bürkert
FLUID CONTROL SYSTEMS

Type 7017

2/2- or 3/2-way solenoid valve with media separation
2/2- oder 3/2-Wege-Magnetventil mit Medientrennung
Électrovanne 2/2 ou 3/2 voies avec séparation de fluide

MAN 1000603564 EN Version: - Status: RL (released | freigegeben) printed: 24.01.2024

Operating Instructions

Bedienungsanleitung
Manuel d'utilisation

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Operating Instructions 2312/00_EU-ML_00815456 / Original DE

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1 OPERATING INSTRUCTIONS

The operating instructions describe the entire life cycle of the device. Keep these instructions ready to hand at the operating site.

Important safety information.

- Read these instructions carefully.
- Above all, observe the safety instructions, intended use and usage conditions.
- Persons who work on the device must read and understand these instructions.

1.1 Symbols

DANGER

Warns of an immediate danger.

- Failure to observe will result in death or serious injuries.

WARNING

Warns of a potential danger.

- Failure to observe may result in death or serious injuries.

CAUTION

Warns of a potential danger.

- Failure to observe may result in moderate or minor injuries.

NOTE

Warns of damage.

- Failure to observe may result in damage to the device or the system.

Indicates important additional information, tips and recommendations.

Refers to information in these operating instructions or in other documentation.

▶ Highlights instructions to avoid a danger.

→ Highlights a procedure which you must carry out.

1.2 Definition of Terms

Term	in these instructions, refers to
Device	Type 7017 2/2 or 3/2-way solenoid valve with media separation

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2 INTENDED USE

The Type 7017 2/2 or 3/2-way solenoid valve with media separation is designed for locking, dosing, filling and neutral and aggressive gaseous and liquid media.

- The device must only be used for its intended purpose. Improper use of the device may be dangerous to people, nearby equipment and the environment.
- Device must specifically be selected for the correct application.
- Device must be flushed and/or cleaned depending on the method and frequency of the area of use.
- Do not use the device outdoors.
- Observe the authorised data, and the operating and usage conditions of the respective devices or products. These specifications can be found in the contract documents, the operating instructions and on the type label.
- Use the device only in conjunction with third-party devices and components recommended and authorised by Bürkert.
- The device must only be used when in perfect condition; always ensure proper storage, transportation, installation and operation.

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3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not take into account any unforeseen circumstances or events occurring during installation, operation and maintenance. The operator is responsible for observing the location-specific safety regulations, including staff safety.

Risk of injury due to high pressure in the system or device.

- Before working on the system or device, switch off the pressure and ventilate and empty the lines.

Risk of injury due to electric shock.

- Before working on the device or system, switch off the power supply and secure to prevent reactivation.
- Observe the applicable accident prevention regulations and safety regulations for electrical devices.

Risk of burns or fire from hot device surfaces due to prolonged operation.

- Keep the device away from highly flammable substances and media and do not touch with bare hands.

Risk of injury due to malfunction if used outdoors.

- Do not use the device outdoors and keep it away from heat sources that could cause the permissible temperature range to be exceeded.

Medium may leak out if the diaphragm is worn.

- Check regularly for leaking medium to avoid contamination of the medium.
- If the medium is hazardous, secure the environment against risks.

General hazardous situations.

Ensure the following the prevent injuries:

- Use the device only when it is in perfect condition and in accordance with the operating instructions.
- Do not make any internal or external changes to the device and do not subject it to mechanical stress.
- Secure device or system to prevent unintentional activation.
- Make sure only trained technicians carry out installation and maintenance work.
- Install the valves according to the regulations applicable in the respective country.
- After an interruption in the power supply, ensure that the process is restarted in a controlled manner.
- Observe the general rules of technology.

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4 GENERAL NOTES

4.1 Contact address

Germany

Bürkert Fluid Control Systems
Sales Centre
Christian-Bürkert-Str. 13-17
D-74653 Ingelfingen
Tel. +49 (0) 7940 - 10-91 111
Fax +49 (0) 7940 - 10-91 448
Email: info@burkert.com

International

The contact addresses can be found on the back pages of the printed Quickstart.
They are also available online at: country.burkert.com

4.2 Warranty

A precondition for the warranty is that the device is used as intended and that the specified usage conditions are taken into account.

