bürkert
FLUID CONTROL SYSTEMS

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Type 2063

INOX

2/2-way diaphragm valve with pneumatic actuator, stainless steel

Operating Instructions

Pioneers of Flow.

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Table of contents

1 About this document 5
1.1 Symbols 5
1.2 Terms and abbreviations 6
1.3 Manufacturer and contact addresses 6
2 Safety 7
2.1 Intended use 7
2.2 Safety instructions 7
3 Product description 11
3.1 Product overview 11
3.2 Product identification 12
3.2.1 Type label 12
3.2.2 Labelling on forged steel valve body 13
3.2.3 Labelling on tube valve body 14
3.2.4 Labelling on the cast valve body 15
3.2.5 Determination of actuator size 16
3.3 Functionality 16
4 Technical data 17
4.1 Standards and directives 17
4.2 Operating conditions 17
4.2.1 Permissible temperatures 17
4.2.2 Maximum operating pressure for tight shut-off with control function A 18
4.2.3 Pilot pressure 19
4.3 General technical data 21
5 Installation 22
5.1 Notes on installation 22
5.2 Installation position 22
5.3 Ensuring self-draining 22
5.4 Weld the valve body into the pipeline 24
5.5 Removing the actuator from the valve body 25
5.6 Installing the actuator on the valve body 26
5.6.1 Control function A: Installing the actuator on the valve body 26
5.6.2 Control functions B and I: Installing the actuator on the valve body 28
5.7 Compressor 30
5.8 Alignment of actuator to valve body 30
6 Pneumatic connection 31
6.1 Connecting the device pneumatically 31
7 Commissioning 32
7.1 Commission the device 32
8 Maintenance 33
8.1 Actuator 33
8.2 Wearing parts 33
8.3 Inspection intervals 33
8.4 Service life of the diaphragm 34
8.5 Cleaning 34

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

9 Repair 35
9.1 Replacing the diaphragm 35
9.1.1 Control function A: Replacing the diaphragm 36
9.1.2 Control functions B and I: Replacing the diaphragm 38
9.1.3 Switching between PTFE diaphragm and EPDM diaphragm 40
10 Troubleshooting 42
10.1 Actuator does not switch 42
10.2 Valve is not tight 42
10.3 Flow rate reduced 42
11 Disassembly 43
12 Spare parts 44
12.1 Diaphragm 44
13 Logistics 46
13.1 Transport and storage 46
13.2 Return 46
13.3 Disposal 46
14 Appendix 47
14.1 Storage of elastomer parts 47
14.2 Self-draining angle (α) 48
14.2.1 Forged steel valve body Type KB04 (VS/VH/VI) 49
14.2.2 Cast valve body (VG) 54
14.2.3 Tube valve body (VP) 58

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

1 About this document

The instructions are an important part of the product and instruct the user on safe installation and operation. The notes and instructions in this set of instructions are mandatory for the use of the product.

- Please read the safety section in full and follow the instructions before using the product for the first time.
- Before working on the product, read and observe the relevant sections of the instructions.
- Store the instructions and keep them to hand for reference, and pass them on to the next user.
- Please contact the Bürkert sales department with any questions.

Further information concerning the product at Products.

- Enter the article number from the type label in the search bar.

The illustrations in these instructions may differ from the product, depending on the variant.

1.1 Symbols

DANGER!

Warns of a danger that leads to death or serious injuries.

WARNING!

Warns of a danger that can lead to death or serious injuries.

CAUTION!

Warns of a danger that can lead to minor injuries.

NOTICE!

Warns of property damage on the product or the installation.

Indicates important additional information, tips and recommendations.

Refers to information in this document or in other documents.

- Indicates a step to be carried out.

✓ Indicates a result.

Menu Indicates a software user-interface text.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

1.2 Terms and abbreviations

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

Device	Diaphragm valve Type 2063
DS	Diaphragm size
Operating pressure	Pressure at which the operating medium is present in the pipeline during system operation and flows through the valve.
Pilot pressure	Pressure used for the control or pilot control of a valve to change its switching position.
bar, bar (g)	Unit for relative pressure
Ex area	Potentially explosive atmosphere
Ex approval	Approval for potentially explosive atmosphere

1.3 Manufacturer and contact addresses

Manufacturer

Bürkert Fluid Control Systems

Christian-Bürkert-Str. 13–17

74653 Ingelfingen

GERMANY

Contact addresses

The contact addresses are available at .

Need more information or additional products?

- Explore the full range of products on our eShop.

Service and support

Direct contact with Bürkert-Service.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

2 Safety

2.1 Intended use

The device is designed to control the flow of media. The permissible media are listed in chapter Technical data [▶ 17]

Prerequisites for safe and trouble-free operation are proper transport, storage, installation, commissioning, operation and maintenance.

The instructions are part of the device. The device is intended exclusively for use within the scope of these instructions. Uses of the device that are not described in these instructions, the contractual documents or the type label can lead to severe personal injury or death, damage to the device or property and dangers for the surrounding area or the environment.

- Only use the device for media that do not attack the body and seal materials. Information on the chemical resistance of materials in contact with media is available in the Bürkert resistApp.
- Protect the device against electromagnetic interference, UV rays and, when installed outdoors, the effects of climatic conditions.
- Only trained and qualified personnel may install, operate and maintain the device. See qualification of persons in Safety instructions [▶ 7]
- Use the device only in conjunction with third-party devices and components recommended or approved the manufacturer.
- Use the device only when it is in perfect condition.
- Observe the Operating conditions temperature ranges listed.

2.2 Safety instructions

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:

- Understand the instructions and implement the information contained therein accordingly.
- Detect and avoid dangers when working on the device.
- Safely carry out work on the device within the scope of these instructions.

Responsibility of the operator

The operator is responsible for ensuring compliance with local safety regulations, including regulations concerning personnel.

- Comply with the generally recognized rules of technology.
- Install the device in accordance with the regulations applicable in the country.
- Hazards resulting from the location where the device is used must be preventable through appropriate operating instructions provided by the operator.

