Operating instructions

Type 8880-PS

Vessel Pressure Control System

Solenoid Solution

MAN 1000699704 EN Version: - Status: RL (released | freigegeben) printed: 16.02.2026

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1 Operating instructions

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

WARNING!

Important safety information!

Failure to observe these instructions 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 the warning will result in a fatal or serious injury!

WARNING!

Warns of a potentially dangerous situation!

- Failure to observe the warning may result in serious injuries or death!

CAUTION!

Warns of a possible danger!

- Failure to observe this warning may result in a moderately severe or minor injury.

NOTE!

Warns of damage to property!

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

Indicates important additional information, tips and recommendations.

Indicates important additional information, tips and recommendations.

▶ Designates an instruction to prevent risks

→ Designates a procedure which must be carried out

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1.2 Terms and abbreviations

The terms and abbreviations are used in this document to refer to following definitions.

Device	Type 8880-PS
büS	Bürkert system bus, a communication bus developed by Bürkert and based on the CANopen protocol
bar(g)	Unit for relative pressure

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2 Safety

2.1 Intended use

The device 8880-PS is designed to measure and maintain the pressure of a vessel and control it.

These safety instructions do not consider any contingencies or incidents which occur during installation, operation and maintenance.

The operator is responsible for observing the location-specific safety regulations, also with reference to the personnel.

⚠ WARNING!

General hazard information

Non-authorized use of the system may be dangerous to people, nearby equipment and the environment.

The system is designed for pressure control in a controlled loop.

- The authorized data, the operating conditions and application areas specified in the contract documents and operating instructions must be observed during use!
- Prerequisites for safe and trouble-free operation are correct transportation, correct storage and installation as well as careful operation and maintenance.

The system

- Use products only recommended and approved by Bürkert in conjunction with external devices. The use of other devices and components must be coordinated with Bürkert.
- Only operate when in perfect condition and always ensure proper storage, transportation, installation and operation.
- Protect from harmful environmental influences (radiation, air humidity, fumes, etc.).
- Do not install and operate in a potentially explosive atmosphere.
- Do not expose the system to direct sunlight.
- Do not open the device.
- Use only as intended.

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2.2 Safety instructions

⚠ WARNING!

Qualification of personnel working with the device

Improper use of the device can lead to serious personal injury or death. To avoid accidents when working with the device, the following minimum requirements must be met:

- Carry out work on the device within the scope of these instructions in a safety-compliant manner.
- Detect and avoid dangers when working on the device.
- Understand the instructions and implement the information contained therein accordingly.

Responsibility of the operator

The operator is responsible for observing the location-specific safety regulations, also in relation to personnel.

- Observe the general rules of technology.
- Install the device according to the regulations applicable in the respective country.
- The operator must make hazards arising from the location of the device avoidable by providing appropriate operating instructions.

Changes and other modifications, spare parts and accessories

Changes to the device, incorrect installation or use of non-approved devices or components create hazards that can lead to accidents and injuries.

- Do not make any changes to the device.
- Do not mechanically load the device.
- Observe the operating instructions of the device or component used.
- Only use the devices in conjunction with approved devices or components. Spare parts and accessories that do not meet Bürkert's requirements may impair the operational safety of the device and cause accidents.
- To ensure operational safety, only use original parts from Bürkert.

Operation only after proper transport, storage, installation, start-up or maintenance

Improper transport, storage, installation, start-up or maintenance endanger the operational safety of the device and can cause accidents. This can lead to serious personal injury or death.

- Only carry out works which are described in these instructions.
- Only carry out works using suitable tools.
- Have all other works carried out by Bürkert only.

Technical limit values and media

Non-compliance with technical limit values or unsuitable media can damage the device and lead to leaks. This can cause accidents and seriously injure or kill people.

- Comply with limit values. See Technical data and information on the type label.

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- Only feed media into the media ports that are listed in the chapter “Technical data”.
- Observe the safety data sheet for the media used.

Medium under pressure

Medium under pressure can seriously injure people. In the event of overpressure or pressure surges, the device or lines can burst. Pneumatic lines that are defective or not securely fastened can come loose and swing around.

- Before working on the device or system, switch off the pressure. Vent or empty the lines.
- Adhere to the permitted pressure ranges of the medium.
- Comply with the permitted temperature ranges of the medium.

Electric shock due to electrical components

Touching live parts can result in severe electric shock. This can lead to serious personal injury or death.

- Before working on the device or system, switch off the power supply. Secure it against reactivation.
- Observe any applicable accident prevention and safety regulations for electrical devices.

Working on the device

Working on the device that has not been powered down, unauthorised switching on or uncontrolled startup of the system can cause accidents. This can lead to serious personal injury or death.

- Only work on the device when it is not in use.
- Ensure that the device or system cannot be switched on unintentionally.
- Only start the process in a controlled manner following disruptions. Observe sequence:
  1. Apply supply voltage.

Hot surfaces and fire hazard

The surface of the device can become hot with fast-switching actuators or with hot media.

- Wear suitable protective gloves.
- Keep highly flammable substances and media away from the device.

Electrostatically sensitive components and assemblies

The device contains electronic components that are susceptible to the effects of electrostatic discharging (ESD). Components that come into contact with electrostatically charged persons or objects are at risk. In the worst case scenario, these components will be destroyed immediately or fail after start-up.

- Meet the requirements specified by EN 61340-5-1 to minimise or avoid the possibility of damage caused by a sudden electrostatic discharge.
- Do not touch electronic components when the supply voltage is connected.

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General hazardous situations!

To prevent injury, ensure the following:

- Operate the system only when it is in perfect condition and in accordance with the operating instructions.
- Do not make any internal or external changes to the system.
- Do not physically stress the housing (e.g. by placing objects on it or standing on it).
- Secure the system from unintentional actuation.
- Only trained technicians may perform installation and maintenance work with the appropriate tools.
- After an interruption in the power or pneumatic supply, ensure that the process is restarted in a controlled manner.
- Observe the general accepted technical rules.

⚠ CAUTION!

Medium may leak out if the diaphragm or dynamic seals are worn!