4.3 Information online

Operating instructions and data sheets for Bürkert products can be found on the Internet at:
country.burkert.com

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5 PRODUCT DESCRIPTION

5.1 Product structure

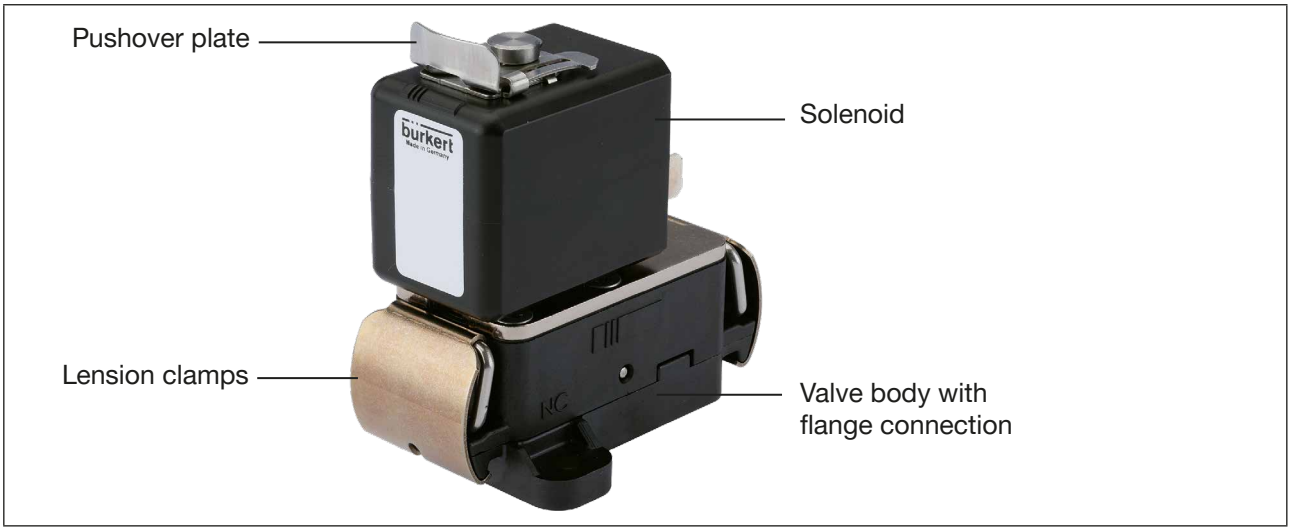

Fig. 1: Device with flange connection

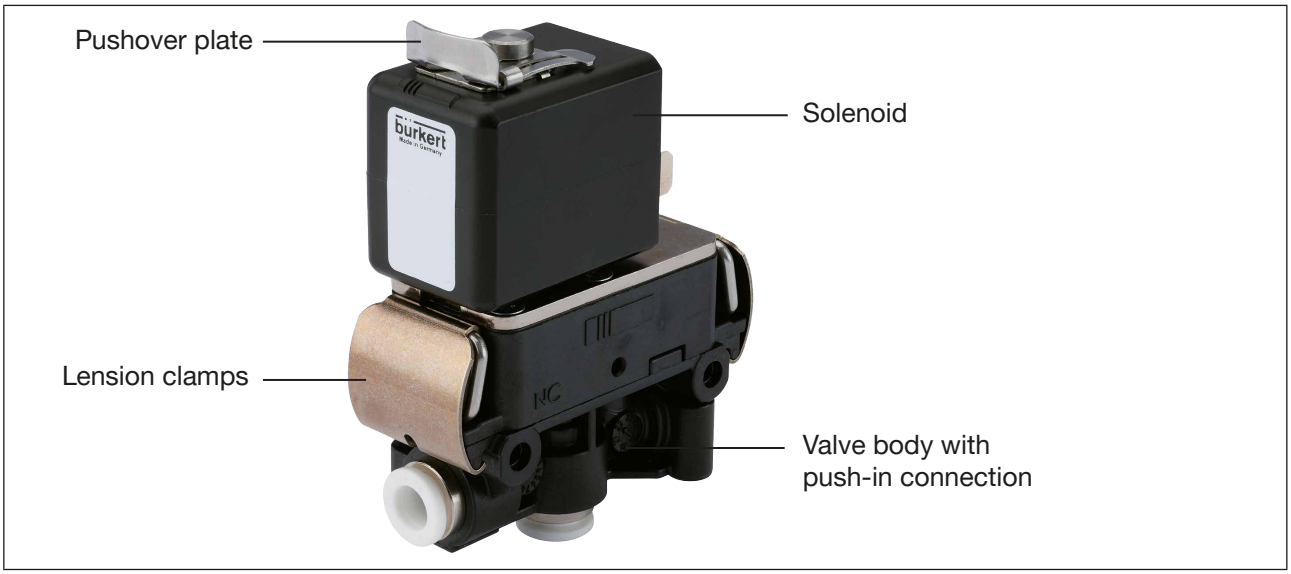

Fig. 2: Device with push-in connection

5.2 Functionality

The 2/2 or 3/2-way solenoid valve consists of a solenoid, a separating diaphragm and a 3/2-way valve body. The rocker integrated into the valve body opens and/or closes the valve seat via a separating diaphragm with the aid of a rotary movement. The medium is then exclusively in contact with the fluid body and seal material.

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6 TECHNICAL DATA

6.1 Conformity

Conformities for the Type 7017 solenoid valve can be viewed on the Bürkert home page at www.country.burkert.com

6.1.1 Food and hygiene conformities

All devices encrypted with a PL code are assessed according to the corresponding manufacturer's declaration. These can be viewed on the Bürkert home page at www.country.burkert.com

The stated conformities exclusively concern the materials, not the construction of the devices.

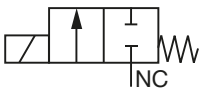
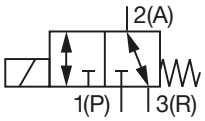
6.2 Operating conditions

Ambient temperature	see data sheet
Medium temperature	see data sheet
Media	neutral gaseous and liquid media that do not attack the body and seal materials, see resistance table at: www.country.burkert.com
Degree of protection	IP20

6.3 Mechanical data

Dimensions	see data sheet
Body material	see type label
Sealing material	see type label

6.4 Fluidic data

Mode of action	Icon	Description
A (NC)		2/2-way valve, direct-acting, closed in rest position
T (NC)		3/2-way valve, can be used universally

Pressure range	see type label
Port connections	see data sheet

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6.5 Electrical data

Solenoid dimensions	Solenoid 24.5 mm (SG3)
Ports	Flat-pin terminal as protection class III Stranded port on request
Operating voltage	see type label
Voltage tolerance	±3%
Nominal power	11 W
Nominal operating mode	50% duty cycle