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.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

- Comply with limit values. See Technical data [▶ 17] and information on the type label.
- Only feed media into the media ports that are listed in the chapter Technical data [▶ 17].
- Observe the safety data sheet for the media used.

Working on the device

Working on the device before it has been powered down, unauthorised switching-on or unmonitored start-up 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.
- Do not open electrical appliances in a damp environment.
- Following an interruption, restart the process in a controlled manner. Observe the following sequence:
  1. Switch on supply voltage or pneumatic supply.
  2. Pressurise the device with the medium.

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.
- Use the device only in conjunction with devices and components recommended or approved by the manufacturer.

Spare parts and accessories that do not meet the manufacturer's requirements may impair the operational safety of the device and cause accidents.

- To ensure operational safety, use only original parts from the manufacturer.

Operation only after proper transport, storage, installation, commissioning, or maintenance

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

- Observe all values and limits specified in these instructions to ensure the device's safety and functionality.
- Only carry out work described in these instructions.
- Only carry out work using suitable tools.
- All other work must be carried out by the manufacturer only.

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.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

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.

Contaminated pilot air

The control exhaust air of the device can be contaminated with lubricants and damage the health of people and the environment.

- Dissipate control exhaust air appropriately.
- Wear appropriate personal protective equipment when working near the device.

If exhaust air from other processes is used to generate compressed air for the device, seals may be destroyed by the media contained in the exhaust air and cause medium to escape.

- Only use fresh air for generating compressed air for the device.

Only use authorised devices in potentially explosive atmospheres

Devices that may be used in potentially explosive atmospheres are labelled with an Ex marking. Additional instructions with Ex labelling are included with these devices.

- Only use devices that are approved for use in a potentially explosive atmosphere.
- For use in potentially explosive atmospheres, observe the information on the device.
- For use in potentially explosive atmospheres, observe the additional instructions with Ex labelling.
- Do not use devices that do not have this Ex labelling and additional instructions in potentially explosive atmospheres under any circumstances.

Danger due to escaping medium

If the diaphragm is worn, medium can escape and seriously injure people.

- The relief bore must be regularly inspected for any medium leakages.
- If medium is leaking from the relief bore, replace the diaphragm.
- If the media is hazardous, protect the area surrounding the discharge point against dangers.

Hearing damage due to high noise level

Depending on the operating conditions, the device may generate loud noises.

- If the noise level exceeds 75 dB(A), wear hearing protection when near the device.

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.

Heavy device

During transportation or installation works, heavy devices may fall and cause injuries.

- Secure heavy device to keep it from tipping or falling over.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

- If necessary, only transport, install and uninstall heavy device with the help of a second person.
- Use suitable tools.

Mechanical moving parts

- Do not reach into openings.

Actuators with control function A (CF A) or control function B (CF B) contain a preloaded spring. Opening the actuator may cause injury due to the spring snapping out.

- Do not open the actuator.

Information on the Pressure Equipment Directive

Bürkert devices are categorised according to the maximum permissible medium pressure indicated on the type label, the nominal diameter DN of the port connection or the included volume, and usually for compressible fluid group 1. Exceptions are documented separately.

On the type label for Bürkert devices, the permissible medium pressure is marked with Pmed, which corresponds to the PS value in the Pressure Equipment Directive. This value can be distinguished from PN or pilot pressure, for example.

In the case of devices marked with PN, the maximum permissible medium pressure can also be restricted through pressure derating based on material or temperature.

Pressure equipment that is not in any category is designed and manufactured in accordance with good engineering practice. These devices do not receive a CE marking or EU Declaration of Conformity under the Pressure Equipment Directive.

- Ensure that the media used are compatible with the device materials and do not significantly reduce the strength of pressurised components or make the device materials brittle.
- Assign the system to a pressure equipment category according to specific operating data.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3 Product description

The diaphragm valve is an externally controlled valve with a pneumatic piston actuator and diaphragm seal.

It uses neutral gases or air to control the flow of media.

The valve is self-draining when in the appropriate installation position.

3.1 Product overview

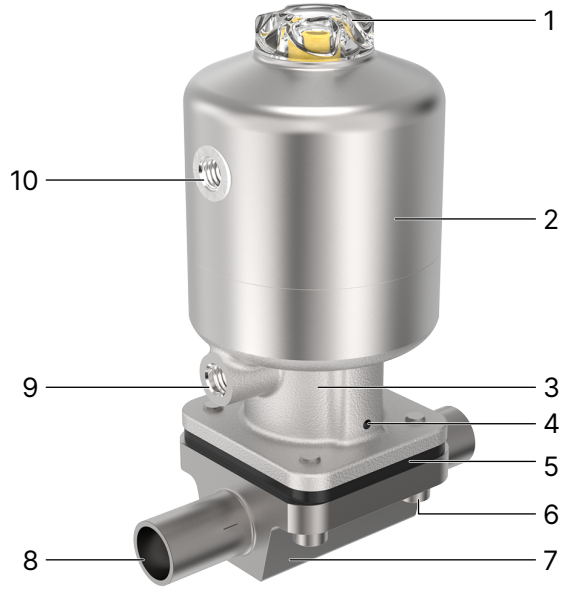


Fig. 1: Product overview of 2/2-way valve Type 2063 REV.2

1	Transparent cap with position	2	Actuator housing
3	Diaphragm bonnet	4	Relief bore
5	Diaphragm	6	Body screw
7	Valve body	8	Port connection
9	Lower pilot air port for CF A and CF I	10	Upper pilot air port for CF B and CF I

