

Type 2000 INOX

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



Quickstart

English Deutsch Français

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We reserve the right to make technical changes without notice.
Technische Änderungen vorbehalten.
Sous réserve de modifications techniques.

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1 QUICKSTART

The quickstart comprises important information.

- ▶ Carefully read the quickstart and observe any safety information.
- ▶ The quickstart must be available to every user.
- ▶ The liability and warranty for Type 2000 INOX do not apply if the quickstart instructions are not observed.

The quickstart illustrates the installation and commissioning of the equipment by way of example. A detailed description of the equipment can be found in the operating instructions for Type 2000 INOX on the Internet at: www.burkert.com



2 CONTACT ADDRESS

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If you have any questions, contact your Bürkert sales office.

2.1 Symbols

Warning to prevent death or serious injuries:



Warns of an immediate danger!



Warns of a potentially dangerous situation!

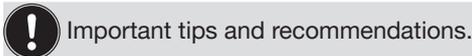
Warning to prevent moderate or minor injuries:



Warns of a possible danger!

NOTE!

Warns of damage to property!



→ designates a procedure which you must carry out.

3 INTENDED USE

Angle seat valve Type 2000 INOX is designed to control the flow-rate of liquid and gaseous media.

- Observe the permitted application conditions for using the equipment.
- Operate only when in perfect condition and pay attention to correct storage, transportation, installation and operation.

- In the potentially explosion-risk area the device may be used only according to the specification on the separate Ex type label. For use observe the additional information enclosed with the device together with safety instructions for the explosion-risk area.
- Devices without a separate Ex type label may not be used in a potentially explosive area.
- The device may be used only in conjunction with third-party devices and components recommended and authorized by Bürkert.
- Use the device only as intended.

4 BASIC SAFETY INSTRUCTIONS



Danger – high pressure!

- ▶ Turn off the pressure and vent the lines before loosening lines or valves.

Risk of electric shock!

- ▶ Before reaching into the device or the equipment, switch off the power supply and secure to prevent reactivation!
- ▶ Observe applicable accident prevention and safety regulations for electrical equipment!

Risk of crushing from moving pneumatic connection!

- ▶ When opening and closing the device, do not touch the moving pneumatic connection.
- ▶ Do not reach into the area immediately above and below the control air connection.

Risk of water hammer when flow inlet over seat!

- When flow inlet over seat, do not use angle seat valve for liquid media due to the risk of water hammer.

Risk of burns/risk of fire if used during long-term operation through hot device surface!

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

To prevent injuries:

- Supply only media to the media connections which have been specified as flow media in the chapter „Technical Data“.
- ▶ Do not use the Type 2000 INOX in potentially explosive areas.
- ▶ Do not physically stress the housing (e.g. by placing objects on it or standing on it).
- ▶ Ensure that the system cannot be activated unintentionally.
- ▶ Only trained technicians may perform installation and maintenance work.
- ▶ After an interruption in the power supply or pneumatic supply, ensure that the process is restarted in a defined or controlled manner.
- ▶ The device may be operated only when in perfect condition and in consideration of the operating instructions.
- ▶ The general rules of technology apply to application planning and operation of the device.

5 TECHNICAL DATA

5.1 Conformity

The angle seat valve, Type 2000 INOX, conforms to the EC Directives according to the EC Declaration of Conformity.

5.2 Standards

The applied standards, which are used to demonstrate compliance with the EC Directives, are listed in the EC type test certificate and/or the EC Declaration of Conformity.

5.3 General technical data

Control functions: A (CFA) / B (CFB)

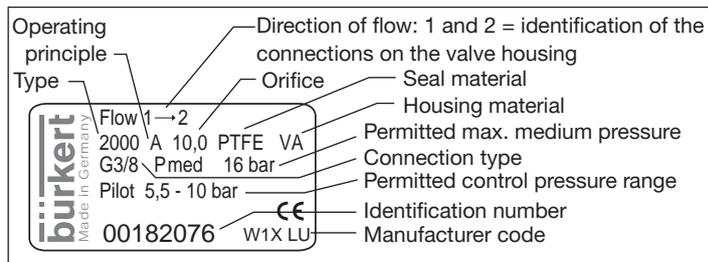
CFA: Closed in rest position by spring force.

CFB: Open in rest position by spring force.

Materials and connections: see data sheet

Installation position: Any position, preferably with the actuator face up.

Inscription of the type label:



5.4 Operating conditions

5.4.1 Permitted temperatures

Ambient temperature: 0 °C ... +60 °C
 Medium temperature: 0 °C ... +180 °C



The angle seat valve is autoclavable.

For this purpose, the control air connection must be removed.

The combination of maximum medium temperature and maximum ambient temperature is indicated on the graph in “Fig. 1”.

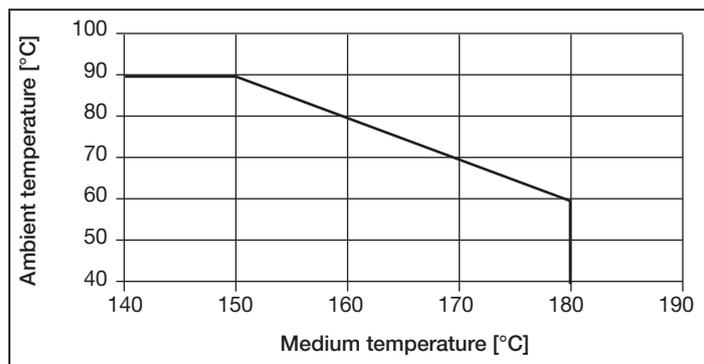


Fig. 1: Combination of medium temperature / ambient temperature

5.4.2 Pressure ranges



WARNING!

