

2/2-Way Direct Acting Solenoid Valves NC

Product Information



A. u. K. Müller

Solenoid valves
Control valves
Special valves and systems

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Series 18.00x.000



Characteristics

- Direct acting
- Compact design
- Long term performance capability
- Suitable for food and hot water appliances
- Works from zero pressure
- Easy to assemble and service
- Coil change without opening of medium circuit, coil can be mounted 4 x 90°
- High operating safety by the use of high quality materials and 100% final testing of the products

Description

Direct acting 2/2-way solenoid valve of several nominal diameters for use with neutral gases and liquids. This valve is direct acting and normally closed (NC).

Valves of this design are single chamber straight through valves, with threaded tube clamp or push-fit connections at outlet and inlet.

The valve body is made of PPSU, which is suitable for hot water applications and saturated steam.

This valve is designed for continuous operation (duty cycle 100%).

Electrical operating safety is achieved by using high quality materials of insulation class H.

Applications

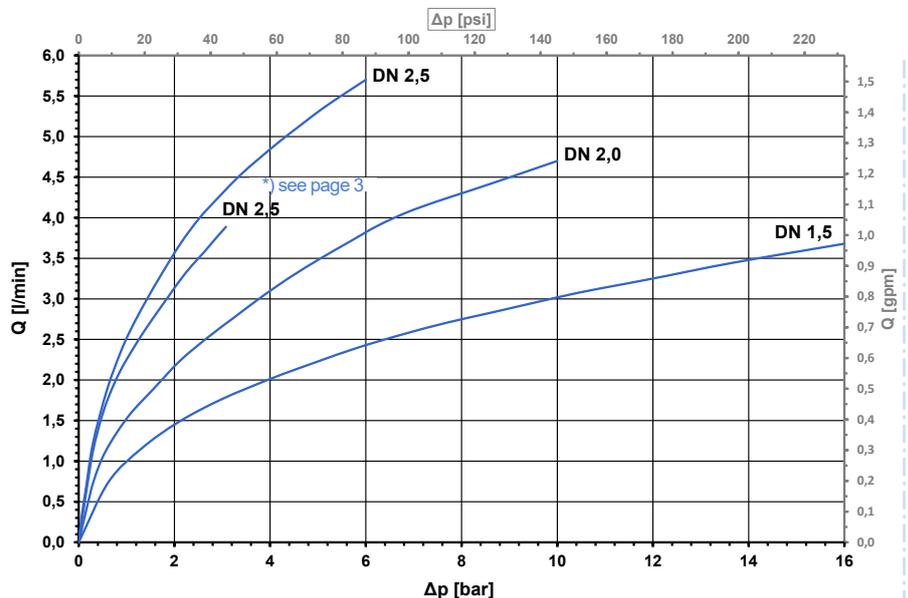
- Saturated steam applications up to 143° C
- Steam cleaners and ironing machines
- Hot / cold drink dispensers (espresso makers)
- Medical equipment
- Industrial applications

Possible Approvals

- Regulation (EC) No. 1935/2004
- NSF 169 (Only: DC)
- UL (Only: 24 VDC)
- Other approved versions available on request

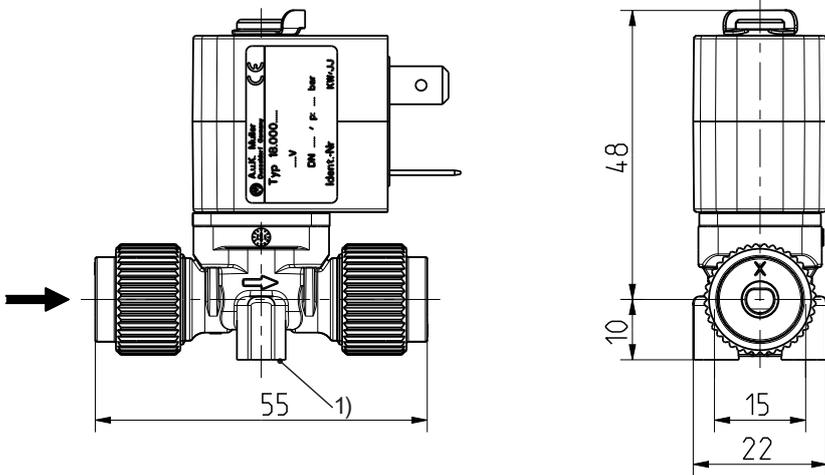
| Type | DN |
|------------|-----|
| 18.003.000 | 1,5 |
| 18.004.000 | 2,0 |
| 18.005.000 | 2,5 |

