bürkert
FLUID CONTROL SYSTEMS

Type 2060
INOX

2/2-way angle seat valve
2/2-Wege Schrägsitzventil
Vanne à siège incliné 2/2 voies

Operating Instructions

Bedienungsanleitung
Manuel d'utilisation

MAN 1000540416 EN Version: FStatus: RL (released | freigegeben) printed: 14.10.2026

We reserve the right to make technical changes without notice.
Technische Änderungen vorbehalten.
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1 OPERATING INSTRUCTIONS

The operating instructions describe the entire life cycle of the device. Keep these instructions in a location which is easily accessible to every user and make them available to every new owner of the device.

The operating instructions contain important safety information!

Failure to observe these instructions and notes may result in hazardous situations.

- The operating instructions must be read and understood.

1.1 Symbols

DANGER!

Warns of an immediate danger!

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

WARNING!

Warns of a potentially hazardous situation!

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

CAUTION!

Warns of a potential danger!

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

NOTE!

Warns of damage to property!

- Failure to observe these instructions 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.

→ Designates a procedure that you must carry out.

1.2 Definition of the term “device”

The term “device” used in these instructions always stands for the angle seat valve type 2060 INOX.

In these instructions, the unit bar stands for relative pressure. The absolute pressure is indicated separately in bar(abs).

2 INTENDED USE

Improper use of the Type 2060 INOX Angle Seat Valve (referred to as the device in the following) may result in hazards to people, nearby equipment and the environment.

- The device is designed to control the flow of liquid and gaseous media.
- In potentially explosive environments, the device must only be used in accordance with the specifications on the separate Ex-type label. The additional information and safety instructions relating to Ex areas enclosed with the device must be adhered to when deploying the device.
- Devices without a separate Ex type label must not be used in the potentially explosive atmosphere.
- When using the device, observe the authorised data, operating conditions and deployment conditions specified in the contract documents and in the operating instructions. These are described in Chapter “6 Technical data”.
- Use the device only in conjunction with third-party devices and components recommended or approved by Bürkert.
- Prerequisites for safe and trouble-free operation include correct transport, storage and installation as well as careful operation and maintenance.
- Only use the device for its intended purpose.

3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not take account of any

- contingencies or events which may occur during installation, operation and maintenance of the devices;
- local safety regulations that are within the operator’s scope of responsibility, including those relating to the installation personnel.

Danger from high pressure!

- Before loosening lines or valves, switch off the pressure and bleed the lines.

Risk of crushing due to moving pneumatic port!

- Do not touch the moving pneumatic port when opening and closing the device.
- Do not reach into the area directly above and below the pilot air port.

Risk of pressure surge flow with flow direction above the seat!

- Because of the risk of pressure surge, angle seat valves with the flow direction above the seat must not be used for fluid media.

Risk of burns/fire due to hot device surface if device operated continuously!

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

General hazardous situations.

Observe the following to prevent injury:

- Feed only those media into the fluid connections that are listed in the chapter “Technical data”.
- Do not place the housing under mechanical stress (e.g. by placing objects on it or standing on it).
- Make sure the system cannot be activated unintentionally.
- Only trained technicians carry out installation and maintenance work.
- After interruption of the electrical or pneumatic supply, ensure a defined or controlled restart of the process.
- Operate the device only when it is in perfect condition and in accordance with the operating instructions.
- The general rules of technology apply to application planning and operation of the device.

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
E-mail: info@burkert.com

International

The contact addresses can be found on the back pages of the printed operating instructions.

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 conditions of use are taken into account.

4.3 Information on the Internet

Operating instructions and data sheets for Type 2060 INOX can be found on the Internet at: country.burkert.com

5 PRODUCT DESCRIPTION

5.1 General description

The 2/2-way angle seat valve Type 2060 INOX is suitable for liquid and gaseous media.

It uses neutral gases or air (control media) to control the flow of media such as water, alcohol, oil, fuel, hydraulic fluid, saline solution, lye, organic solvent and steam (flow media).

5.2 Properties

- Without leakage.
- High flow values.
- Control air connection central and continuously rotatable through 360°.
- Visual position indication
- No maintenance

5.2.1 Restrictions

Due to the danger of a pressure surge, the angle seat valve must not be used for liquid media when the flow is above the seat!