6.6 Device identification

6.6.1 Type label

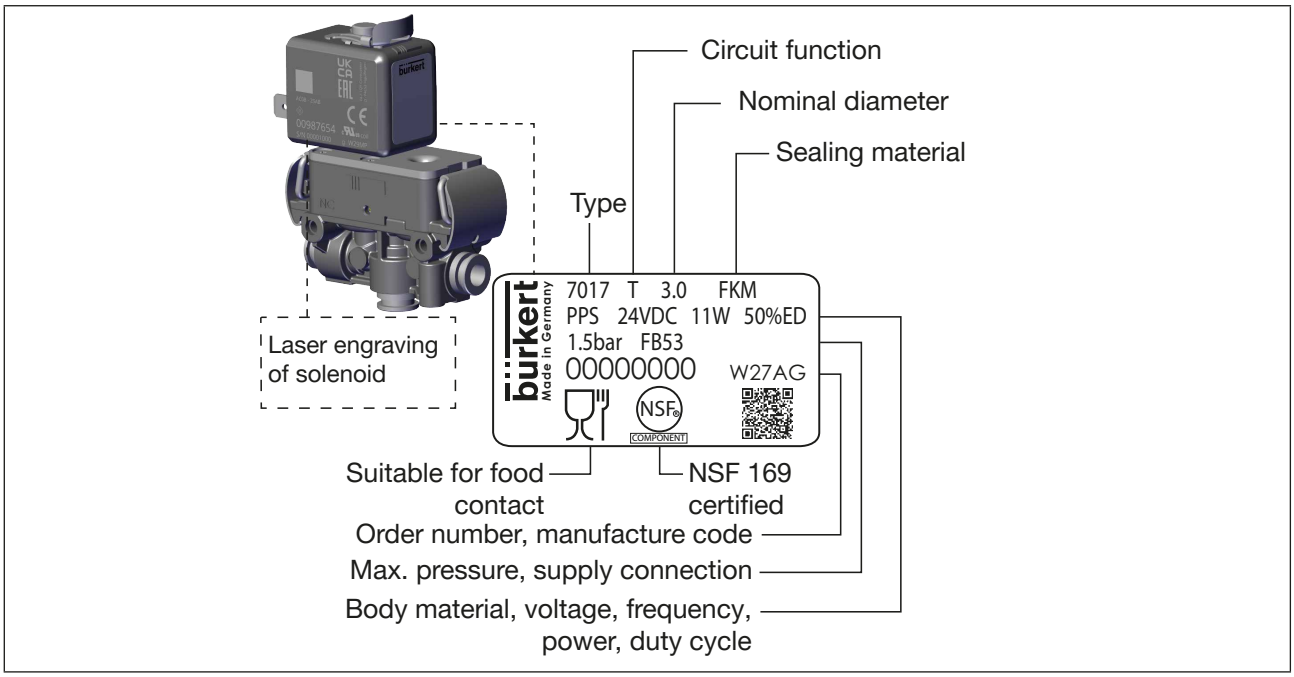

Fig. 3: Description of the type label (example)

6.6.2 Laser engraving of solenoid AC08

Fig. 4: Description of laser engraving on solenoid AC08

6.7 Approvals

6.7.1 cURus

All AC08 solenoids labelled with cURus are certified in accordance with US and Canadian terms.

Labelling of the solenoid is not necessarily linked with the approval of the valve.

6.7.2 NSF

All devices labelled with NSF are certified in accordance with NSF 169.

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7 INSTALLATION

DANGER

Risk of injury due to high pressure and escaping medium.

▸ Switch off the pressure before working on the device or system. Vent or drain the pipes.

Risk of injury due to electric shock.

▸ Switch off voltage before working on the device or system. Secure against reactivation.

▸ Observe the applicable accident prevention and safety regulations for electrical devices.

WARNING

Risk of injury due to improper installation.

▸ Only trained technicians may perform installation work.

Risk of injury due to unintentional activation of the system and uncontrolled restart.

▸ Secure the system against unintentional activation.

▸ Following installation, ensure a controlled restart.

Prior to installation:

→ Clean pipelines and flange connections.

→ Install dirt trap with a machine width of 5 µm in front of the valve.

7.1 Create the fluidic connections to the device

Installation position: any, preferably solenoid facing upward.

Note the flow direction. NC indicates the flow direction.