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3.2 Product identification

3.2.1 Type label

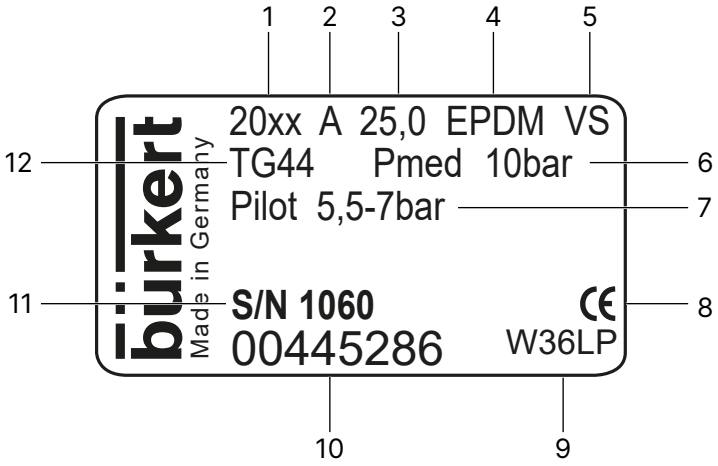


Fig. 2: Description of the type label (example)

1	Type	2	Control function
3	Diaphragm size	4	Diaphragm material
5	Valve body material	6	Operating pressure
7	Pilot pressure	8	CE marking
9	Manufacture code	10	Article number
11	Serial number	12	Port connection

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3.2.2 Labelling on forged steel valve body

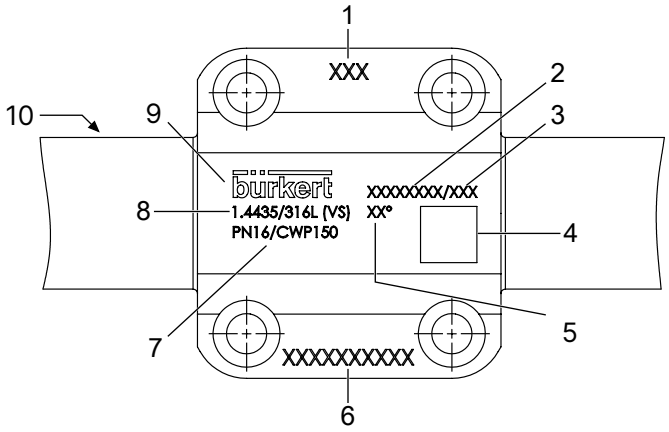


Fig. 3: Labelling on forged steel valve body

1	Batch number	2	Production number
3	Serial number	4	Data matrix code
5	Self-draining angle	6	Nominal diameter and pipe dimensions
7	Pressure level	8	Material
9	Manufacturer	10	Marking for self-draining angle (on top of pipe)

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3.2.3 Labelling on tube valve body

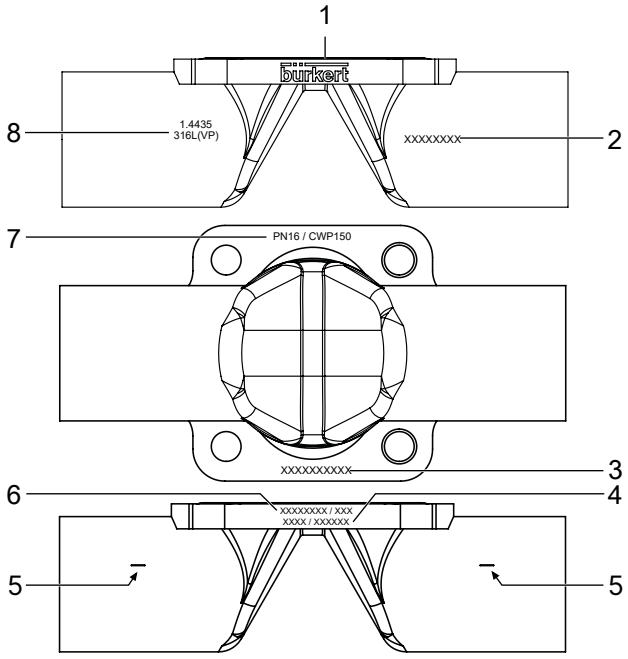


Fig. 4: Labelling on tube valve body

1	Manufacturer	2	Heat number
3	Nominal diameter and pipe dimensions	4	Self-draining angle
5	Marking for self-draining angle	6	Production number and serial number
7	Pressure level	8	Material

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3.2.4 Labelling on the cast valve body

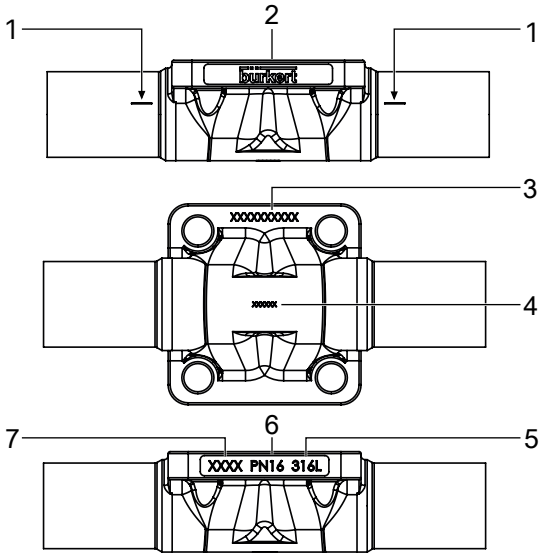


Fig. 5: Labelling on the cast valve body

1	Marking for self-draining angle	2	Manufacturer
3	Nominal diameter and pipe dimensions	4	Batch number
5	Material	6	Nominal pressure
7	Diaphragm size (nominal diameter DN)		

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

3.2.5 Determination of actuator size

Fig. 6: Determination of actuator size based on the outer diameter A of the actuator cover

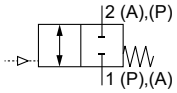
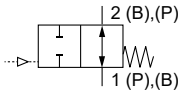
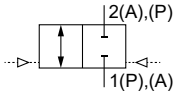
Ø A [mm]	Corresponds to actuator size
36.4	32 (B)
45	40 (C)
58.4	50 (D)
71.4	63 (E)
88.4	80 (F)

Tab. 1: Determination of actuator size

3.3 Functionality

Depending on the control function, spring force (CF A) or pneumatic pilot pressure (CF B, CF I) generates the closing force.