- If the medium is hazardous, secure the area around the leakage to prevent risks.
- Regular inspection of dosing outlet for leaks.

The system was developed with due consideration given to the accepted safety rules and recognized rules of technology. Nevertheless, dangerous situations may occur.

Non-observance of these instructions and unauthorized tampering with the system will release us from any liability and also invalidate the warranty covering the accessories.

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2.3 Restrictions

NOTE!

Damage to property!

- The exhaust air can be contaminated by detergent, cleaning agents and lubricants in the actuator.
- Faulty connections can cause detergent and cleaning agent to leak.
- Only materials that are resistant to the medium may be used. The medium connections of the system may only be fed with media, which has been approved as process media.

If exporting the system, observe any existing restrictions (if applicable).

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3 General information

3.1 Scope of supply

After receipt of the shipment, immediately check that the contents are not damaged and that they correspond with the type and quantity on the delivery note or packaging list. If there are any inconsistencies, please contact us immediately.

3.2 Contact addresses

Germany

Bürkert Fluid Control Systems
Sales Center
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@buerkert.com

www.buerkert.de

International

The contact addresses can be found on the Internet at: “burkert.com”

3.3 Warranty

The warranty is only valid if the 8880-PS is used as authorized in accordance with the specified application conditions.

The warranty covers only the freedom from defects of the pressure control system and its components.

No liability is accepted for consequential damage of any kind that may result from failure or malfunctioning of the system.

3.4 Information on the internet

Operating instructions, data sheets and software for this Type 8880-PS and the other components used can be found on the Internet at: “country.burkert.com”

4 System description

4.1 Intended application area

The 8880-PS is intended to provide the measurement and control of the pressure inside a vessel.

To use the device, observe the permitted data, operating and application conditions. These are described in chapter “Technical data” as well as in the operating instructions and data sheets of the components installed.

Prerequisites for safe and trouble-free operation include correct transport, storage and installation as well as careful operation and maintenance.

Any other use or usage going beyond these specifications shall be deemed unintended use and shall constitute misuse of the product. Bürkert Werke GmbH & Co. KG accepts no liability for any damage or injury occurring through such misuse.

NOTE!

Improper Use:

- Operation of the vessel pressure control system with media and operating conditions that do not meet the above specifications.
- Operating the vessel pressure control system in an explosive atmosphere.
- Using the vessel pressure control system in areas subject to vibration.
- Installation of additional and/or unsuitable components.
- Unsuitable and incorrectly installed components for feeding and removing media and the power supply.
- Improper mechanical strain (e.g. usage as a step).
- Processes that lead to the creation of non-operational states and/or media.
- Improperly mounted electrical push-in connectors or pneumatic hose connections.

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4.2 General description

4.2.1 Product description

The system consists of the following main components or functional units.

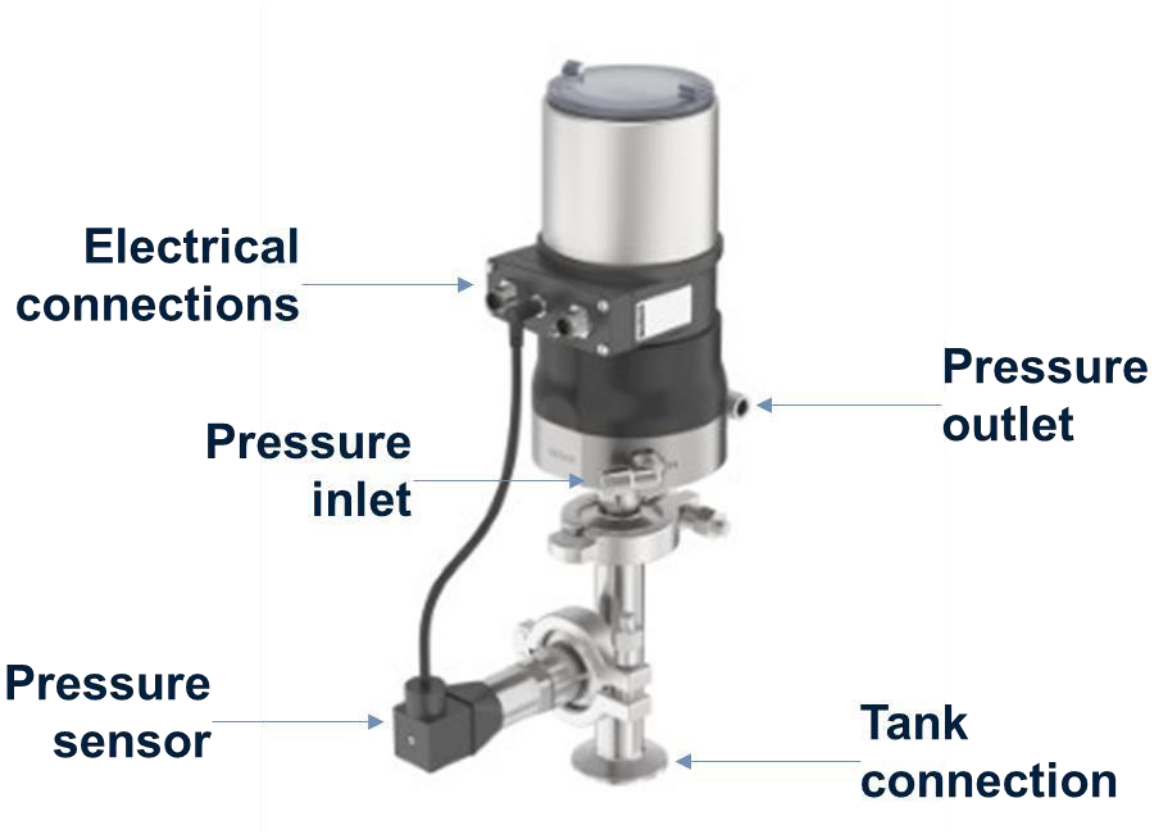

Figure 1: 8880-PS (isotropic view)

