



2/2-way solenoid valve

NC - Valve normally closed (as standard)

NO - Valve normally open (as option)

Force-pilot operated piston valve

No differential pressure is necessary for operation.

In standard (NC) the valve closes with spring power.

■ Solenoid valve for cryogenic fluids

TECHNICAL SPECIFICATIONS

| | |
|----------------------|---|
| Type of control | Force-pilot operated, no pressure difference necessary |
| Design | Piston design |
| Connection | Sleeve connection G 1/4 - G 2 weld-on <small>Further connections like NPT on request</small> |
| Installation | Actuator upright |
| Pressure | 0 - 16 bar / 0 - 40 bar (see table on page 2) |
| Medium | Clean, neutral gaseous and liquid media |
| Max. viscosity | 22 mm ² /s |
| Temperature range | Medium: -196 °C / +60 °C Environment: -40 °C / +50 °C <small>Taking into account other influencing parameters</small> |
| Body material | PN16: Brass 2.0402 PN16: Stainless steel 1.4581 PN50: Stainless steel 1.4404 |
| Metallic inner parts | Brass and st. steel |
| Sealing | PTFE |
| Supply voltage | AC~ 24V, 110V, 230V DC= 12V, 24V <small>Other supply voltages on request</small> |
| Voltage tolerance | -10% / +10% |
| Power consumption | .322 = 30 Watt .328 = 24 Watt ⚠ .242 = 46 Watt .248 = 30 Watt ⚠ .272 = 100 Watt .278 = 47 Watt ⚠ |
| Protection class | IP65 according to DIN 60529 |
| Duty factor | 100% ED-VDE 0580 |
| Connection type | Device plug DIN 43650, terminal box |
| Ex-proof | acc. to 2014/34/EU (ATEX) |

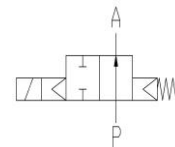
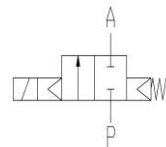
VALVE FEATURES

- For cryogenic media to -196 °C
- No pressure difference is required
- High life time
- High-quality materials
- Reliable and sturdy sealing elements

FUNCTION

NC – non energized closed

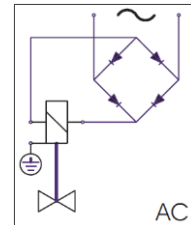
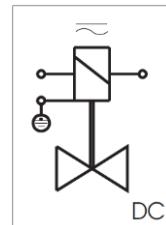
NO – non-energized open



CONNECTION DIAGRAM

For AC/DC coils

For DC coils
w/ integr. rectifier



CERTIFICATES



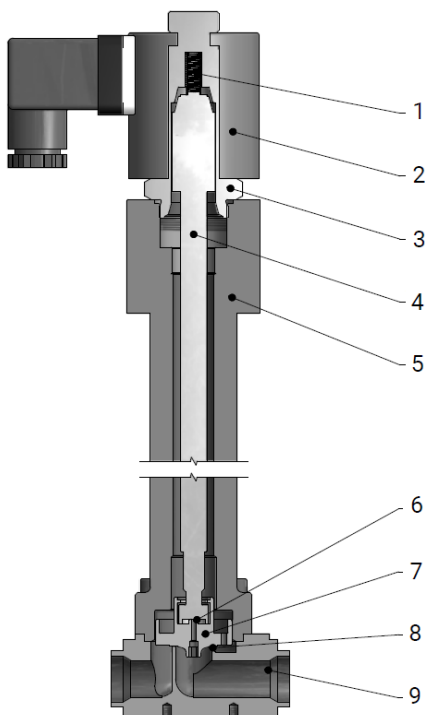
TECHNICAL FEATURES

| PN16 | | | | max. pressure for coils | | | | |
|-------|-----------|---------------|---------------|-------------------------|------|------|------|------|
| G | Seat Ø mm | Kv-value m³/h | Standard type | .322 | .242 | .328 | .248 | .278 |
| 1/4 | 13,5 | 1,7 | A9121/..04/.. | 0-16 | - | 0-16 | - | - |
| 3/8 | 13,5 | 3,8 | A9122/..04/.. | 0-16 | - | 0-16 | - | - |
| 1/2 | 13,5 | 4,4 | A9123/..04/.. | 0-16 | - | 0-16 | - | - |
| 3/4 | 27,5 | 11,2 | A9124/..04/.. | 0-16 | - | 0-16 | - | - |
| 1 | 27,5 | 13,0 | A9125/..04/.. | 0-16 | - | 0-16 | - | - |
| 1 1/4 | 40,0 | 28,5 | A9126/..04/.. | 0-16 | - | - | 0-16 | - |
| 1 1/2 | 40,0 | 32,0 | A9127/..04/.. | 0-16 | - | - | 0-16 | - |
| 2 | 50,0 | 47,0 | A9128/..04/.. | - | 0-16 | - | - | 0-16 |