A spindle connected to the actuator piston transfers the force to the compressor, which presses the diaphragm against the weir in the valve body.

Symbol	Description
	**Control function A (CF A)** Pneumatically operated 2/2-way on/off valve Bidirectional Closed by spring force in rest position
	**Control function B (CF B)** Pneumatically operated 2/2-way on/off valve Bidirectional Opened by spring force in rest position
	**Control function I (CF I)** Pneumatically operated 2/2-way on/off valve on both sides Bidirectional Switching position dependent on external control unit

Tab. 2: Control function

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

4 Technical data

4.1 Standards and directives

This product complies with the legal requirements applicable at the time of placing on the market and has been developed and tested in accordance with the relevant European directives/regulations and harmonized standards. The conformity is documented and, if necessary, supported by evidence. The EU Declaration of Conformity can be found behind the respective type on the home page country.burkert.com

4.2 Operating conditions

Medium	Neutral gases and liquids, ultrapure, sterile, aggressive or abrasive media (Information on the chemical resistance of materials in contact with media is available in the Bürkert resistApp)
Control medium	Neutral gases, air
Application environment	Indoors and outdoors. Protect the device against electromagnetic interference, UV rays and, when installed outdoors, the effects of climatic conditions.
Altitude	Up to 2000 m above sea level
Storage temperature	See Storage of elastomer parts [▶ 47]

4.2.1 Permissible temperatures

Ambient temperature	0 to +130 °C
Medium temperature	–10...+150 °C

Medium temperature for diaphragms

The specified medium temperatures only apply to media that do not attack the diaphragm materials or cause it to swell up. The behaviour of the medium with respect to the diaphragm may be changed by the medium temperature. The functional properties and, in particular, the service life of the diaphragm can deteriorate as the medium temperature rises.

Do not use the diaphragms as a steam shut-off element.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Diaphragm material	Medium temperature [°C]	Comments
EPDM (AD)	–10...+143	Steam sterilisation[1] max. +150°C for 60 min
FKM (FF)	0...+130	No steam, dry heat max +150°C for 60 min
PTFE (EA)	–10...+130	Steam sterilisation[1]max. +140°C for 60 min
Advanced PTFE (EU)	–5...+143	Steam sterilisation[1] max. +150°C for 60 min
GYLON® (ER)	–5...+130	Steam sterilisation[1]max. +140°C for 60 min

Tab. 3: Medium temperatures for diaphragms

4.2.2 Maximum operating pressure for tight shut-off with control function A

Diaphragm size	Actuator size	Pilot pressure [bar]	Maximum operating pressure for seal material [2]			
			EPDM, FKM		PTFE, advanced PTFE, GYLON®	
			Dynamic [bar]	Static [bar]	Dynamic [bar]	Static [bar]
6	32 (B)	5.0–7	10	10	10	10
6	40 (C)	4.2–10	10	10	10	10
15	40 (C)	5.3–10	8.5	10	–	–
15	50 (D)	5.2–10	8.5	10	–	–
15	63 (E)	5.0–10	10	10	10	10
20	50 (D)	5.3–10	8	8	–	–
20	63 (E)	5.5–10	10	10	5	10
20	80 (F)	5.0–10	10	10	10	10
25	80 (F)	5.5–10	10	10	7.5	10
32	100 (G)	5.5–7	10	10	8	10
40	100 (G)	5.5–7	6.5	10	6[3]	9
40	125 (H)	5.5–7	10	10	10	10
50	100 (G)	5.5–7	4.5	X	2.5	X
50	125 (H)	5.5–7	8	10	7	10

Tab. 4: Maximum operating pressure

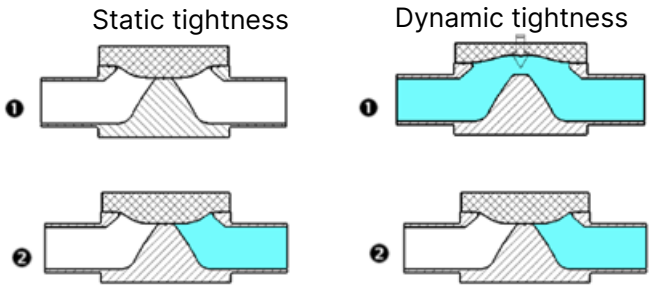
1) Extending the sterilisation period is permitted but may affect the service life and maintenance intervals.

2) In the event of deviations, the pressure values indicated on the type label must be observed.

3) Max. operating pressure for laminated GYLON®/EPDM diaphragms: 4 bar

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

4.2.2.1 Static/dynamic tightness



Static tightness

The diaphragm valve is in the closed state and the diaphragm is resting against the valve seat. Pressure is applied to one side of the body seat. At the specified pressure, there is no leak across the body seat.

Dynamic tightness

The medium flows through the open valve, with the outlet side restricted by downstream components. Pressure is applied to both sides of the body seat. The diaphragm valve is closed and seals tightly against the body seat at the specified pressure.

4.2.3 Pilot pressure

WARNING!

Risk of bursting due to overpressure

If the device bursts, escaping media may cause injuries, burns or scalds.

- Do not exceed the maximum permissible pilot pressure or maximum permissible operating pressure. Observe specifications on the type label.
- Observe the permissible ambient temperature and medium temperature.

NOTICE!

Malfunction due to incorrect pilot pressure

Valves with reduced spring force require reduced pilot pressure. The required values can be found on the type label.

- Observe the values indicated on the type label.
- Please contact the Bürkert sales department with any questions.