6 TECHNICAL DATA

6.1 Conformity

The angle seat valve Type 2060 INOX conforms to the EU directives as per the EU Declaration of Conformity.

6.2 Standards

The applied standards as used to verify compliance with the EU Directives can be found in the EU type examination certificate and/or the EU Declaration of Conformity.

6.3 Operating conditions

6.3.1 Permitted temperatures

Ambient temperature: 0 °C – +60 °C
Medium temperature: 0 °C – +200 °C

The angle seat valve is autoclavable.
The pilot air port must be removed for this.

Derating pressure and temperature ranges

Usage limits of the valve (derating operating pressure)

Temperature	operating pressure
150 °C	14.8 bar
200 °C	13.7 bar

Tab. 1: Derating the operating pressure as per ASME B16.5/ ASME B16.34 Cl.150

Temperature	operating pressure
-10...+50 °C	14 bar
100 °C	14 bar
150 °C	13.4 bar
200 °C	12.4 bar

Tab. 2: Derating the operating pressure as per JIS B 2220 10K

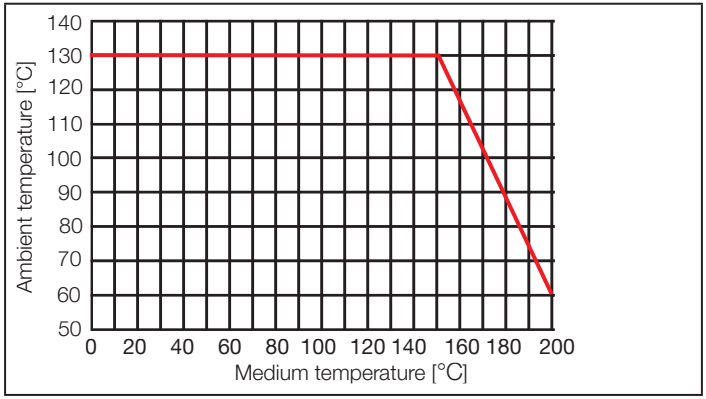


Figure 1: Derating VA actuator INOX ANTG 32

6.3.2 Pressure ranges

WARNING!

Risk of medium leak and bursting.

Exceeding the permissible operating or control pressure can lead to leakage and bursting of lines or devices.

With control function B, too little pilot pressure can cause a leak.

- Do not exceed operating pressure and control pressure.
- With control function B, adhere to the minimum pilot pressure of 4 bar.

The following product-specific pressure information is provided on the type label.

Pilot pressure for control function B: 4 bar

6.3.3 Media

WARNING!

Risk of injury due to burst lines caused by a pressure surge!

If the valve with flow direction above the seat is used for liquid media, a pressure surge can cause the lines and device to burst.

- Do not use valves with flow direction above the seat for liquid media!

Control medium: Neutral gases, air

Flow media: Water, alcohols, oils, fuels, hydraulic fluids, saline solutions, lyes, organic solvents, vapour, air, neutral gases.