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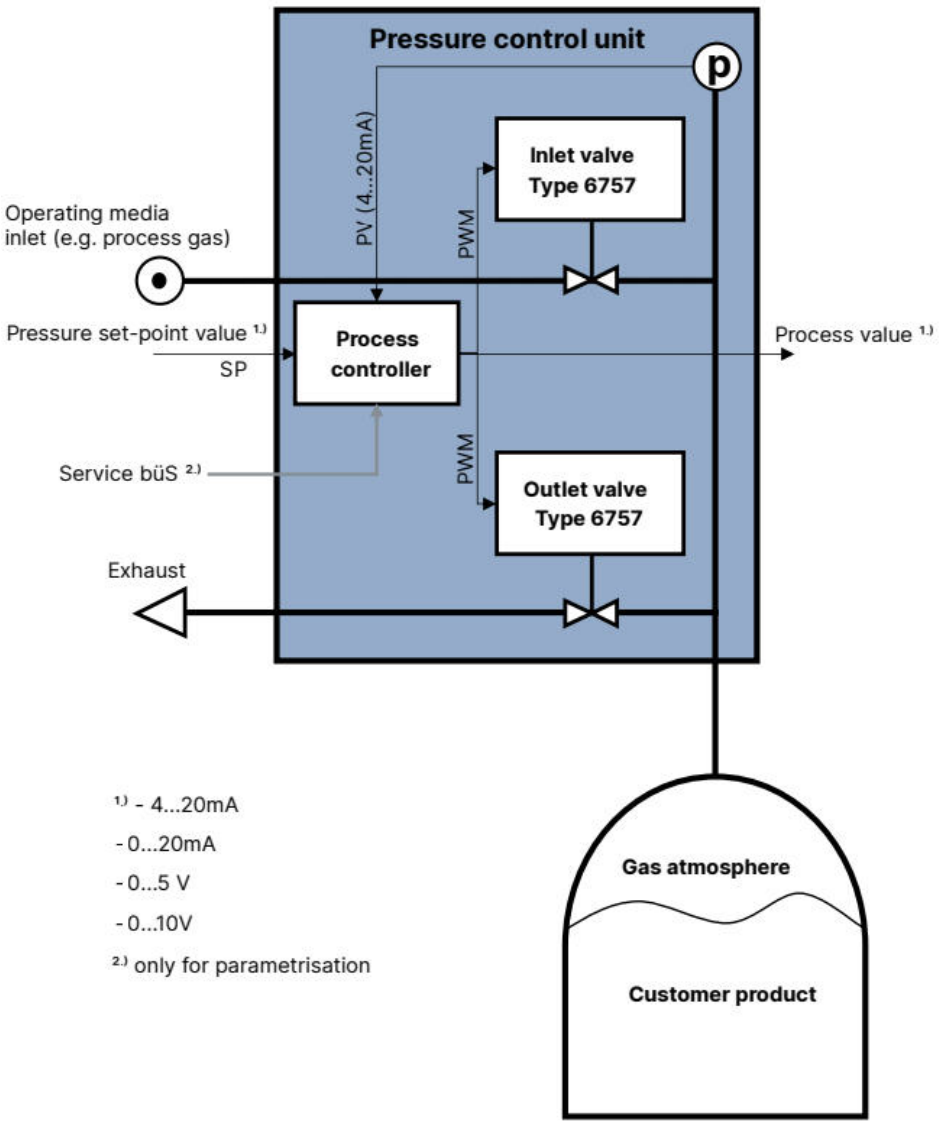
4.2.2 Function diagram

The following diagram shows the main components of the system, the fluidic principle and the controller connections.



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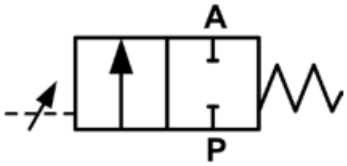
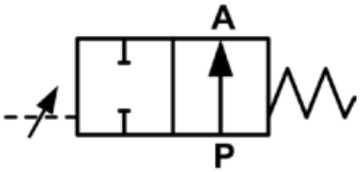
4.2.3 Control functions A (NC), B (NO)

The control function of valves is illustrated in the pictograms below:

 **A**: Normally closed (NC)	 **B**: Normally open (NO)
Magnetically controlled, closed in rest position by spring force	Magnetically controlled, open in resting position by spring force

The control functions of the valves are part of the Bürkert Type code. Normally, the inlet valve has control function A. The exhaust valve can be chosen to be control function A or B, resulting in different fail-safe behavior:

Control function of exhaust valve	Fail-safe behavior
A	tank pressure maintained
B	tank vented

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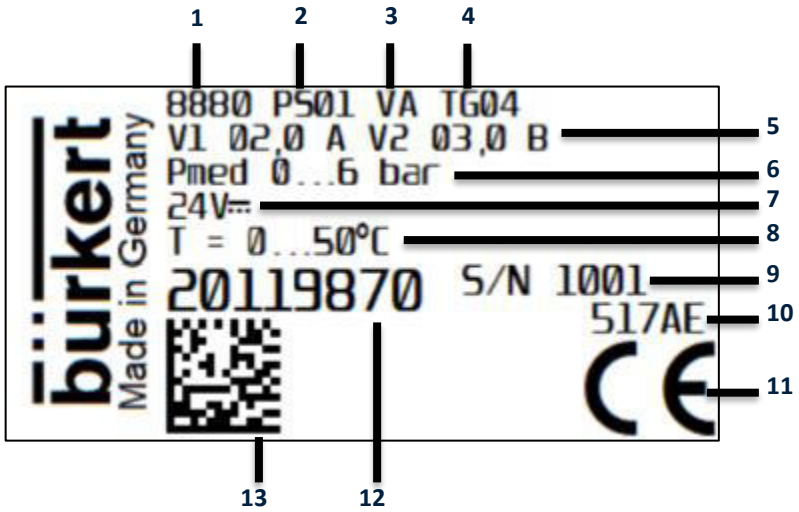
4.2.4 Product identification



1	Type 8880
2	Block configuration: PS01 Solenoid variant
3	Body material: VA Stainless steel
4	Tank port connection: TG04 Clamp connection 50.5 x 25.4 x 1.65
5	Specification inlet valve V1 and exhaust valve V2: seat size and control function (see also „4.2.3“)
6	Medium pressure in bar(g)
7	Operating voltage
8	Ambient temperature
9	Serial number S/N
10	Date of manufacture (encoded)
11	CE mark (possibly other icons)
12	ID number
13	Data matrix (identification and serial number)

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4.3 CONTROL AND DISPLAY ELEMENTS

4.3.1 Status indicator

The status indicator changes its colour based on the NAMUR recommendation NE 107. Refer to “NAMUR mode”.