The following pilot air ports can be used:

Actuator size	Pilot air port
32 (B)	Above M5 Below G1/8
40 (C) to 63 (E)	G1/8
80 (F) to 125 (H)	G1/4

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Maximum permitted pilot pressure

Actuator size	Max. permitted pilot pressure [bar]
32 (B)	7
40 (C)	10
50 (D)	
63 (E)	
80 (F)	
100 (G)	7
125 (H)	

Tab. 5: Maximum permitted pilot pressure

4.2.3.1 Minimum pilot pressure for control function A

Diaphragm size	Actuator size	Minimum pilot pressure [bar][4] at	
		0 bar operating pressure	maximum operating pressure
6	32 (B)	4.5	3
6	40 (C)	4.2	4
15	40 (C)	5.3	4.0
15	50 (D)	5.2	3.5
15	63 (E)	5	4
20	50 (D)	5.3	4.8
20	63 (E)	5.5	4
20	80 (F)	5	4
25	63 (E)	5	4.5
25	80 (F)	5.5	4.5
32	100 (G)	5.5	4
40	100 (G)	5.5	4
40	125 (H)	5.5	4
50	100 (G)	5.5	3.5
50	125 (H)	5.5	3

Tab. 6: Minimum pilot pressure for CF A

4) In the event of deviations, the pressure values indicated on the type label must be observed.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

4.3 General technical data

The following technical data is listed on the diaphragm valve type label:

- Control function
- Diaphragm size
- Diaphragm material
- Valve body material
- Operating pressure
- Pilot pressure

Further technical characteristics: enter the article number in the search bar at country.burkert.com and select the product.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5 Installation

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service.

5.1 Notes on installation

NOTICE!

Protect the device against electromagnetic interference, UV rays and, when installed outdoors, the effects of climatic conditions.

- Installation site must be easily accessible and provide sufficient space for installation, disassembly and maintenance.
- Use suitable lifting gear to lift heavy equipment.
- Only lift heavy equipment by the valve body and pneumatic actuator, not by the control unit (if present).
- For pipelines, the inclination angles specified in the valid ASME BPE standard are recommended.
- Support and align pipelines.
- Ensure pipelines are aligned before connection.
- Ensure that pipelines are free of impurities (seal material, metal chips).
- The device and relief bore must be accessible for inspection and maintenance.

5.2 Installation position

Any installation position, preferably with the actuator facing up.

Installation for leakage detection

One of the relief bores in the diaphragm bonnet for monitoring leakages must be at the lowest position.

5.3 Ensuring self-draining

The installer and the operator are responsible for ensuring self-draining.

The following points must be observed for optimum self-draining:

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

1. Inclination angle of the pipeline

- The inclination angle is determined by the installer or operator.
- It should correspond to the inclination angle of the pipeline.
- For pipelines, the inclination angles specified in the valid ASME BPE standard are recommended.

2. Self-draining angle for valve body

- The self-draining angle (α) depends on:
  - The size of the valve body (diaphragm size)
  - The inner diameter of the port connection (nominal diameter)
- On forged steel valve bodies (VS), tube valve bodies (VP) as well as – for diaphragm size 6 only – stainless steel round material (VI), the angle is specified as a value.
- The marking for self-draining angles on the port connection serves as a guide and must point upwards.
- The actual angle must be set with a suitable measuring tool.

The specified angles are to be understood as a guide value and may be subject to certain fluctuations due to permissible manufacturing tolerances.

The values are in the appendix for valve bodies without angle information.

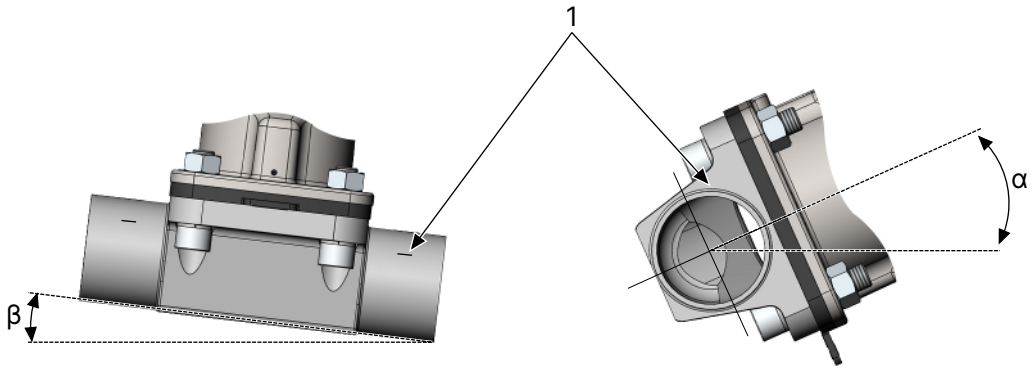


Fig. 7: Installation position for self-draining

β	Inclination angle of the pipeline	1	Marking for self-draining
α	Self-draining angle		

Self-draining does not mean that the valve will drain completely and without residue when installed correctly.

Draining is influenced by various factors, including:

- Inner diameter of the pipeline
- Surface quality
- Inclination angle to the line axis
- Medium (viscosity and adhesion)

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5.4 Weld the valve body into the pipeline

NOTICE!

Damage to the diaphragm or the actuator

The diaphragm and actuator can be damaged when welding the valve body into the pipeline.

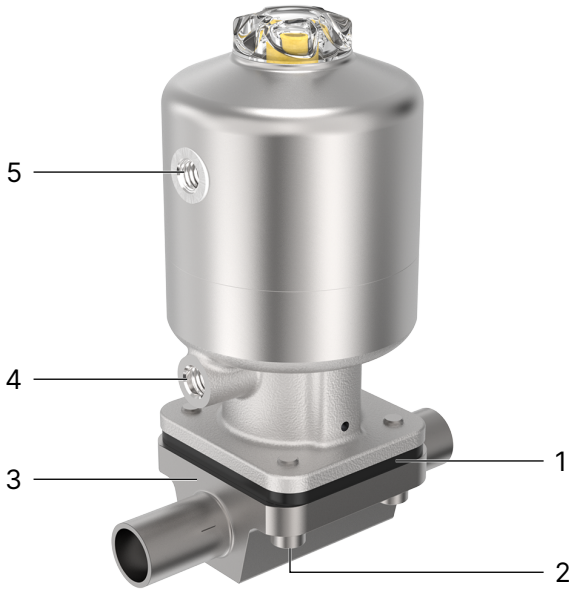
- In the case of devices with a welded connection, remove the actuator and diaphragm from the valve body before installation.