Typical Performance Curve





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1) Fixing possibility for self tapping screw $\varnothing 3,8 \times 9$ mm

Technical Data

| | | |
|-------------------|--|--|
| Type | Solenoid valve | |
| Construction | 2/2-way single chamber straight valve, direct acting | |
| Function | NC (normally closed) | |
| Fitting position | Any | |
| Media | Neutral gases, cold and heated potable water and physically and chemically similar media | |
| T-Medium | 98 | °C max. |
| Saturated steam | 143 (3bar) | °C max. |
| T-Ambient | 60 | °C max. |
| DN | | |
| Cv-value | See page 3 | |
| p-Operating | | |
| Coil type | MS 039, MS 040 | |
| Nominal voltage | 24 | V DC |
| | Other voltages on request | |
| Voltage tolerance | +10% -15% | |
| Duty cycle | 100% | |
| Saturated steam | 50% (ON:0,5 min OFF:0,5 min) | |
| Coil 8,0 W | | |
| Nominal power | 8,0 W | |
| Protection Type | | |
| MS 39 | IP 00 | |
| MS 40 | IP 65 | |
| Coil connections | Flat tap 6,3 x 0,8 mm Plug and socket - model B industry form | |
| Insulation class | H | according to EN 60730 |
| Protection class | I | according to EN 60730 (for incorporation in class I) |

Materials

| | |
|---------------|-----------------|
| Valve body | PPSU |
| Plunger guide | Stainless steel |
| Plunger | Stainless steel |
| Seal | EPDM |
| Coil coating | PET |

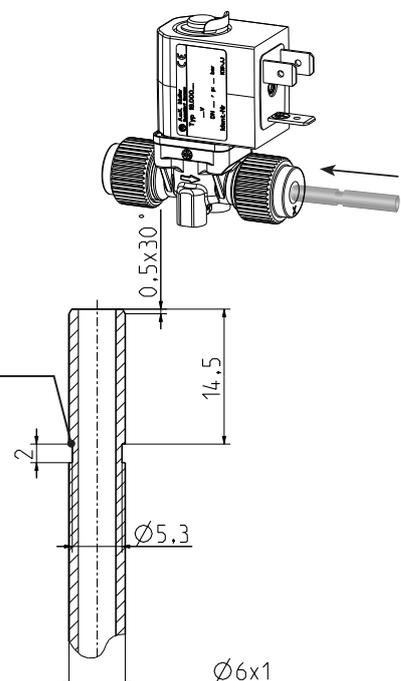


Options

| Tube material | Tube dimension outer \varnothing x wall thickness | |
|------------------------|---|----------------------------------|
| Flexible plastic tubes | 6 x 1 mm | |
| Metal tubes | 6 x 1 mm | special groove to be cut by user |

Other tube dimensions are in preparation

! PPSU valve bodies may not come in contact with:
acetone, ethers, ketones, aromatic hydrocarbons, chlorinated hydrocarbons, acids and oxidizing anaerobic adhesives.





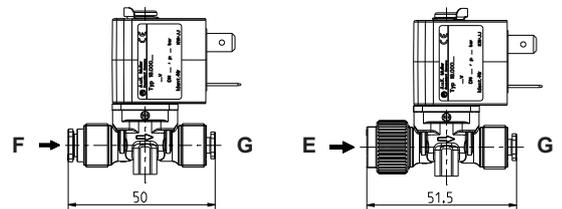
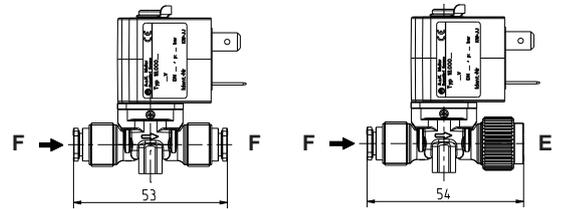
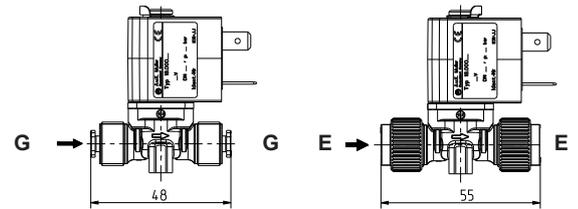
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Please refer to our Fitsys 18 datasheet for additional valve connection options.