The colour of the status indicator indicates:

- Whether device diagnostics are active or not. Diagnostics are active on the device and cannot be deactivated.
- If diagnostics are active, then the status indicator shows whether diagnostics events have been generated or not. If several diagnostics events have been generated, then the status indicator shows the diagnostics event with the highest priority.

If the status indicator flashes, then the device is selected in a man-machine interface such as the Bürkert Communicator software.

▶ To solve a problem indicated by the status indicator, refer to “Troubleshooting”.

4.3.2 NAMUR mode

The status indicator shows the status of the device and its peripherals, based on NAMUR recommendation 107 (NR 107).
If various alerts are present, the status indicator always shines in the colour of the highest prioritized alert (red = outage = highest priority).

Colour	Colour code	Status	Description
red	5	Failure, error or fault	Due to a malfunction in the device or its periphery, normal operation is not possible.
orange	4	Function check	Work is being carried out on the device, which means that normal operation is temporarily not possible.
yellow	3	Out of specification	The environment conditions or process conditions for the device are not within the specified range. Internal device diagnostics indicate problems within the device or with the process properties.
blue	2	Maintenance required	The device is in normal operation, although a function is briefly restricted. → service device
green	1	Diagnostics active	Device is running faultlessly, diagnostics are active.
white	0	Diagnostics inactive	Device is switched on, diagnostics are inactive.

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5 Technical data

5.1 Conformity, standards, approvals

The 8880-PS conforms to the EC Directives according to the EC Declaration of Conformity. 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.

5.2 Operating conditions and technical data

Operating conditions	
Adm. ambient temperature	-10 … +55 °C
Adm. media temperature	0 … +50 °C + 90 °C permissible for rinsing cycles (max. 30 min)
max. operating pressure	0 to 16 bar(g) (depending on nominal diameter)
Operating medium	Air, nitrogen, CO2 and other neutral gases
Protection class	IP 65 according to EN 60529 (only if cables, plugs and sockets have been connected correctly)
Connections	weld ends, flange, thread, clamp connections
Mechanical data	
Dimensions	see data sheet of Type 8880
Weight	approx. 3 kg
Fluid block material	Stainless steel
Sealing material	EPDM
Electrical data	
Operating voltage	24V DC +/- 10%
Power consumption	< 15 W
Service interface	büS / CANopen
Setpoint value signal	0/4…20 mA or 0…5/10 V
Process value signal	0/4…20 mA or 0…5/10 V

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6 Assembly and Installation

6.1 Safety instructions

DANGER!

Risk of injury from high pressure in the equipment/system!

- Before working on the equipment or system, switch off the pressure and vent/drain lines!

Risk of injury due to electrical shock!

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

WARNING!

Risk of injury from improper assembly!

- Assembly may be carried out only by trained technicians and with the appropriate tools!
- Secure system against unintentional activation.
- Following installation, ensure a controlled restart!

6.2 Installation of the system

6.2.1 Installation into the pipe system

NOTE!

Robust and safe installation

- It is the responsibility of the plant manufacturer and operator to ensure a robust and safe installation. The relation of size and length of the pipe to weight of the system must be considered.

→ Clean pipelines (sealing material, swarf etc.)

→ Before connecting the system, ensure that the pipelines are flush: support and align the pipelines.

→ Connect the system to the pipe system / tank.

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6.2.2 Installation of the system

→ The functional units of the pressure controller must be set up in a dry location.

→ The pressure controller must be easily accessible for start-up, operation and maintenance.

→ The pressure controller must be inspected for damage before installation.

→ It must be ensured that all on-site pneumatic and electrical connections are correctly fitted.

→ Hoses must be properly secured.

→ Establish the media connection.

→ Pressurize the pipes with medium.

→ Vent the pipes completely.

→ Energize the device.

⚠ CAUTION!

During installation, make sure that no foreign objects enter the media-containing channels and lines. This could damage the components.

6.3 Fluidic, pneumatic and electrical interfaces

6.3.1 Fluidic connections

Inlet and outlet	outlet	Function
Hose connector or G1/8“	Clamp	Inlet / outlet depending on version Interface to customer’s application

→ Remove the protection cap that closes the threaded connection if applicable.

→ Connect the medium fitting on one side.

→ Obey the instructions that are given by the manufacturer of the fitting used.

→ Obey the torques that are given by the manufacturer of the fitting used.

→ Connect the medium fitting on the other side in the same way.

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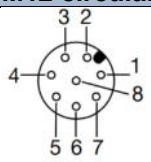
6.3.2 Electrical connections

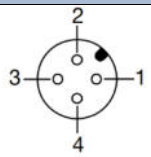
6.3.2.1 M12x8

The system has an 8-pole round connector M12 for its signal transmission.

M12 circular plug, 8-pin (analogue feedback, setpoint)			
	**Pin**	**Pin assignment**	**Color**
	5	Analogue feedback GND	GY
	6	Analogue feedback + (0/4…20 mA/0…5/10 V)	PK
	7	Setpoint GND	BU
	8	Setpoint + (0/4…20 mA/0…5/10 V)	RD

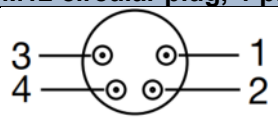
6.3.2.2 M12x4

The system has a 4-pole round connector M12 for its power supply (24 V DC).

M12 circular plug, 4-pin (operating voltage)			
	**Pin**	**Pin assignment**	**Color**
	1	Operating voltage +24V DC	BN
	2	Not assigned	WH
	3	Operating voltage GND	BU
	4	Not assigned	BK

6.3.2.3 M8x4

The system has a 4-pole round connector M8 for its sensor. Factory setting is internally supplied.