The Kv values in the table apply to the larger drive

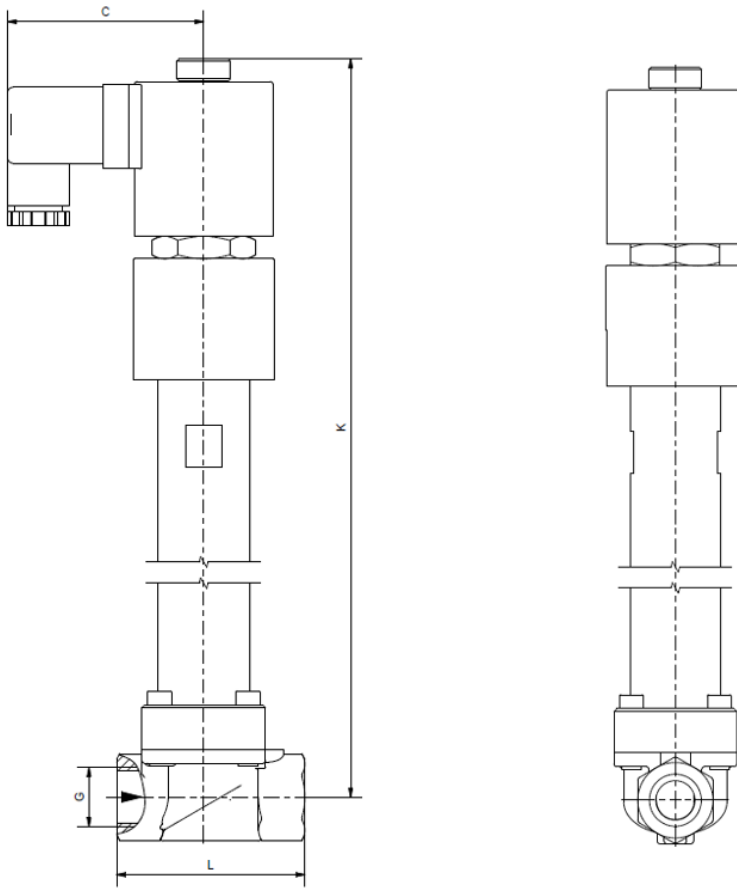
| PN50 | | | | max. pressure for coils | | | | |
|-------|-----------|---------------|---------------|-------------------------|------|------|------|------|
| G | Seat Ø mm | Kv-value m³/h | Standard type | .322 | .242 | .272 | .248 | .278 |
| 1/4 | 13,5 | 1,8 | B9121/..04/.. | 0-40 | - | - | 0-40 | - |
| 3/8 | 13,5 | 4,0 | B9122/..04/.. | 0-40 | - | - | 0-40 | - |
| 1/2 | 13,5 | 4,5 | B9123/..04/.. | 0-40 | - | - | 0-40 | - |
| 3/4 | 27,5 | 11,5 | B9124/..04/.. | 0-40 | - | - | 0-25 | 0-40 |
| 1 | 27,5 | 13,0 | B9125/..04/.. | 0-40 | - | - | 0-25 | 0-40 |
| 1 1/4 | 40,0 | 29,0 | B9126/..04/.. | - | 0-25 | 0-40 | 0-25 | 0-40 |
| 1 1/2 | 40,0 | 33,0 | B9127/..04/.. | - | 0-25 | 0-40 | 0-25 | 0-40 |
| 2 | 50,0 | 47,0 | B9128/..04/.. | - | - | 0-40 | - | 0-40 |

The Kv values in the table apply to the larger drive



| Description | |
|-------------|---------------|
| 1 | Spring |
| 2 | Solenoid coil |
| 3 | Core tube |
| 4 | Plunger |
| 5 | Distancing |
| 6 | Pilot seat |
| 7 | Piston |
| 8 | Valve seat |
| 9 | Valve body |

DIMENSIONS



PN16

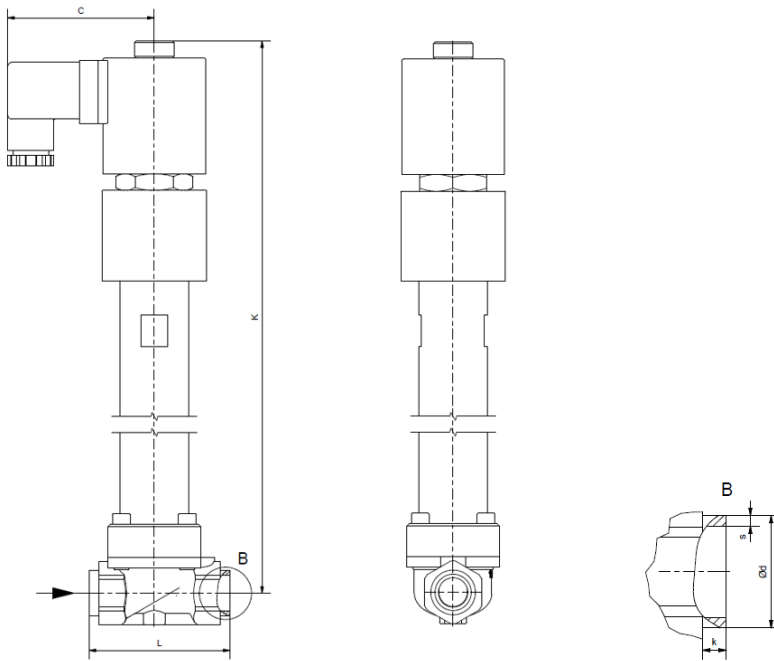
| Coil | .322 | | | .242 | |
|------|-----------|----------|---------------|---------------|-------|
| Type | A9121-23 | A9124-25 | A9126-27 | A9126-27 | A9128 |
| G | 1/4 - 1/2 | 3/4 - 1 | 1 1/4 - 1 1/2 | 1 1/4 - 1 1/2 | 2 |
| C | 70 | 70 | 77 | 93 | 93 |
| K | 365 | 400 | 475 | 500 | 510 |
| L | 67 | 96 | 140 | 140 | 168 |
| kg | 2,2 | 4,4 | 8,8 | 9,7 | 10,3 |

