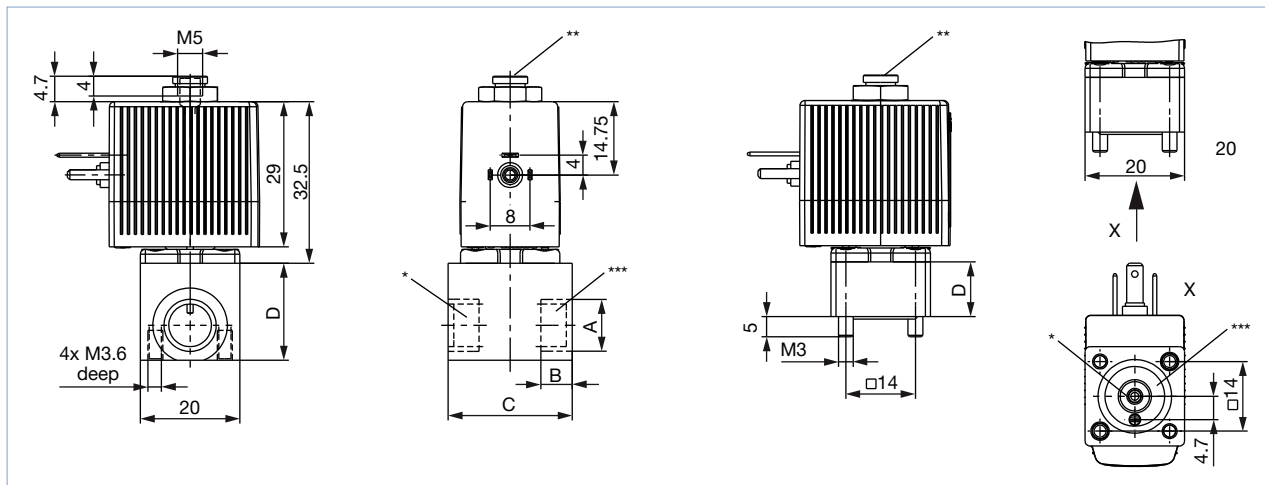
## 4. Dimensions

### 4.1. Standard version

Version acc. to DIN EN 175301-803 Form C (cable plug Type 2516)

**Note:**

Dimensions in mm



Port connection	A	B	C	D
Thread	M5	5	20	14
Thread	G 1/8	8	25	19.5
Sub-base	-	-	20	11

### PIN Assignments

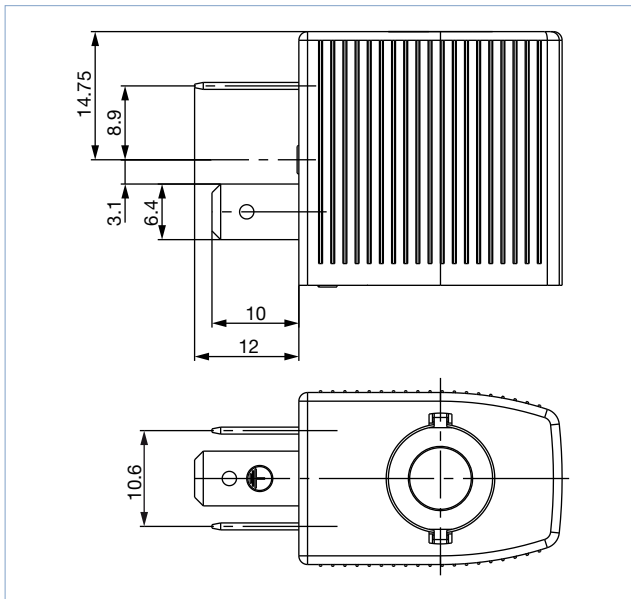
For the positions marked with \*, \*\* or \*\*\* in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function. Unused connections in circuit functions A or B will be closed off with a blanking plug or cap nut.

Circuit function	Connection Type		
	*	**	***
A	P	to lock	A
B	to lock	B	P
C	P	R	A
D	R	P	B
T	P	R	A

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

**Note:**

Dimensions in mm



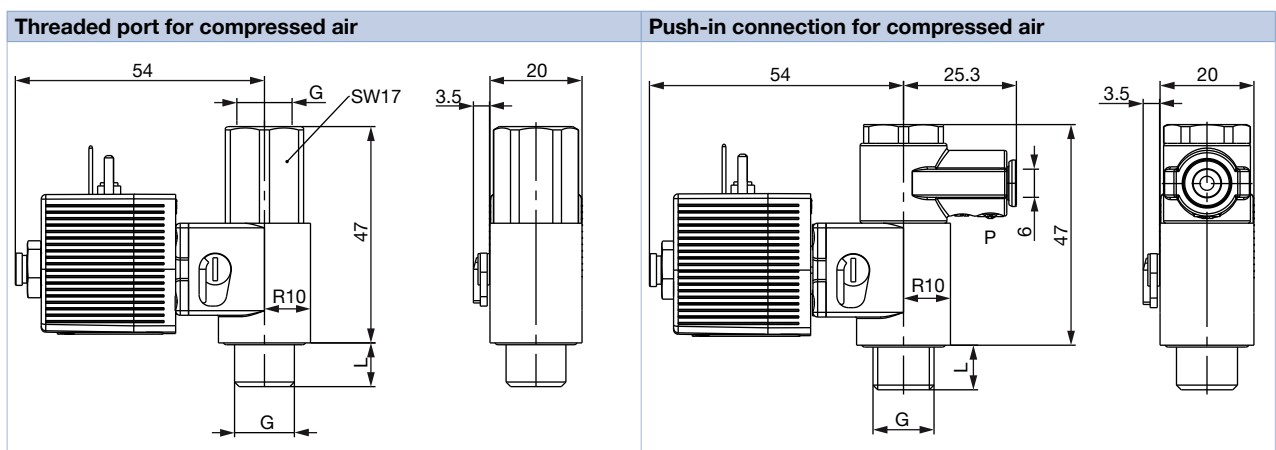
Port connection	A	B	C	D
Thread	M5	5	20	14
Thread	G 1/8	8	25	19.5
Sub-base	-	-	20	11