6.4 General technical data

6.4.1 Inscription on the type label

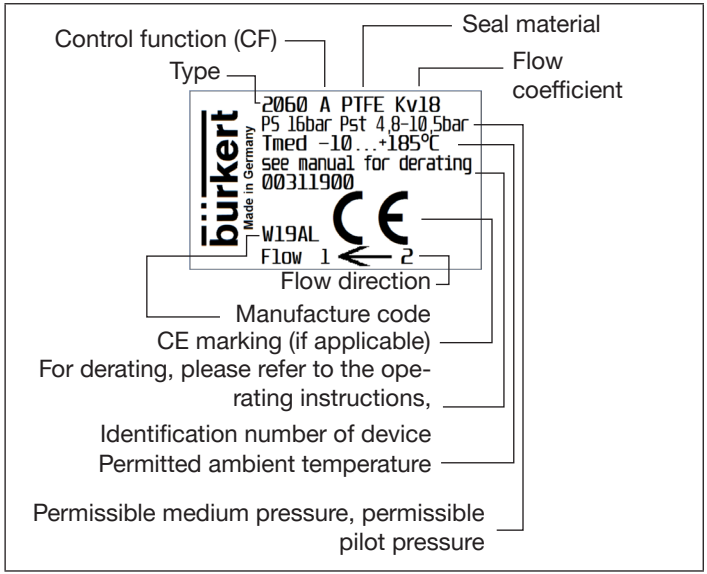


Figure 2: Example of a type label

6.4.2 Materials

Valve body	Stainless steel 316L
Actuator	Stainless steel 1.4404
Sealing elements	FKM
Spindle seal	PTFE V-rings with spring compensation (with silicone grease)
Seat seal	PTFE
Spindle	Stainless steel 1.4401/1.4404

6.4.3 Ports

Pilot air port (recommendation)	45° hose connector 4/2 M5 Order no. 903383
Medium connection	G3/8 and NPT3/8 - Socket connection G1/2 - Male thread Welding socket acc. to EN ISO 1127/ISO 4200, DIN 11850 series 2, ASME BPE. Other connections on request

6.4.4 Installation position

Any, preferably actuator face up.

6.5 Conversion of actuator sizes

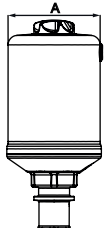
Actuator size	Designation	Outer diameter A [mm]	Scale drawing
32	B	36,4	

Figure 3: Conversion of actuator sizes

7 STRUCTURE AND FUNCTION

7.1 Design

The angle seat valve consists of a pneumatically operated piston actuator with optical position indicator and a 2/2-way valve housing.

7.2 Function

Depending on the variant, the valve is closed against the medium flow either with spring action (control function A, CFA) or pilot pressure (control function B, CFB).

Spring action (CFA) or pneumatic pilot pressure (CFB) generate the closing force on the swivel plate. Force is transmitted through a spindle connected to the piston actuator.

Flow direction below seat:

Because the operating pressure is below the swivel plate, the pressure helps open the valve. The flow is under the valve seat.

⚠ Minimum control pressure for CFB that is either too low or which exceeds the permitted operating pressure can cause leaks.

7.2.1 Control functions

Control function A (CFA)
Closed by spring action in resting position.

Control function B (CFB)
Opened by spring action in resting position.

8 INSTALLATION

8.1 Safety instructions

DANGER!

Risk of injury from high pressure in the system!

- Before loosening lines or valves, switch off the pressure and bleed the lines.

WARNING!

Risk of injury due to improper installation!

- Installation may be carried out by authorised technicians only and with the appropriate tools!

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.

Risk of crushing due to moving pneumatic port!

- Do not touch the moving pneumatic port when opening and closing the device.
- Do not reach into the area directly above and below the pilot air port.

8.2 Before installation

- Any installation position of the angle seat valve is possible, but preferably the actuator is facing upward.
- Ensure that (de-energized) pipelines are aligned before connecting the valve.
- Note flow direction!
  See “Figure 4”.

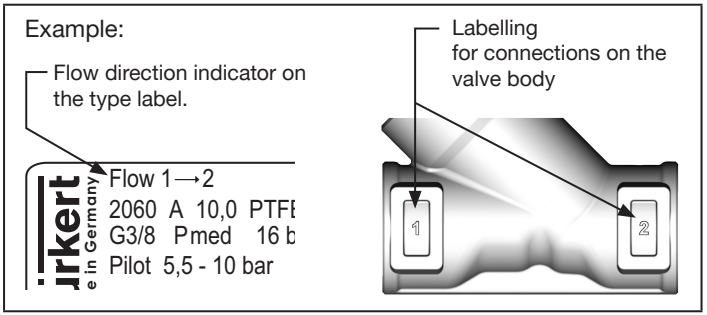


Figure 4: Labelling for connections / flow direction

8.2.1 Preparatory tasks

→ Clear impurities from pipelines (seal material, metal chips, etc.).

Welded connection:

→ Remove the actuator before welding in the valve body (see Chapter “8.3.1”).

8.3 Installation

8.3.1 Remove actuator from the valve body (only for welded connections)

WARNING!