M12 circular plug, 4-pin (operating voltage)					
	**Input type**	**Pin**	**Pin assignment**	**Color**	**Switch**
	4…20 mA, internally supplied	1	+24V Transmitter supply	BN	 Switch on left
		2	Output from transmitter	WH	
		3	GND	BU	
		4	Bridge to GND	BK	
	4…20 mA, externally supplied	1	Not assigned	BN	 Switch on right
		2	Process actual value +	WH	
		3	Not assigned	BU	
		4	Process actual value -	BK	

WARNING!

Risk of injury from improper assembly!

- Assembly may be carried out only by trained technicians and with the appropriate tools!
- Secure system against unintentional activation.
- Following assembly, ensure a controlled restart!

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7 Start-up

7.1 Safety instructions

⚠ WARNING!

Risk of injury from improper operation!

Improper operation may result in injuries as well as damage to the system and the area around it!

- Before start-up, ensure that the operating personnel are familiar with and completely understand the contents of the operating instructions.
- Observe the safety instructions and intended use.

Only adequately trained personnel may start up the equipment/the system.

7.2 Configuration with Bürkert Communicator

Setting can be made with the Bürkert Communicator Type 8920.

→ For general information about the Bürkert Communicator, refer to the Type 8920 operating instructions.

Connect to the Bürkert Communicator

→ Use the USB-büS-Interface set with article number 00772426.

→ Assemble the parts of the USB-büS-Interface set.

Figure 2: parts of the USB-büS interface set

→ Download the latest version of the Type 8920 Bürkert Communicator from burkert.com.

→ Install the Bürkert Communicator on a PC. During installation, the büS stick must not be inserted at the PC.

→ Insert the büS stick into a USB port of the PC.

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→ No additional power source needed for service büS (Power supply via M12x4 socket)

→ Connect the M12 female connector to the micro USB adapter.

→ Connect the micro USB connector to the port on the 8880-PS.

→ Set the büS stick switch to “ON”. The termination resistance that is integrated in the büS stick is then activated.

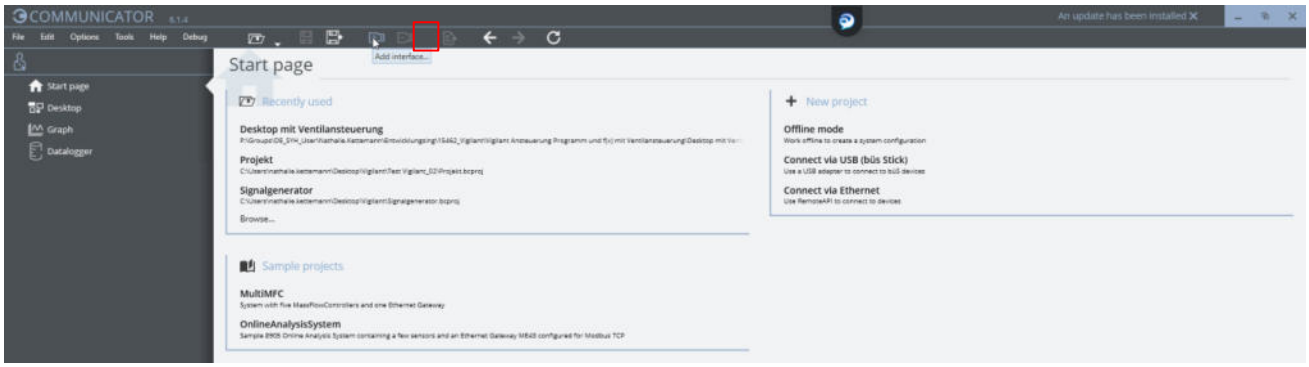
→ Insert the USB connector into a USB port of the PC.

→ Wait until the driver of the büS stick has been completely installed on the PC.

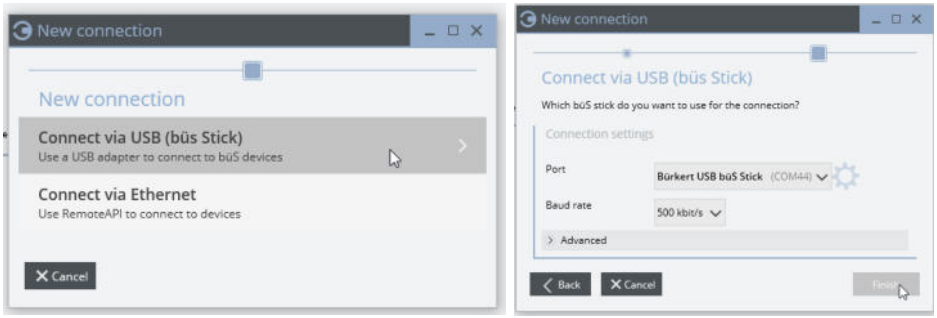
→ Energize the device. Refer to Electrical connections.

→ Start the Bürkert Communicator.

→ Add interface…



→ Connect via USB (büS Stick), the port will be automatically found → Click on Finish and wait until the device symbol appears in the list of devices.



→ All connected devices will be shown.

→ In the navigation area, click on the symbol related to the device: The device menu appears.

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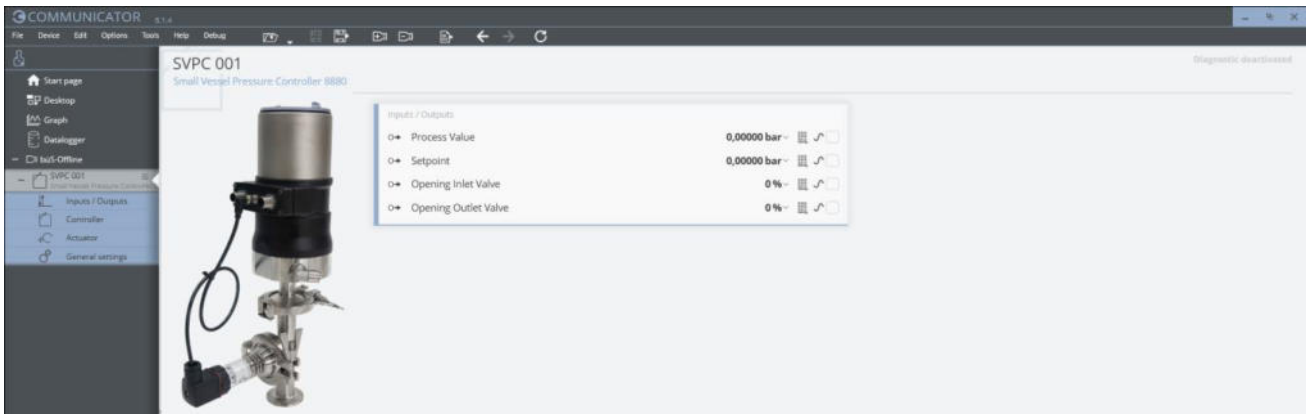
8 Operation and function

8.1 Cyclic data



8.1.1 Process Value

Transmit the current pressure in the vessel.