Discharge of medium and danger of bursting.

If the permitted medium or control pressure is exceeded, lines or device may leak and burst.

For control function B a too low control pressure may result in leaks.

- ▶ Do not exceed medium pressure and control pressure.
- ▶ For control function B observe the minimum control pressure of 4 bar.

The product-specific pressure specifications are indicated on the rating plate.

Minimum control pressure for control function B: 4 bar

5.4.3 Media



WARNING!

Risk of injury from bursting lines caused by water hammer!

If the valve is used for liquid media when flow inlet over seat, water hammer may cause lines and device to burst.

- ▶ Do not use valves with flow inlet over seat for liquid media!

Control medium: neutral gases, air.

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

6 ASSEMBLY



DANGER!

Risk of injury from high pressure in the system!

- ▶ Turn off the pressure and vent the lines before loosening lines or valves.



WARNING!

Risk of injury from improper assembly!

- ▶ Installation must only be carried out by authorized technicians and with the appropriate tools!

Risk of injury from unintentional activation of the system and uncontrolled restart!

- ▶ Secure system from unintentional activation.
- ▶ Following assembly, ensure a controlled restart.

Risk of crushing from moving pneumatic connection!

- ▶ When opening and closing the device, do not touch the moving pneumatic connection.
- ▶ Do not reach into the area immediately above and below the control air connection.

6.1 Preparatory work

- Before connecting the valve, ensure the pipelines are flush (stress-free).
- Clean pipelines (sealing material, swarf, etc.).

Devices with welded body:

Remove the actuator from the valve body:

- Clamp the valve body into a holding fixture.

NOTE!

Damage to the seat seal or the seat contour!

- Open the valve for control functions A: Pressurize the lower pilot air port with compressed air (5 bar).
- Place a suitable open-end wrench on the wrench flat of the nipple.
- Unscrew the actuator off the valve body.

Devices with threaded body:

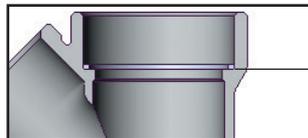
- Only disassemble the actuator if required by the customer.

6.2 Installation

6.2.1 Installing valve housing in pipeline

For welded housings:

- Weld valve housing in pipeline system.
- Check graphite seal and, if required, replace.



Graphite seal

For other housing models:

- Connect valve housing to pipeline.

6.2.2 Installing actuator on valve housing



DANGER!

Risk of explosion if incorrect lubricants used!

Unsuitable lubricant may contaminate the medium. In oxygen applications there is a risk of explosion.

- ▶ In specific applications, e.g. oxygen or analysis applications, use appropriately authorized lubricants only.



WARNING!

Risk of injury from damaged devices!

An incorrect tool and an excessive tightening torque may damage the device during installation.

- ▶ Use an open-end wrench to install the actuator, never a pipe wrench.
- ▶ Observe tightening torque (40 ± 3 Nm)

- Grease pipe thread before re-installing the actuator (e.g. with Klüber paste UH1 96-402 from Klüber).
- **For control function A:** Pressurize control air connection with compressed air (5.5 bar) so that the pendulum disc is lifted off the valve seat and is not damaged when screwed in.
- Screw actuator into the valve housing.
 - ⚠ Observe tightening torque (40 ± 3 Nm)!

6.3 Pneumatic connection



WARNING!

Risk of injury from unsuitable connection hoses!

Hoses which cannot withstand the pressure and temperature range may result in hazardous situations.

- ▶ Use only hoses which are authorized for the indicated pressure and temperature range.
- ▶ Observe the data sheet specifications from the hose manufacturers.

6.3.1 Control air connections

	<p>The 45° angle connection, which can be ordered separately, is recommended for the control air connection! In this case the free-moving hose length should be min. 250 mm. If the hose length is shorter, the durability and function of the plug-in coupling will be impaired! Order no. 903383</p>
	<p>If a straight control air connection is used, the free-moving hose length should be min. 400 mm. If the hose length is shorter, the durability and function of the plug-in coupling will be impaired!</p>
	<p>⚠ Risk of crushing!</p> <ul style="list-style-type: none"> ▶ Due to the risk of crushing, a 90° control air connection must not be used!

7 START-UP



WARNING!

Risk of injury from 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 familiar with and completely understand the contents of the manual.
- ▶ Observe the safety instructions and intended use.
- ▶ Only adequately trained personnel may start up the device.



Observe the type label specifications and information on pressure and temperature values in chapter “[5 Technical data](#)”.

8 MAINTENANCE, CLEANING

→ Complete a visual inspection of the equipment once a year. Shorter maintenance intervals may be recommended depending on the operating conditions.

Wear parts: Pendulum disc and graphite seal.

→ In the event of a leak, replace the relevant wear part. Description see Operating Instructions on the [Internet](#).

8.1 Cleaning

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

NOTE!

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

9 DISASSEMBLY



DANGER!

Risk of injury from discharge of medium and pressure!

It is dangerous to remove a device which is under pressure due to the sudden release of pressure or discharge of medium.

- ▶ Before removing a device, switch off the pressure and vent the lines.

Procedure:

- Loosen pneumatic connection.
- Remove device.

10 TRANSPORTATION, STORAGE, DISPOSAL

NOTE!

Transport and storage damage!

- Protect the device against moisture and dirt in shock-resistant packaging during transportation and storage.
- Permitted storage temperature: -20 – +65°C.

Damage to the environment caused by device components contaminated with media.

- Ensure the device and packaging are disposed of in an environmentally sound manner!

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