Risk of injury due to damaged devices!

Doing assembly work with the wrong tools can damage the device.

▸ To remove the actuator from the valve body, use an open-end wrench, never a pipe wrench.

Control function A:

→ Apply compressed air (5.5 bar) to the pilot air port so that the swivel plate lifts off the valve seat and is not damaged.

Control function B:

No compressed air needs to be applied for installation for control function B.

NOTE!

Damage to the seat seal or seat contour!

▸ When removing the actuator, the valve must be in the open position.

→ Remove the actuator from the valve body in the open valve position using a open-end wrench (see “Figure 5”).

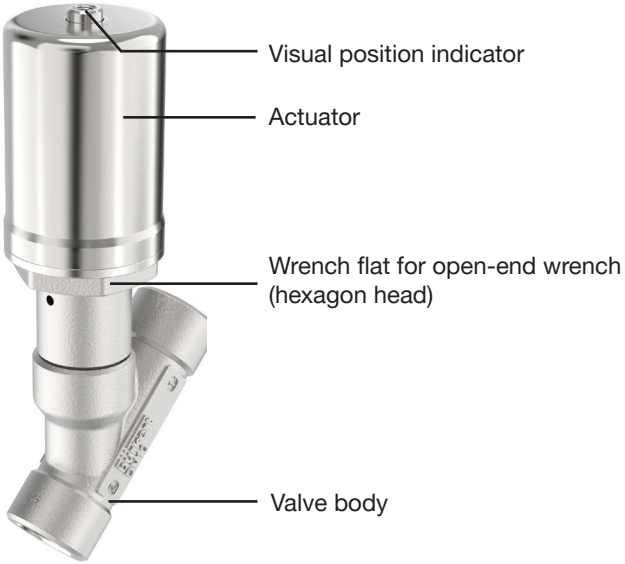


Figure 5: Disassemble actuator

8.3.2 Install valve body into pipeline

For welded connections:

→ Weld or bond valve body in pipeline system.

→ Replace seal.

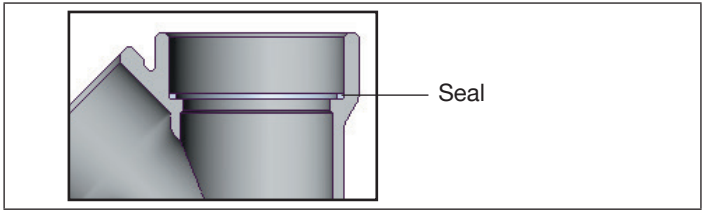


Figure 6: Seal

For other body variants:

→ Connect valve body to pipeline.

8.3.3 Installing actuator on valve body

DANGER!

Risk of explosion due to incorrect lubricants!

Unsuitable lubricant may contaminate the medium. There is a risk of explosion in oxygen applications.

- For specific applications, e.g. oxygen or analysis applications, use approved lubricants only.

WARNING!

Risk of injury due to damaged devices!

Doing assembly work with the wrong tools can damage the device. The same applies if the tightening torque is incorrect.

- To remove the actuator from the valve body, use an open-end wrench, never a pipe wrench.
- Observe the tightening torque (40 ± 3 Nm)

→ Before re-installation, grease the pipe thread of the actuator (e.g. using Klüberpaste UH1 96-402 from Klüber).

→ **For control function A:** Apply compressed air to the pilot air port (5.5 bar) so that the swivel plate lifts up from the valve seat and is not damaged during the screw-in process.

→ Screw the actuator into the valve body.

⚠ Observe the tightening torque (40 ± 3 Nm)!

If the position of the pilot air port is unfavourable for mounting the hose, it can be seamlessly aligned by turning the drive 360°.

8.4 Pneumatic connection

DANGER!

Risk of injury from high pressure in the system!

- Before loosening lines and valves, turn off the pressure and vent the lines.

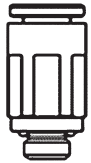
WARNING!

Risk of injury due to unsuitable connection hoses!

Hoses that cannot withstand the pressure and temperature range can cause hazardous situations.

- Only use hoses that are permitted for the specified pressure and temperature range.
- Note the data sheet information from the hose manufacturers.