Alternative Connections

| Type | | Inlet | Outlet |
|------|----------------------------|-------|--------|
| G | Push-Fit connection Ø 4 mm | | |
| F | Push-Fit connection Ø 6 mm | | |
| E | Clamp connection Ø 6 mm | | |

Inlet and outlet connections can be combined



Each Inlet and Outlet can be configured

| ID | DN mm | Cv-value l/min | Inlet Ø mm | Outlet Ø mm | p-Operating | | Coil type | Voltage V | |
|--------|----------|-------------------|---------------|----------------|-----------------------------|----------------------------------|-----------|--------------|----------|
| | | | | | bar in flow direction | bar against flow direction | | | |
| 087714 | 1,5 | 0,9 | F | G | 0 - 12,0 | 0 | MS 40 | 24 | |
| 087712 | | | G | G | | | | | |
| 087733 | | | F | G | | | | | |
| 087717 | | | F | F | | | | | |
| 087719 | | | F | E | | | | | 0 - 16,0 |
| 087723 | | | F | F | | | | | |
| 087736 | | | F | F | | | | | |
| 087730 | | | F | F | | | | | 0 - 2,5 |
| 087728 | F | F | | | | | | | |
| 087724 | 2 | 1,5 | F | G | 0 - 12,0 | 0 | MS 39 | 24 | |
| 087734 | | | G | G | 0 - 6,0 | 0 | MS 40 | 12 | |
| 087735 | | | F | F | 0 - 10,0 | 0 - 1,0 | | | |
| 087726 | 2,5 | 2,1 | F | F | 0 - 3,0*) | 0 - 5,0 | MS 39 | 24 | |
| 087727 | | 2,5 | F | F | 0 - 6,0 | 0 | | | |
| 087701 | | 2,1 | E | E | 0 - 3,0 | 0 - 5,0 | MS 40 | | |
| 087702 | | F | F | 0 - 3,0 | 0 - 5,0 | | | | |
| 087706 | | 2,5 | F | F | 0 - 6,0 | 0 | | | |

*) For saturated steam up to 143°C (refer to performance curve for fluids on page 1)
additional versions on request