7.1.1 Devices with push-in connection

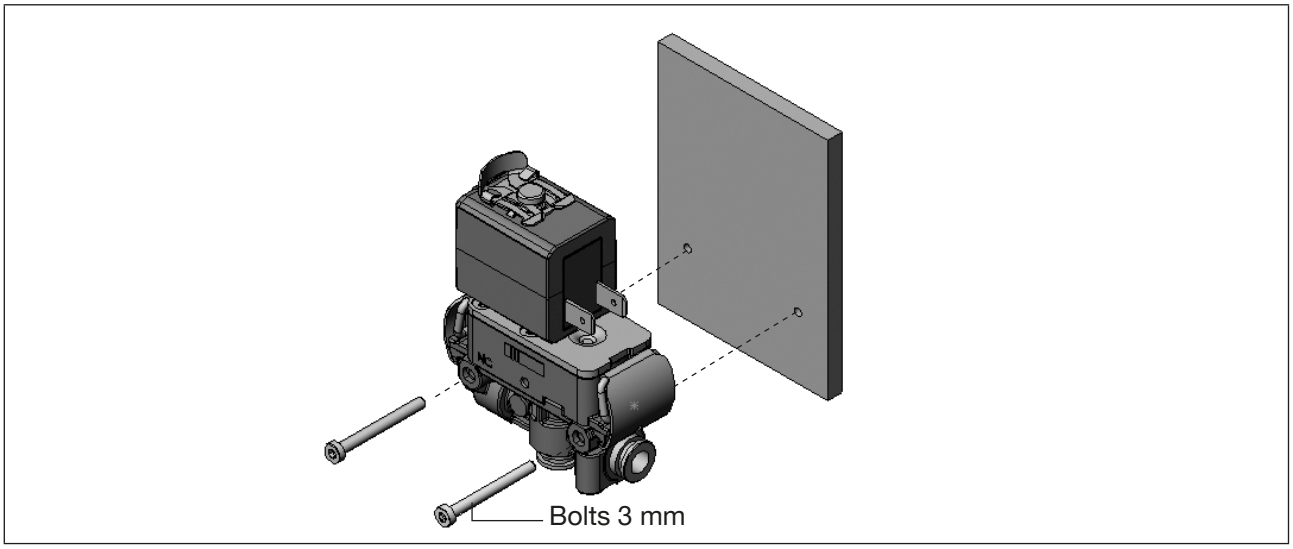

Fig. 5: Horizontal installation of devices with push-in connection

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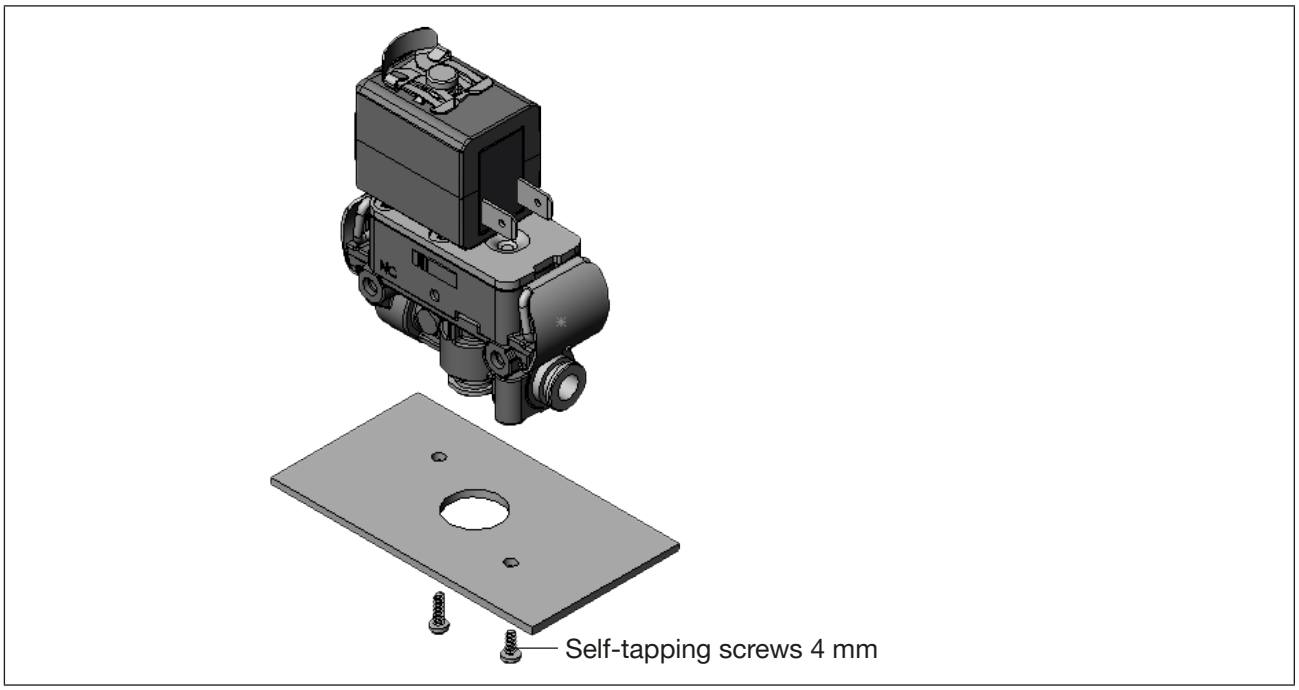

Fig. 6: Vertical installation of devices with push-in connection

→ For horizontal installation: fasten device with bolts.