The installation is divided into the following steps:

1. Removing the actuator from the valve body [▶ 25]
2. Weld the valve body into the pipeline.
   - After welding the surface of the valve body, smooth by sanding if necessary.
   - Clean the valve body carefully.
3. Installing the actuator on the valve body [▶ 26].

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5.5 Removing the actuator from the valve body



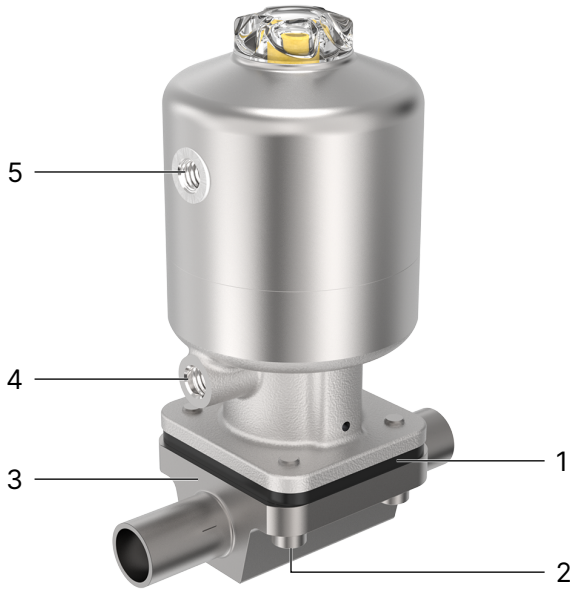
1	Diaphragm	2	Body screw
3	Valve body	4	Lower pilot air port for CF A and CF I
5	Upper pilot air port for CF B and CF I		

- Clamp the valve body in a holding device (only for devices which have not yet been installed).
- **NOTICE! For valves with control function A:** Pressurise the lower pilot air port with compressed air (value as indicated on the type label). This is required to detach the diaphragm from the body without being damaged.
  This step is not necessary for valves with control functions B and I.
- Loosen the body screws crosswise and remove the actuator and diaphragm from the valve body.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5.6 Installing the actuator on the valve body

5.6.1 Control function A: Installing the actuator on the valve body



1	Diaphragm	2	Body screw
3	Valve body	4	Lower pilot air port for CF A and CF I
5	Upper pilot air port for CF B and CF I		

- Ensure the correct position of the compressor (see Compressor [▶ 30]).
  Note: Not necessary for diaphragm size 8.
- Place the actuator together with the diaphragm on the valve body.
- For diaphragm size 6, ensure that the compressor ridge and the body weir lie on top of each other (see Alignment of actuator to valve body [▶ 30]).
- Slightly tighten the body screws crosswise until the diaphragm rests between the valve body and the actuator. **Do not fully tighten the screws yet.**
- Actuate the valve twice to position the diaphragm correctly.
- Switch off the pilot pressure.
- Without applying pressure, tighten the body screws in three stages (approx. 1/3, then 2/3 and then full tightening torque, as specified in the following table), in each case crosswise. The diaphragm should be positioned and pressed evenly all around the actuator and valve body.

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
6	1.1	1.1	–	–
8	2	2.5	2	2.5

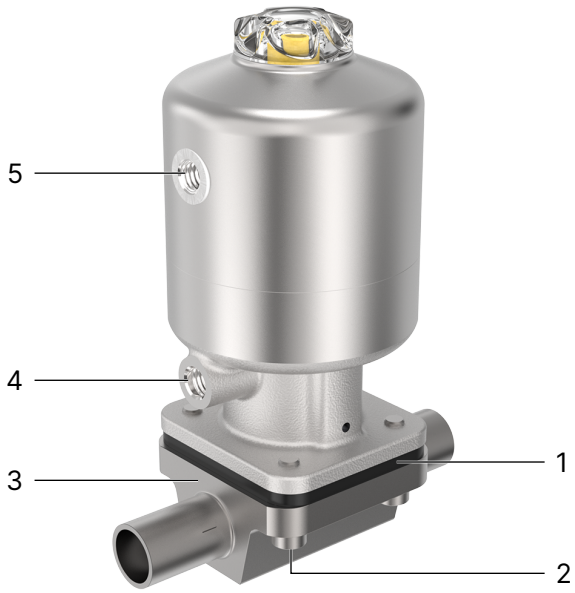
MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
15	3.5	4	3.5	4
20	4	4.5	4	4.5
25	5	6	7	8
32	6	8	8	10
40	8	10	12	15
50	12	15	15	20

Tab. 7: Tightening torques for body connection

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5.6.2 Control functions B and I: Installing the actuator on the valve body



1	Diaphragm	2	Body screw
3	Valve body	4	Lower pilot air port for CF A and CF I
5	Upper pilot air port for CF B and CF I		

- Ensure the correct position of the compressor (see Compressor [▶ 30]).
  Note: Not necessary for diaphragm size 8.
- Place the actuator together with the diaphragm on the valve body.
- For diaphragm size 6, ensure that the compressor ridge and the body weir lie on top of each other (see Alignment of actuator to valve body [▶ 30]).
- Slightly tighten the body screws crosswise without applying pressure until the diaphragm rests between the valve body and actuator. **Do not fully tighten the screws yet.**
- Actuate the valve twice to position the diaphragm correctly.
- Pressurise the upper pilot air port with compressed air (value as indicated on the type label): valve closes.
- With pressure, tighten the body screws in three stages (approx. 1/3, then 2/3 and then full tightening torque, as specified in the following table), in each case crosswise. The diaphragm should be positioned and pressed evenly all around the actuator and valve body.