8.4.1 Pilot air ports

Order no. 903383 or 771077	The 45° elbow connection, available separately, is recommended as a pilot air port! The freely movable hose length here should be min. 250 mm. A shorter hose length reduces the durability and function of the plug-in coupling!
	When using a straight pilot air port, the freely movable hose length should be min. 400 mm. A shorter hose length reduces the durability and function of the plug-in coupling!
	Risk of crushing! ▸ Because of the risk of crushing, a 90° pilot air port must not be used!

9 START-UP

9.1 Safety instructions

WARNING!

Risk of injury due to improper operation!

Improper operation may result in injuries as well as damage to the device and the area around it.

- ▸ Before start-up, ensure that the operating personnel are aware of and have completely understood the contents of the operating instructions.
- ▸ The safety instructions and the intended use must be observed.
- ▸ Only adequately trained personnel may start up the system/ device.

10 MAINTENANCE, CLEANING

10.1 Safety instructions

DANGER!

Risk of injury from high pressure in the system!

- Before loosening lines or valves, switch off the pressure and bleed the lines.

WARNING!

Risk of injury due to improper maintenance work!

- Maintenance may be carried out by authorised technicians only and with the appropriate tools!

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

- Secure the system against unintentional activation.
- Ensure a controlled restart after maintenance is completed.
- To screw the valve body or actuator in and out, use an open-end wrench – never a pipe wrench – and observe the tightening torques.

10.2 Maintenance work

10.2.1 Actuator

The angle seat valve actuator requires no maintenance.

10.2.2 Angle seat valve

Wearing parts that are subject to natural wear and tear:

- Swivel plate
- Seal

If there is a leak, replace the wearing part in question with a corresponding spare part (see Chapter “13 Spare parts”).

10.3 Cleaning

Commercially available cleaning agents can be used to clean the device surface.

NOTE!

Avoid causing damage with cleaning agents.

- Before cleaning, check that the cleaning agents are compatible with body materials and seals.

10.4 Recommended auxiliary materials

In these instructions, the following auxiliary materials are recommended for the proper operation, maintenance and repair of the device:

Type of auxiliary material	Product name	Manufacturer and Internet address
Lubricant paste	Klüberpaste UH1 96-402	Klüber Lubrication München KG, www.klueber.de
Adhesive	Loctite 640	Marketing Loctite, Henkel AG & Co.KGaA, www.loctite.de

11 MAINTENANCE

CAUTION!

Risk of injury and/or damage to property due to incorrect parts!

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

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

11.1 Replacing the valve seat

The valve set includes:

- **The swivel plate:**
  Consisting of - Seal holder
  - Valve seal
  - Centring device
- **The seal**
  This can also be ordered separately.

To replace the valve set, the actuator must first be removed from the valve body as described below.

11.1.1 Removing the actuator from the valve body

DANGER!

Risk of injury from escaping medium and pressure discharge.

Removing the pressurised device is dangerous due to sudden pressure discharge and medium leakage.

- Before loosening lines or valves, switch off the pressure and bleed the lines.

WARNING!

Risk of injury due to damaged devices!

Using the wrong tool and too much tightening torque can damage the device during installation.

- To remove the actuator from the valve body, use an open-end wrench, never a pipe wrench.
- Observe the tightening torque: 40 ± 3 Nm

Control function A:

→ Apply compressed air (5.5 bar) to the pilot air port so that the swivel plate lifts off the valve seat and is not damaged.

Control function B:

No compressed air needs to be applied for installation for control function B.

NOTE!

Damage to the seat seal or seat contour!

- When removing the actuator, the valve must be in the open position.

→ Use an open-end wrench (SW 22 for DN10; SW27 for DN15) to remove the actuator from the valve body in the open valve position (see “Figure 7”).