→ For vertical installation: fasten device with self-tapping screws.

→ Insert hoses into push-in connections until they come to a stop. Make sure they are firmly in place.

7.1.2 Devices with flange connection

WARNING

Risk of injury due to medium leak.

- Ensure that the seals provided fit the valve properly.
- Ensure that the manifold is level.
- Ensure sufficient surface quality of the manifold.

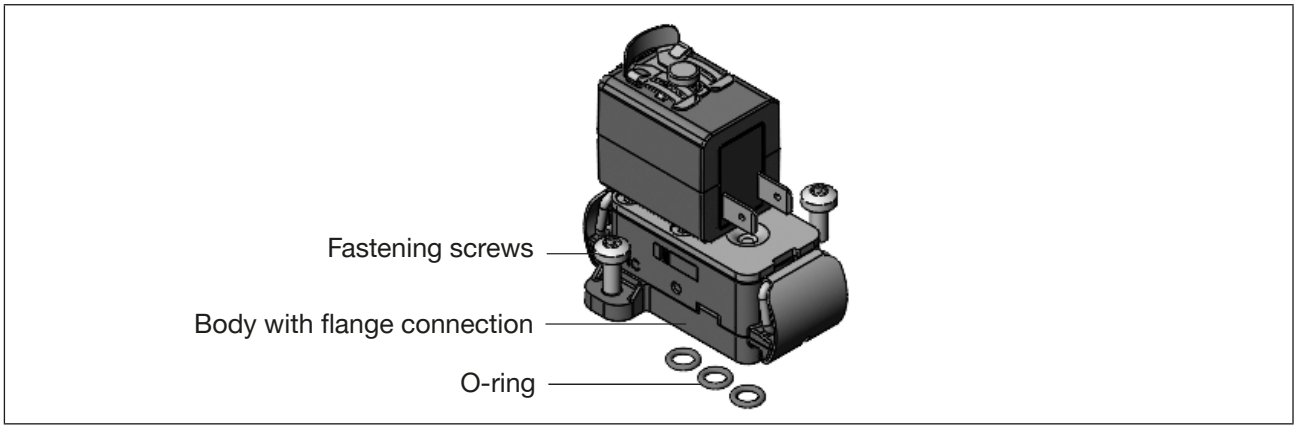

Fig. 7: Installation of devices with flange connection

→ Check O-rings position.

→ Attach the body and fasten with fastening screws. Observe tightening torque of max. 0.8 Nm.

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7.2 Electrically connecting the device

WARNING

Risk of injury due to electric shock.

- ▸ Before working on the system or device, switch off the power supply and secure to prevent reactivation.
- ▸ Observe the applicable accident prevention regulations and safety regulations for electrical devices.
- ▸ Only connect protection class III devices (without protective conductor) to SELV or PELV power sources.
- ▸ Only use cable plug for matching solenoid variant. Cable plug B must not be used for a protection class III device.

→ Plug in flat connector.

→ Plug in cable plug.

→ Check electrical passage.

7.3 Rotate the solenoid

WARNING

Risk of injury due to overheating or fire hazard.

Connecting the solenoid without first installing the armature will lead to overheating and will destroy the solenoid.

- ▸ Only connect the solenoid after the armature has been installed.

The solenoid can be rotated by 4 x 90°.