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
6	1.1	1.1	–	–
8	2	2.5	2	2.5
15	3.5	4	3.5	4

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
20	4	4.5	4	4.5
25	5	6	7	8
32	6	8	8	10
40	8	10	12	15
50	12	15	15	20

Tab. 8: Tightening torques for body connection

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

5.7 Compressor

WARNING!

Risk of crushing

If the compressor is not positioned correctly and the actuator is actuated, this may result in injuries and damage to the device.

- Before actuating the actuator, ensure that the compressor is in the correct position.

Fig. 8: Correct and incorrect position of the compressor

5.8 Alignment of actuator to valve body

The compressor weir and body weir must overlap. The relief bore must be arranged perpendicular to the port connections.

With diaphragm size 6, attention must be paid to the correct alignment of the body due to the square hole pattern. For all other diaphragm sizes, the hole pattern prevents faulty installation.

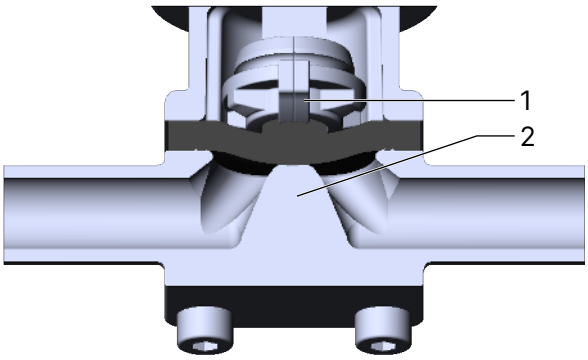


Fig. 9: Alignment of actuator to valve body

1	Compressor ridge	2	Body weir

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

6 Pneumatic connection

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service.

6.1 Connecting the device pneumatically

WARNING!

Risk of injury from connection of unsuitable hoses

Inappropriate hoses can come loose and swing around.

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

WARNING!

For control function I: Risk of injury in the event of pilot pressure failure

The valve stays in an undefined position in the event of a pilot pressure failure.

- Switch off the pressure before working on the device or system. Vent or drain the lines.
- To ensure a controlled restart, first pressurise the device with pilot pressure, then switch on the medium.

Control function A:

- Connect the control medium to bottom of the pilot air port of the actuator.

Control function B:

- Connect the control medium to top of the pilot air port of the actuator.

Control function I:

- Connect the control medium to upper and lower pilot air port of the actuator.
  Pressure at upper pilot air port: valve closes.
  Pressure at lower pilot air port: valve opens.

The following pilot air ports can be used:

Actuator size	Pilot air port
32 (B)	Above M5 Below G1/8
40 (C) to 63 (E)	G1/8
80 (F) to 125 (H)	G1/4

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

7 Commissioning

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service.

7.1 Commission the device

WARNING!

For control function I: Risk of injury in the event of pilot pressure failure

The valve stays in an undefined position in the event of a pilot pressure failure.

- Switch off the pressure before working on the device or system. Vent or drain the lines.
- To ensure a controlled restart, first pressurise the device with pilot pressure, then switch on the medium.

WARNING!

Risk of injury from high pressure or hot medium

Excessively high pressure or temperatures may damage the device and cause leaks.

- Observe values for pressure and medium temperature indicated on the type label.

In the case of devices with control unit, observe start-up in the operating instructions for the corresponding control unit.

- Adjust the pilot pressure in accordance with the information on the type label and in technical data.
- Commission the device.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

8 Maintenance

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service .

8.1 Actuator

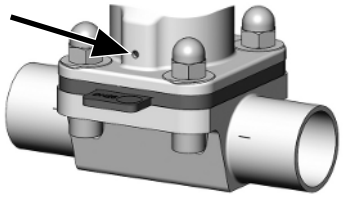
The device actuator is maintenance-free if the instructions in these operating instructions are followed.

8.2 Wearing parts

Components which are subject to natural wear are:

- Seals
- Diaphragm

- If leaks occur, replace the affected wearing parts with suitable spare parts.
- The relief bore must be inspected at regular intervals for any medium leakages.



A bulging diaphragm may reduce the flow rate.

8.3 Inspection intervals

The following inspection intervals apply to the diaphragm valve:

- **After the first steam sterilisation and when required:**
  Tighten the body screws crosswise.
- **After 10^5 switching cycles at the latest:**
  Check the diaphragm for wear.

Shortened inspection intervals are required for muddy and abrasive media.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

8.4 Service life of the diaphragm

The service life of the diaphragm depends on the following factors:

- Diaphragm material
- Medium
- Medium pressure
- Medium temperature
- Actuator size
- Pilot pressure for CF B and CF I

To increase the diaphragm service life, observe the following instructions:

- ▸ **For CF A:** Match the actuator size (actuator force) to the medium pressure to be actuated. If required, use the actuator with reduced spring force EC04.
- ▸ **For CF B and CF I:** Select a pilot pressure that is not higher than is required to actuate the medium pressure.

8.5 Cleaning

NOTICE!

Avoid causing damage with cleaning agents.

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

- ▸ Only use commercially available cleaning agents for external cleaning.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

9 Repair

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service.

9.1 Replacing the diaphragm

DANGER!

Risk of injury from sudden discharge of pressure and escaping medium

Disassembling a pressurised device can cause medium to escape unexpectedly or a sudden discharge of pressure. This can cause serious injuries.