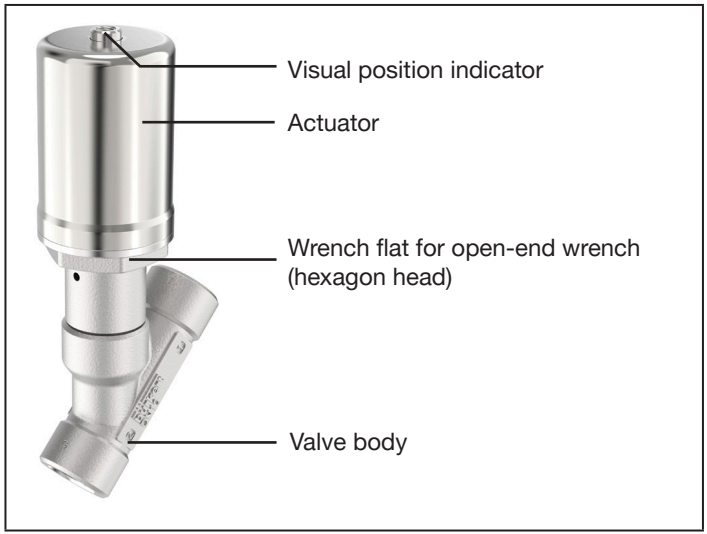


Figure 7: Disassemble actuator

11.1.2 Replacing valve set

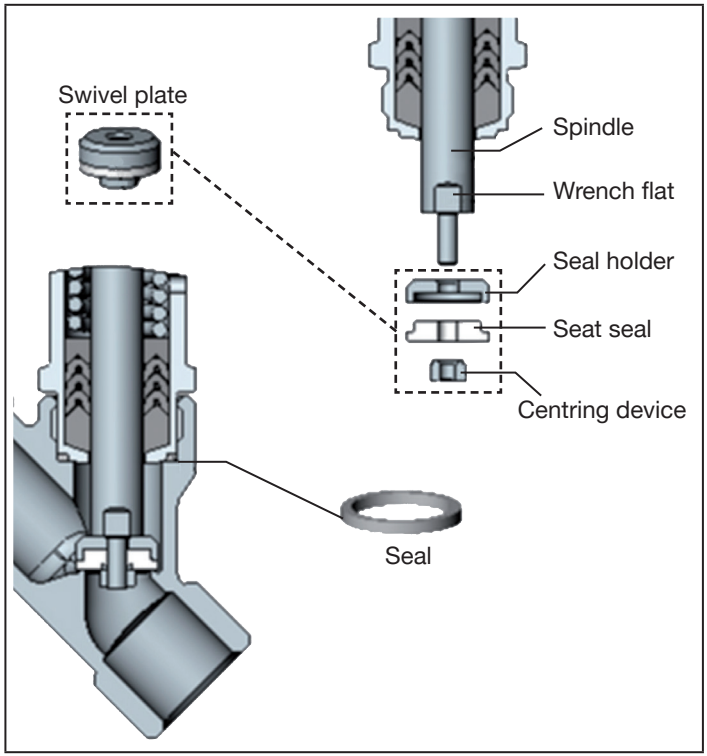


Figure 8: Valve set

WARNING!

Risk of injury due to damaged devices!

Doing assembly work with the wrong tools can damage the device.

- To remove the actuator from the valve body, use an open-end wrench, never a pipe wrench.

If the tightening torque is too high it can damage the spindle thread.

Procedure:

→ Hold the spindle against the wrench flat with a fork wrench (SW 7).

→ Loosen thecentring device carefully with a suitable open-end wrench (SW 5.5) in order to not damage the spindle thread.

→ Unscrewcentring device.

→ Remove the seal holder with the seat seal.

→ Place new seal holder and new seat seal on the spindle.

→ Apply adhesive (Loctite 640) to spindle thread.

→ Screw on thecentring device and tighten with a suitable open-end wrench (SW 5.5).

⚠ Observe the tightening torque (0.6 Nm)!

11.1.3 Installing actuator on valve body

WARNING!

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.

DANGER!

Risk of explosion due to incorrect lubricants!

Unsuitable lubricant may contaminate the medium. There is a risk of explosion in oxygen applications.

- For specific applications, e.g. oxygen or analysis applications, use approved lubricants only.

→ Before re-installation, grease the pipe thread of the actuator (e.g. using Klüberpaste UH1 96-402 from Klüber).

→ Replace seal.