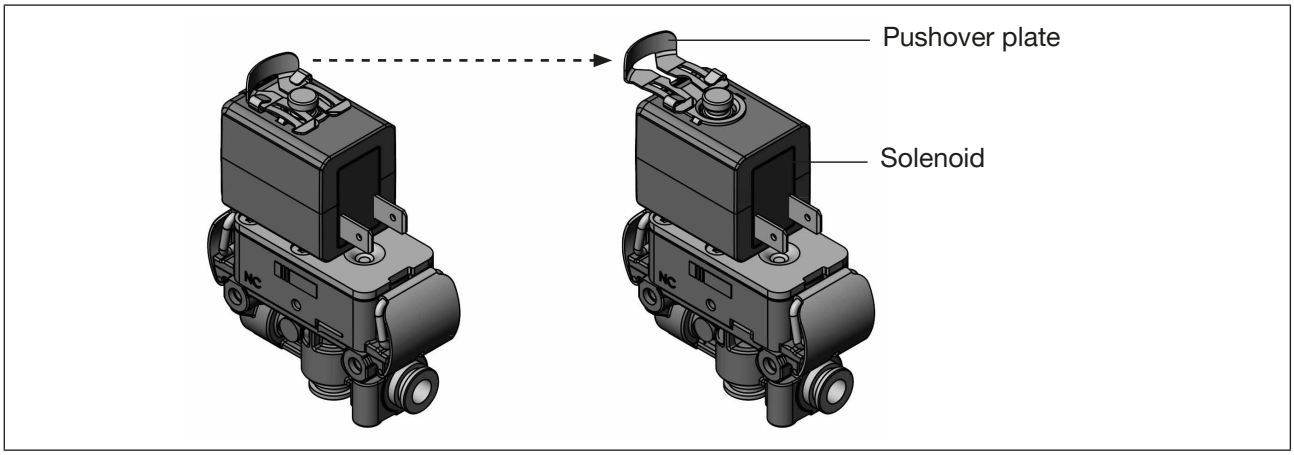

Fig. 8: Loosen pushover plate

→ Loosen pushover plate.

→ Rotate the solenoid in the desired direction.

→ Join pushover plate.

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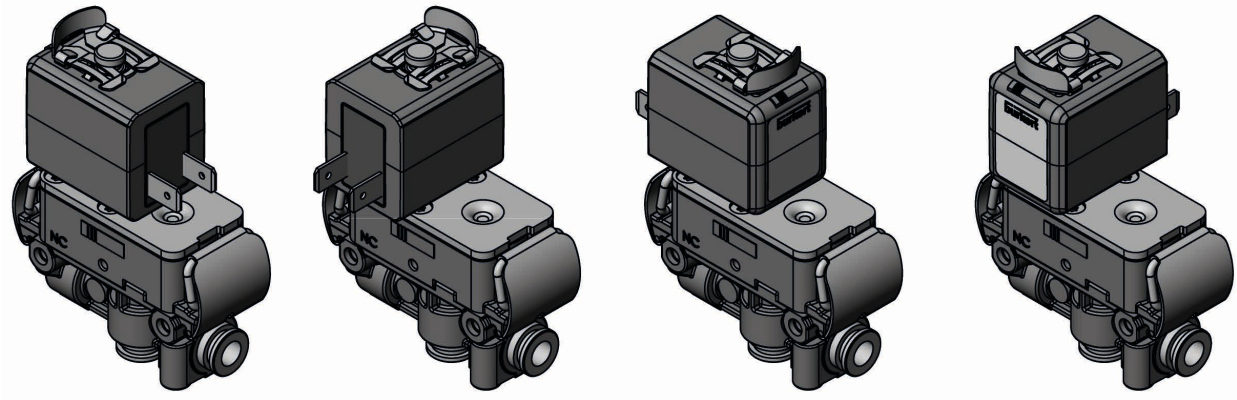

Fig. 9: Rotating the solenoid

7.4 Before using for the first time

For food and hygiene applications, it is recommended to flush the device for use, in accordance with the application.

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8 DISASSEMBLY

DANGER

Risk of injury due to high pressure in the system or device.

▸ Switch off the pressure before working on the device or system. Vent or drain the pipes.

Risk of injury due to electric shock.

▸ Switch off voltage before working on the device or system. Secure against reactivation.

▸ Observe the applicable accident prevention and safety regulations for electrical devices.

Risk of injury due to improper disassembly.

▸ Disassembly may be carried out by authorised technicians only.

→ Shut off the pressure and vent the lines.

→ Switch off electrical voltage.

→ Remove cable plug or flat connector.

Devices with push-in connection:

→ Remove hoses.

Devices with flange connection:

→ Remove the device from the manifold.

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9 MAINTENANCE, TROUBLESHOOTING

WARNING

Risk of injury due to improper maintenance work.

- Only trained technicians may perform maintenance work.
- Secure the system against unintentional activation.
- Ensure a controlled restart after maintenance is completed.

9.1 Maintenance

The device must be flushed and/or cleaned depending on the method and frequency of the area of use.