PN16

| Coil | .328 | | | .248 | .278 |
|------|-----------|----------|---------------|---------------|-------|
| Type | A9121-23 | A9124-25 | A9126-27 | A9126-27 | A9128 |
| G | 1/4 - 1/2 | 3/4 - 1 | 1 1/4 - 1 1/2 | 1 1/4 - 1 1/2 | 2 |
| C | 83 | 83 | 83 | 93 | 106 |
| K | 370 | 405 | 475 | 500 | 560 |
| L | 67 | 96 | 140 | 140 | 168 |
| kg | 3,3 | 5,4 | 9,0 | 9,8 | 13,0 |



DIMENSIONS



PN50

| Coil | .322 | | .242 | .272 | |
|------|----------|----------|----------|----------|-------|
| Type | A9121-23 | A9124-25 | A9126-27 | A9126-27 | A9128 |
| DN | 13,5 | 25-27,5 | 40 | 40 | 50 |
| C | 77 | 77 | 93 | 107 | 107 |
| K | 408 | 424 | 505 | 55 | 560 |
| L | 80 | 104 | 148 | 148 | 178 |
| d | 24 | 30-36 | 45-52 | 45-52 | 65 |
| s | 3,5 | 4 | 5-5,5 | 5-5,5 | 5,5 |
| k | 2 | 4 | 4 | 4 | 4 |
| kg | 3,3 | 5,4 | 9,8 | 12,3 | 13,0 |

PN50

| Coil | .248 | | .278 | |
|------|----------|----------|----------|-------|
| Type | A9121-23 | A9124-25 | A9126-27 | A9128 |
| DN | 13,5 | 25-27,5 | 40 | 50 |
| C | 93 | 93 | 106 | 106 |
| K | 418 | 434 | 353 | 560 |
| L | 80 | 104 | 148 | 178 |
| L | 24 | 30-36 | 45-52 | 65 |
| L | 3,5 | 4 | 5-5,5 | 5,5 |
| L | 2 | 4 | 4 | 4 |
| kg | 4,5 | 6,6 | 12,2 | 13,0 |



INFORMATION

- It is imperative to observe the installation and safety instructions in our operating and service manuals.
- Required ordering information: valve type, function NC/NO, pressure range, connection, nominal width, medium, flow rate, medium and ambient temperatures, connection voltage.
- **For information on the heating and performance of solenoid coils, refer to the corresponding "Coils" data sheet.**
- **Detailed production-specific drawings and other technical information will be made available when an order is placed.**

PLEASE NOTE

Each individual application decides which valve type is required, the main factor being the resistance of the materials to the operating medium. The correct selection of materials requires knowledge of the concentration, temperature and degree of contamination of the medium. Other criteria include the operating pressure and max. volumetric flow, since, in addition to high temperatures, high pressures and high flow rates must also be taken into account when selecting the materials.

All materials used for our valves, be it housing, seals or magnets, will be carefully selected in view of the different application areas. Any information given is non-binding and serves for orientation only. No claims under warranty can be derived therefrom.

ORDERING CODE

| Type | Connection | | Body | Sealing | . | Coil | | | Option |
|-------------|------------|----------|------------|--------------|---|----------|----------|----------|-------------------|
| A 91 | 2 | 3 | 0 8 | 0 4 | . | 3 | 2 | 2 | X X |
| A PN16 | 21 | G 1/4 | 08 | St.steel | | 32 | 30 W | 2 | Standard IP65 |
| B PN50 | 22 | G 3/8 | 10 | Brass 2.0402 | | 24 | 46 W | 8 | 2014/34/EU (ATEX) |
| | 23 | G 1/2 | | | | 27 | 100 W | | |
| | 24 | G 3/4 | 04 | PTFE | | | | | NO normally open |
| | 25 | G 1 | | | | | | | AS weld-on |
| | 26 | G 5/4 | | | | | | | |
| | 27 | G 6/4 | | | | | | | |
| | 28 | G 2 | | | | | | | |