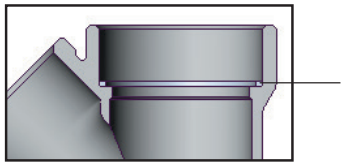


Figure 9: Seal

→ **For control function A:** Apply compressed air to the pilot air port (5.5 bar) so that the swivel plate lifts up from the valve seat and is not damaged during the screw-in process.

WARNING!

Risk of injury due to damaged devices!

Doing assembly work with the wrong tools can damage the device.

- To remove the actuator from the valve body, use an open-end wrench, never a pipe wrench.

If the tightening torque is too high it can damage the spindle thread.

- Observe the tightening torque (40 ± 3 Nm)

→ Screw the actuator into the valve body.
⚠ Observe the tightening torque (40 ± 3 Nm)!

If the position of the pilot air port is unfavourable for mounting the hose, it can be seamlessly aligned by turning the drive 360°.

12 FAULTS

Fault	Elimination
Actuator does not switch.	Pilot pressure too low. → See pressure specification on the type label.
	Operating pressure too high. → See pressure specification on the type label.
	Flow direction switched. → See labelling on the type label.
Valve leaks.	Dirt between seal and valve seat. → Install dirt trap.
	Valve seat seal worn. → Install new swivel plate.
	Seat seal damaged, e.g. by foreign bodies, chips or similar. → Install new swivel plate.
	Flow direction switched. → See labelling on the type label.
	Pilot pressure too low. → See pressure specification on the type label.
	Operating pressure too high. → See pressure specification on the type label.
Valve is leaking at the relief bore.	Spindle seal worn. → Replace the actuator.

Tab. 3: Faults

13 SPARE PARTS

CAUTION!

Risk of injury and/or damage to property due to incorrect parts!

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

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

The following valve sets are available as replacement part set for the angle seat valve Type 2060 INOX:

- DN10 Order no. 220053
- DN15 Order no. 011134

For DN10 these include:

- **The swivel plate:**
  Consisting of
  - Seal holder
  - Valve seal
  - Centring device
- **The seal**
  This can also be ordered separately.

For DN15 these include:

- **The complete swivel plate**
- **The seal**
  This can also be ordered separately.

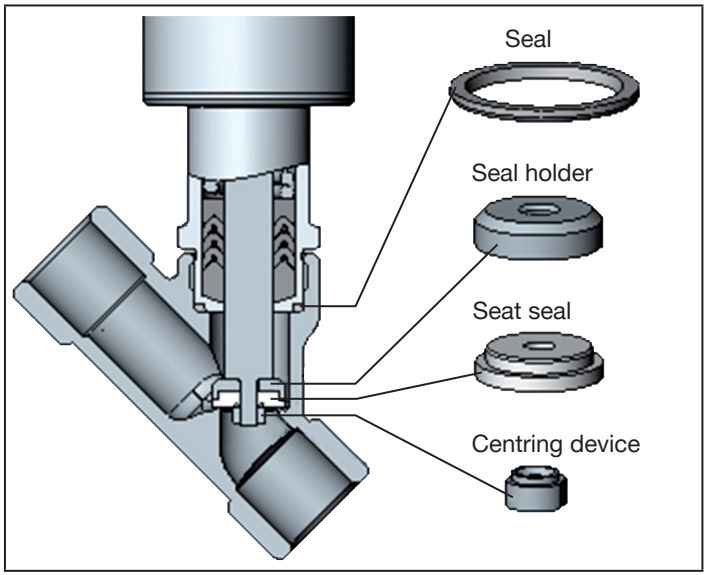


Figure 10: Valve set

14 TRANSPORTATION, STORAGE, DISPOSAL

NOTE!

Transport damage!

Inadequately protected devices may be damaged during transport.

- Protect the device against moisture and dirt in shock-resistant packaging during transportation.
- Avoid exceeding or dropping below the permitted storage temperature.

Incorrect storage may damage the device.

- Store the device in a dry and dust-free location!
- Storage temperature –20…+65 °C.

Damage to the environment caused by device parts that are contaminated with media.

- Dispose of the device and packaging in an environmentally friendly manner!
- Observe applicable disposal and environmental regulations.

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