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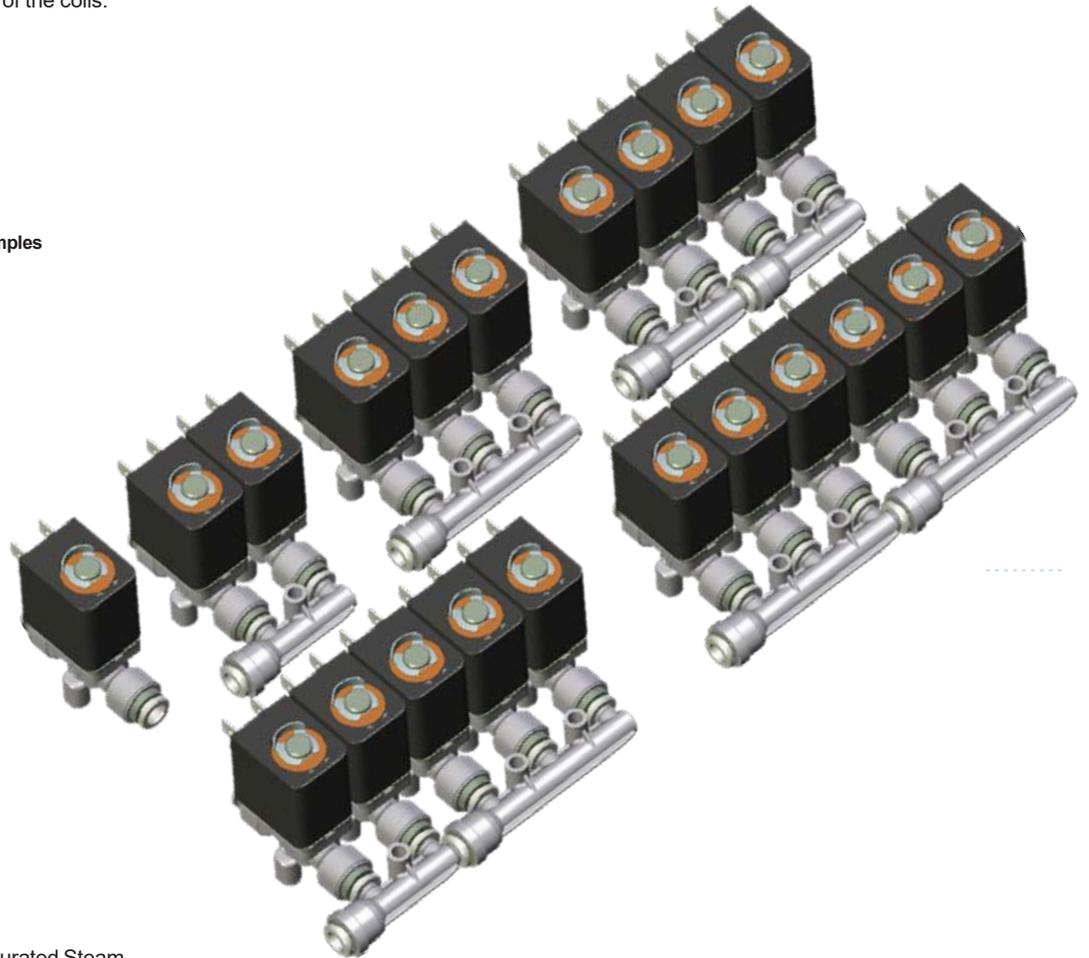
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Manifold System with Ø 6 mm Push-fit Connection

Just four different Ø 6mm push fit manifold pieces enable unlimited bank valve combinations.

Please provide a sufficient ventilation of the coils.

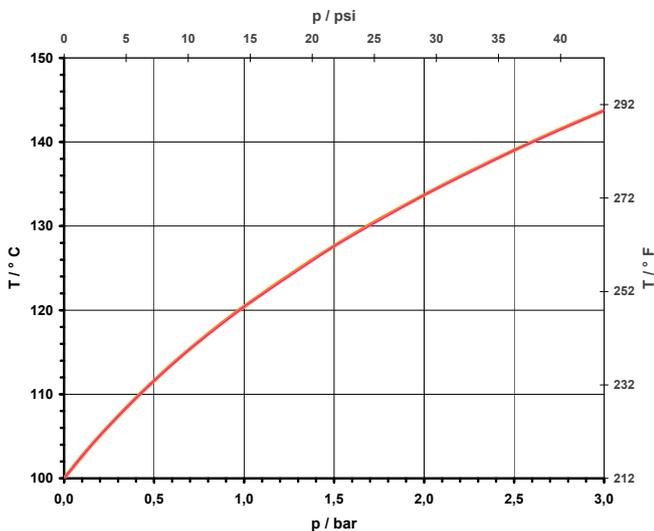
Configuration examples



In addition to hot water the system is also suitable for saturated steam applications up to a temperature of 143° C.

A fixed relation between pressure and temperature exists for saturated steam, as is shown in the adjacent diagram.

Pressure-temperature Diagram for saturated Steam





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Manifold system with Ø 6 mm Push-fit Connection

| Type | Figures | | ID |
|--------------|-----------------------|---|--------|
| | * Area of o-ring seal | Flow direction (→) can also be reversed. | |
| MC-F.C.C | | | 008948 |
| MC-F.C.C.C | | | 008949 |
| MO-F.C.C.C | | | 008946 |
| MO-F.C.C.C.C | | | 008947 |



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Example of mounting for valves and manifold components on a mounting plate