8.1.2 Setpoint

Transmit the target value of the pressure.

8.1.3 Opening Inlet Valve

Transmit the current opening of the Inlet Valve.

8.1.4 Opening Outlet Valve

Transmit the current opening of the Outlet Valve.

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8.2 Transmission speeds of cyclic data

The device transmits cyclic data at the following transmission speeds:

- Once every 5000ms by default if the value of a PDO is constant. The transmission speed of each PDO can be changed. Refer to change the transmission speed of a single PDO.
- Once every 10ms by default if the value of a PDO changes.

8.2.1 Change the transmission speed of a single PDO

→ In the Bürkert Communicator Software, select the device
→ Go to General settings > Parameters > PDO Configuration
→ Set the value of the Inhibit time for each PDO
→ The transmission speed of the PDO is changed.

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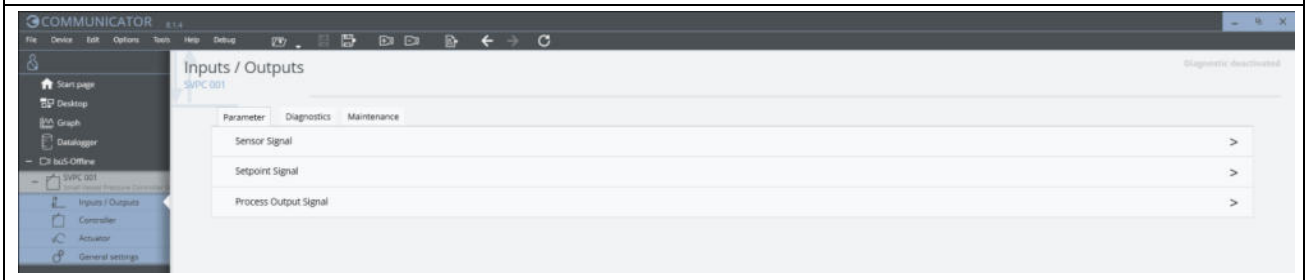
8.3 Parameter

8.3.1 Inputs / Outputs

Name	Description
Parameter	
	
Sensor Signal	
	
Minimum Value	Enter the lower measuring limit of the sensor here Default value: 0 bar
Maximum Value	Enter the upper measuring limit of the sensor here Default value: 0 bar
Filter Mode	Choose between different filter modes for the process value Default value: Off
Filter Frequency / Number of Values	This parameter can be used to set the filter strength Default value: 0.00 Note: When the frequency is set to 0.00 the filter is deactivated

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Name	Description
Setpoint Signal	
	
Setpoint Source	Switch between an externally or internally set Setpoint Default value: External Note: Different settings are available depending on which mode is active
Setpoint	Set an internal fixed Setpoint Default value: 0,00 bar
Operating Mode	Switch between different analog signal modes (0-20mA, 4-20mA, 0-5V, 0-10V) Default value: 4-20mA
Minimum Value	Enter the lower limit of the setpoint range here Default value: 0 bar
Maximum Value	Enter the upper limit of the setpoint range here Default value: 0 bar
Filter Mode	Switch between different filters (Off, Slope) Default Value: Off
Slope	This parameter can be used to set the filter strength Default value: 0.00 bar

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Name	Description
Process Output Signal	
	
Operating Mode	Switch between different analogue signal modes (0-20mA, 4-20mA, 0-5V, 0-10V) Default value: 4-20mA
Minimum Value	Enter the lower pressure limit of the output signal here Default value: 0 bar
Maximum Value	Enter the upper pressure limit of the output signal here Default value: 0 bar
Diagnostics	
	
Warning: Process Value low!	Shows the current state of the low process value error
Warning: Process Value high!	Shows the current state of the high process value error

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Name	Description
Maintenance	
	
Sensor Calibration	Only available for Userlevel = Buerkert Wizard for calibrating the sensor signal. You have to connect a standard signal source and follow the wizard's instructions. Note: Do not forget to set the switch to external input during calibration.
Setpoint Calibration	Only available for Userlevel = Buerkert Wizard for calibrating the setpoint signal You have to connect a standard signal source and follow the wizard's instructions.
Process Output Signal Calibration	Only available for Userlevel = Buerkert Wizard for calibrating the process output signal You have to connect a multimeter and follow the wizard's instructions.

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Name	Description
Warning settings	
	
Process value low	This activates a Warning Message if the process value drops below a certain limit Default value: Inactive
Low warning value	With this value you can set the limit of the Warning: Process value low. Default value: 0 bar
Process value high	This activates a Warning Message if the process value exceeds above a certain limit Default value: Inactive
High warning value	With this value you can set the limit of the Warning: Process value high. Default value: 0 bar