**4.2. Banjo version**

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

**Note:**

- Dimensions in mm
- Push-in connection for compressed air: Pressure inlet P can be rotated through 360°.

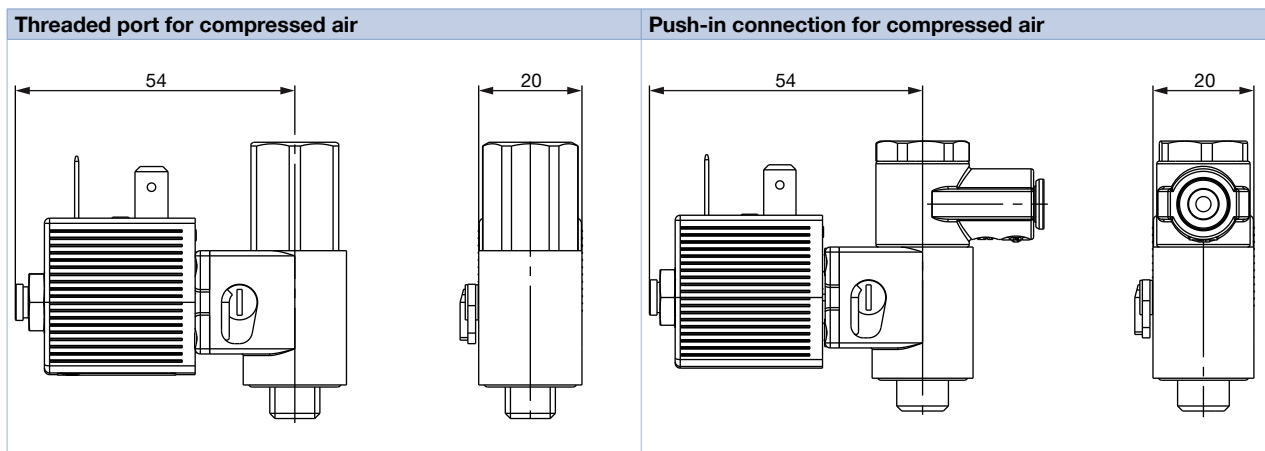


G	L
G 1/8	6.5
G 1/4	9.5

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

**Note:**

Dimensions in mm

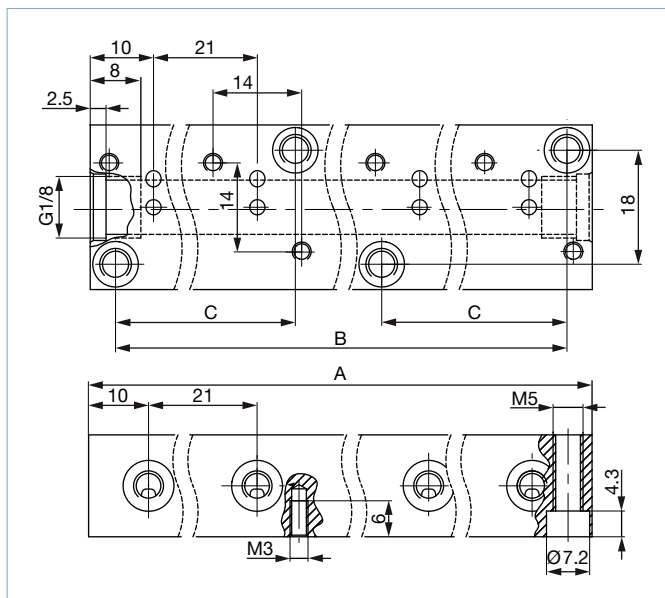


G	L
G 1/8	6.5
G 1/4	9.5

**4.3. Multiple manifold**

**Note:**

- Dimensions in mm
- Made of aluminium, anodized
- Can only be combined with versions Circuit function C (normally closed)



No. of valves	A	B	C	Article no.
	[mm]	[mm]	[mm]	
1	20	12	-	005312
2	41	33	-	005355
3	62	54	-	005313
4	83	75	-	005314
5	104	96	-	005315
6	125	117	-	005316
7	146	138	-	005893
8	167	159	54	005166
9	188	180	54	005241
10	209	201	75	005819
11	230	222	75	005242
12	251	243	96	005222

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