9.2 Faults

If faults occur, check whether:

→ the device has been installed correctly,

→ the electrical and fluid connections have been properly set up,

→ the device is not damaged,

→ all screw connections have been tightened with the correct tightening torque,

→ diaphragm is joined completely and in the correct position,

→ voltage and pressure have been applied,

→ the pipelines are clean.

If the valve still does not actuate, contact your local Bürkert Service representative.

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10 SPARE PARTS

CAUTION

Risk of injury and/or damage due to incorrect parts.

Incorrect accessories and unsuitable spare parts may cause personal injuries and damage to the device and the area around it.

▸ Use only original accessories and original spare parts from Bürkert.

The solenoid and armature can be ordered with the device's identification number.

10.1 Replacing the diaphragm

The device must be opened in order to replace the wear parts.

→ Switch off pressure.

→ Switch off power supply.

→ Loosen tension clamps.

→ Remove diaphragm.

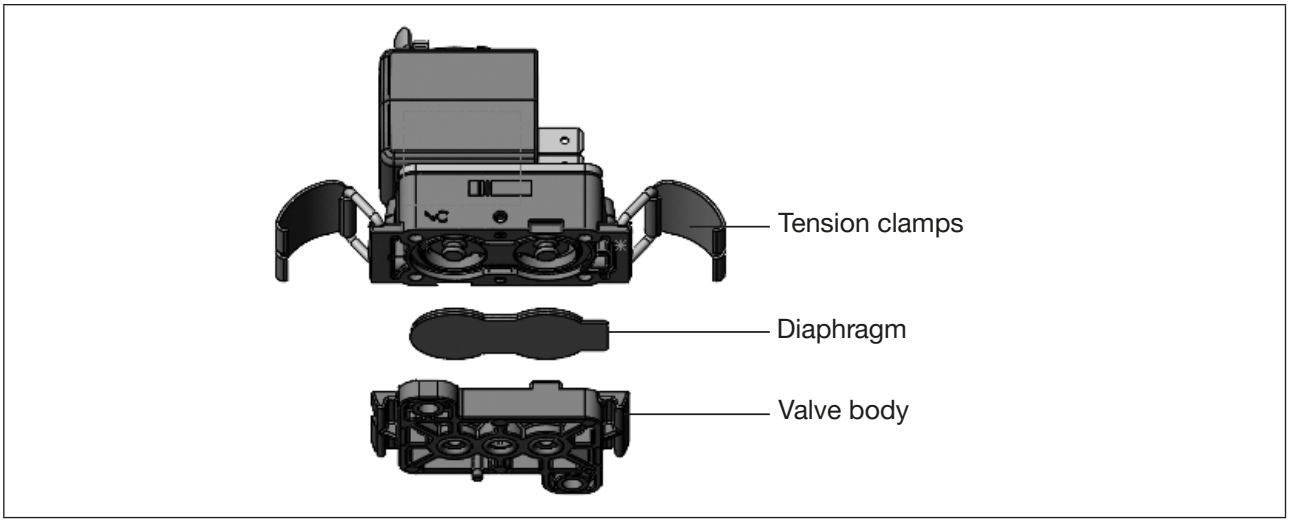

Fig. 10: Replacing the diaphragm

→ Install new diaphragm in correct position and completely.

→ Close tension clamps.

→ Fasten device in correct position.

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11 PACKAGING, TRANSPORT

NOTE

Damage in transit due to inadequately protected devices.

- Protect the device against moisture and dirt in shock-resistant packaging during transportation.
- Observe permitted storage temperature.

12 STORAGE

NOTE

Incorrect storage may damage the device.

- Store the device in a dry and dust-free location.

Permitted storage temperature: –40…+80 °C

13 ENVIRONMENTALLY FRIENDLY DISPOSAL

- Follow national regulations regarding disposal and the environment.
- Collect electrical and electronic devices separately and dispose of them as special waste.

Further information at country.burkert.com

14 EXCLUSION OF LIABILITY

Devices supplied without valve bodies are incomplete devices. Bürkert cannot guarantee the function and technical data in this instance, such as flow coefficient, switchable medium pressure or switching voltage. The mechanical connection to the device must be tested and validated by the customer. The operation must perform a risk assessment for the complete device.

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