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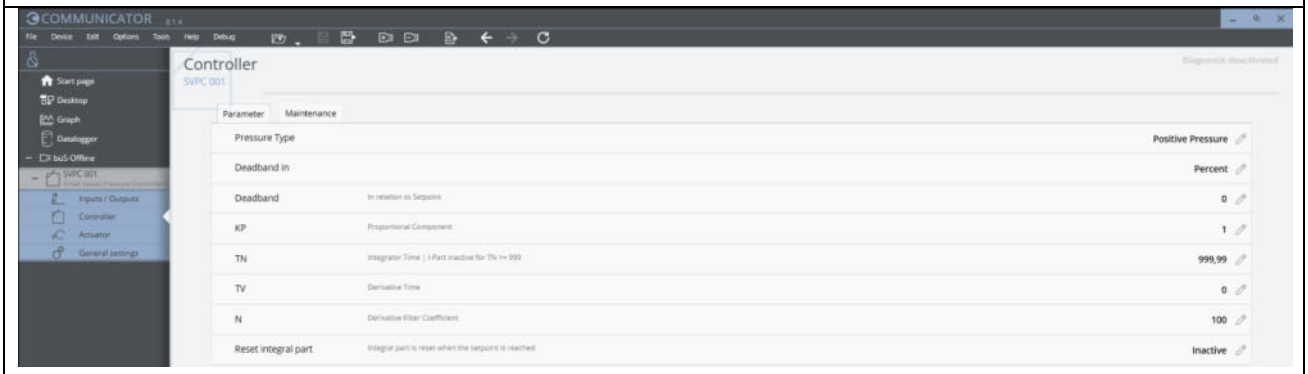
8.3.2 Controller

Name	Description
Parameter	
	
Pressure Type	Select if you want to regulate positive pressure or negative pressure Default value: Positive Pressure
Deadband in	Select between a fixed deadband in mbar or a deadband in % of the setpoint Default value: Percent
KP	KP is the factor of the proportional component of the controller Default value: 1
TN	TN is the integrator time. The smaller the factor, the greater the amplification Note: The integrating part of the controller is deactivated when TN >= 999 Default value: 999.99
TV	TV is the factor of the derivative component of the controller Default value: 0
N	With N you can set a filter for the derivative component Default value: 100

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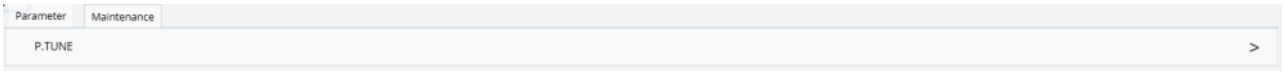
Reset integral part	If active, the integral part is reset when the setpoint is reached Default value: 0
Maintenance	
	
P.TUNE	Only available for Userlevel >= Installer
	
Controller Type	This selection can be used to determine whether the P.TUNE calculates a P or PI controller. Note: This selection will only affect the P.TUNE Default value: PI controller
Sensor Type	Please select the type of sensor connected here. Note: This selection will only affect the P.TUNE Default value: Relative
P.TUNE	This Wizard starts an algorithm that searches for the controller parameters of the system

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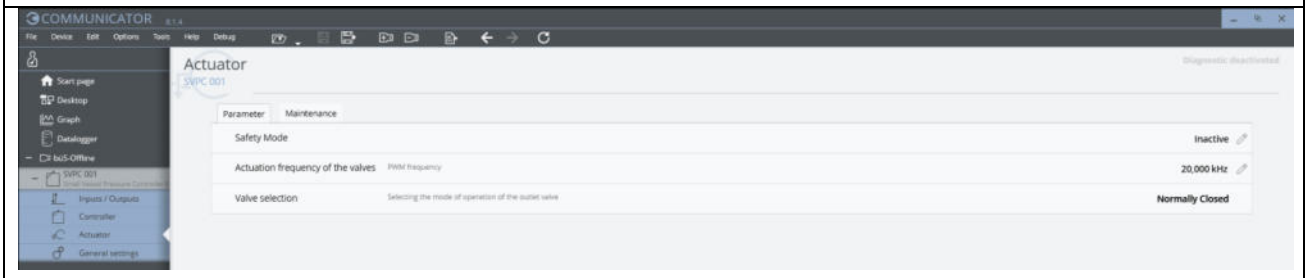
8.3.3 Actuator

Name	Description
Parameter	
	
Safety Mode	“Inactive”, “Hold Pressure” or “Vent” Safety mode is activated, if either the sensor or the setpoint signal is faulty Inactive: Safety mode doesn’t activate Hold Pressure: On activation both valves close Vent: On activation inlet valve closes and outlet valve opens Default value: Inactive
Frequency	When the Frequency resonates with the system you must change this parameter Default value: 20.000Hz
Valve selection	Switch between normally closed and normally opened according to the outlet valve in use Default value: Normally Closed
Diagnostics	
	
Safety Position	Shows the current state of the safety position

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Name	Description
Maintenance	
	
Manual Mode	
	
Manual Mode	The manual mode deactivates the controller and offers full control over the inlet and outlet valve Default value: Inactive Note: Use with care!
Opening Inlet Valve	This parameter will set the opening of the inlet valve according to the given value Default value: 0%
Opening Outlet Valve	This parameter will set the opening of the outlet valve according to the given value Default value: 0%

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Name	Description
X.TUNE	Only available for Userlevel >= Installer This Wizard starts an algorithm that searches for the working range of the valves. 1. Make sure that the maximum pressure permitted by the tank cannot be exceeded 2. The inlet pressure of the system must be 10-20% higher than the setpoint range. 3. Mount the device on a smaller tank (also possible with a bigger tank, just takes longer) and supply it with compressed air, set the setpoint range so that the upper limit can be reached with the supply pressure 4. Run X.Tune Wizard and wait (can take up to several 10min depending on the tank size, the smaller the tank the shorter) It is not necessary to perform an X.Tune; this is done at the factory before delivery.

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9 Troubleshooting

9.1 Status indicator is red

Cause	Solution
The supply voltage is out of the error range. The device can be damaged.	Operate the device within the specifications. If the status indicator is still red, then send the device back to Bürkert.
büS error or CANopen-bus error, for example a short circuit.	Make sure that the device is correctly wired.
The internal memory or the device is defective.	Contact the manufacturer, because maintenance is needed.
Safety Position active! Check Sensor Signal.	Make sure that the sensor is connected correctly. If the sensor is defective contact the manufacturer, because maintenance is needed.
Safety Position active! Check Setpoint Signal.	Make sure that the setpoint signal is connected correctly. If the setpoint signal is defective or cannot be read by the device contact the manufacturer, because maintenance is needed.

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9.2 Status indicator is orange

Cause	Solution
Attention, sensor signal faulty!	Make sure that the sensor is connected correctly. If the sensor is defective contact the manufacturer, because maintenance is needed.
Attention, setpoint signal faulty!	Make sure that the setpoint signal is connected correctly. If the setpoint signal is defective or cannot be read by the device contact the manufacturer, because maintenance is needed.
A calibration procedure is in progress.	Wait until the calibration procedure is completed.
Manual Mode active!	This indicates that the manual control of the valves is active.
X.TUNE active!	Wait until the X.TUNE has found the working range of the valves. How much time this takes depends on the tank size and can take longer than 15 minutes
P.TUNE active!	Wait until the P.TUNE has found the controller parameters for the system.

9.3 Status indicator is yellow

Cause	Solution
One of the following values is out of specification. The sensor or the device can be damaged. • the medium temperature • the device temperature • the supply voltage	Operate the device within the specifications. If the status indicator is still yellow, then send the device back to Bürkert.
Warning, low pressure detected!	The process value is below the set limit.
Warning, high pressure detected!	The process value is above the set limit.

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9.4 Status indicator is blue

Cause	Solution
Error in the internal memory.	Contact the manufacturer, because maintenance is needed.

9.5 Status indicator is off

Cause	Solution
The device is not energized.	Make sure that the device is correctly wired. Make sure that the voltage supply is in the tolerance of +- 10 % 24 V DC. Make sure that the power supply source is working properly.

9.6 Status indicator flashes

Cause	Solution
The power supply source is not working properly.	Make sure that the power supply source is working properly. After 10 seconds, the device automatically returns to the previous status.
The device is selected in the Bürkert Communicator.	The appliance automatically returns to the previous state after a maximum of 10 seconds.

9.7 Status indicator goes off periodically

Cause	Solution
The power supply is intermittently dropping and the device restarts.	Use a power supply with sufficient power output.
The voltage drop in the connecting cable is too high.	Increase the cross-section of the cable and reduce the cable length.

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9.8 Replacement device adopts none of the values from the defective device

Cause	Solution
The article number of the replacement device is different from the article number of the defective device.	Use a replacement device that has the same article number as the defective device. Values can only be transferred between devices with the same article numbers.
The backup file doesn't fit to the device.	Check the backup file.

9.9 Replacement device does not adopt all of the values from the defective device

Cause	Solution
The device description of the replacement device is different from the device structure of the defective device. Only the existing values of the defective device can be adopted by the replacement device.	Use the Bürkert Communicator to configure the new values of the replacement device.

9.10 Unstable measured value

Cause	Solution
The residual ripple on the voltage supply is too high.	Use a supply voltage that conforms to the technical data given in chapter "Technical data"
The device is caused to vibrate.	Reduce the damping factor => Refer to chapter "Controller Parameter" Reduce the input pressure or contact the manufacturer.

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9.11 Pressure setpoint cannot be reached

Cause	Solution
Input pressure too low	Increase the input pressure of the 8880-PS.
Unsuitable controller parameters	Try to improve the parameters by changing KP and TN.

9.12 Pressure is not kept constant

Cause	Solution
Pressure fluctuations in the input pressure supply	Make sure that the pressure is constant.
Unsuitable controller parameters	Try to improve the parameters by changing KP, TN and TV.
There is an uneven removal or filling of the medium from the tank	Try to make the flow more constant or try changing KP and TN.

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10 Maintenance and troubleshooting

10.1 Safety instructions

DANGER!

Risk of injury from high pressure in the equipment/system!

- Before working on the equipment or system, switch off the pressure and vent/drain lines!

Risk of injury due to electrical shock!

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

WARNING!

Risk of injury from improper maintenance work!

- Maintenance may be carried out only by trained technicians and with the appropriate tools!
- Secure system against unintentional activation.
- Observe the permissible tightening torques.
- Following installation, ensure a controlled restart!

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11 Spare parts and accessories

Spare part	Article no.
Clamp gasket ISO DN 20 EPDM	730134

CAUTION!

Risk of injury and/or damage by the use of incorrect parts!

Incorrect accessories and unsuitable spare parts may cause injuries and damage the system and the surrounding area.

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

CAUTION!

If you have any queries, please contact your Bürkert sales office - see chapter „3.2. Contact addresses“.

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12 Disassembly

12.1 Safety instructions

⚠ DANGER!

Risk of injury from high pressure in the equipment/system!

- Before working on the equipment or system, switch off the pressure and vent/drain lines!

Risk of injury due to electrical shock!

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

⚠ WARNING!

Risk of injury from improper disassembly!

- Disassembly may be carried out only by trained technicians and with the appropriate tools!

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

- Secure system from unintentional activation

Risk of injury from hazardous media!

- Before disassembly, drain and flush out the system and lines.

12.2 Disassembly

Procedure:

→ Relieve the medium pressure in the installation.
→ Relive the flushing medium pressure in the installation.
→ De-energize the device.
→ Remove the mating connectors.
→ Disconnect the medium connections.
→ Remove the device.

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13 Logistics

13.1 Packaging and transport

NOTE!

Transport damage!

Inadequately protected devices may be damaged during transportation.

- Remove cables, connectors, external filters and installation equipment.
- Clean and vent contaminated devices.
- Protect the electrical and fluidic interfaces with protective plugs.
- Protect the system against moisture and dirt in shock-resistant packaging during transportation.
- Prevent the temperature from exceeding or dropping below the permitted storage temperature.

Incorrect storage may damage the system.

- Store the system in a dry and dust-free location!
- Storage temperature: -20 ... +65 °C

13.2 Storage

NOTE!

Incorrect storage may damage the device.

- Close medium connections with protective caps.
- Store the system in a dry and dust-free location
- Observe the storage temperature limits.

13.3 Return

To return a used device to Bürkert, contact your Bürkert sales office. A return number is required.

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13.4 Disposal

NOTE!

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

- Dispose of the system and packaging in an environmentally friendly manner.
- Observe applicable disposal and environmental regulations!
- Collect electrical and electronic devices separately and dispose them as special waste.
- Observe national waste disposal regulations!

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