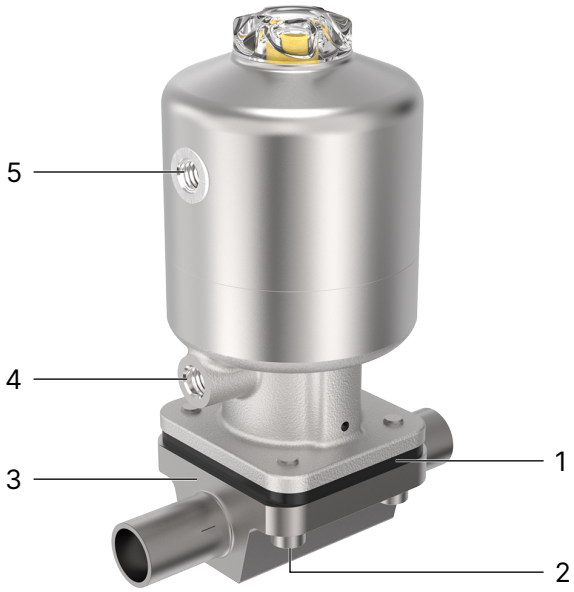
- Before disassembly, shut off the pressure and vent all lines.
- Completely drain the lines.
- During reinstallation, check the tightening torque of the body screws.

Diaphragm size	Diaphragm material	
	PTFE and advanced PTFE	EPDM, FKM and GYLON®
≤8	Diaphragm fastening using buttons	
15, 20	Diaphragm fastening using bayonet catch	
≥25	Diaphragm fastening using bayonet catch	Diaphragm fastening using threaded connection

Tab. 9: Types of diaphragm fastening

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

9.1.1 Control function A: Replacing the diaphragm



1	Diaphragm	2	Body screw
3	Valve body	4	Lower pilot air port for CF A and CF I
5	Upper pilot air port for CF B and CF I		

- Clamp the valve body in a holding device (only for devices which have not yet been installed).
- Loosen the body screws crosswise and remove the actuator and diaphragm from the valve body.
- Unbutton or unscrew the old diaphragm. When fastening with a bayonet catch, loosen the diaphragm by rotating it 90°. For diaphragm size ≥25, observe additional chapter Switching between PTFE diaphragm and EPDM diaphragm [▶ 40].
- Ensure the correct position of the compressor (see Compressor [▶ 30]).
  Note: Not necessary for diaphragm size 8.

NOTICE!

Damage to diaphragms with threaded connection

If the pin is live, the diaphragm may be damaged.

- First screw on the diaphragm hand-tight, then loosen it by one-half turn anticlockwise.

- Attach the new diaphragm to the compressor according to the fastening type. When fastening the diaphragm by buttoning it in, a slight twisting motion is helpful. The identification tab must be perpendicular to the flow direction.
- Place the actuator together with the diaphragm on the valve body.
- For diaphragm size 6, ensure that the compressor ridge and the body weir lie on top of each other (see Alignment of actuator to valve body [▶ 30]).
- Slightly tighten the body screws crosswise until the diaphragm rests between the valve body and the actuator. **Do not fully tighten the screws yet.**
- Actuate the valve twice to position the diaphragm correctly.
- Switch off the pilot pressure.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

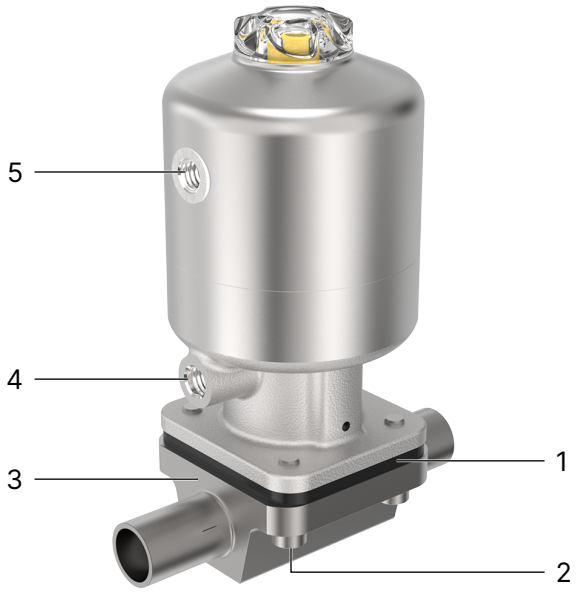
- Without applying pressure, tighten the body screws in three stages (approx. 1/3, then 2/3 and then full tightening torque, as specified in the following table), in each case crosswise. The diaphragm should be positioned and pressed evenly all around the actuator and valve body.

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
6	1.1	1.1	–	–
8	2	2.5	2	2.5
15	3.5	4	3.5	4
20	4	4.5	4	4.5
25	5	6	7	8
32	6	8	8	10
40	8	10	12	15
50	12	15	15	20

Tab. 10: Tightening torques for body connection

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

9.1.2 Control functions B and I: Replacing the diaphragm



1	Diaphragm	2	Body screw
3	Valve body	4	Lower pilot air port for CF A and CF I
5	Upper pilot air port for CF B and CF I		

- Clamp the valve body in a holding device (only for devices which have not yet been installed).
- Loosen the body screws crosswise and remove the actuator and diaphragm from the valve body.
- Unbutton or unscrew the old diaphragm. When fastening with a bayonet catch, loosen the diaphragm by rotating it 90°. For diaphragm size ≥25, observe additional chapter Switching between PTFE diaphragm and EPDM diaphragm [▶ 40].
- Ensure the correct position of the compressor (see Compressor [▶ 30]).
  Note: Not necessary for diaphragm size 8.

NOTICE!

Damage to diaphragms with threaded connection

If the pin is live, the diaphragm may be damaged.

- First screw on the diaphragm hand-tight, then loosen it by one-half turn anticlockwise.

- Attach the new diaphragm to the compressor according to the fastening type. When fastening the diaphragm by buttoning it in, a slight twisting motion is helpful. The identification tab must be perpendicular to the flow direction.
- Place the actuator together with the diaphragm on the valve body.
- For diaphragm size 6, ensure that the compressor ridge and the body weir lie on top of each other (see Alignment of actuator to valve body [▶ 30]).
- Slightly tighten the body screws crosswise without applying pressure until the diaphragm rests between the valve body and actuator. **Do not fully tighten the screws yet.**
- Actuate the valve twice to position the diaphragm correctly.
- Pressurise the upper pilot air port with compressed air (value as indicated on the type label): valve closes.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

- With pressure, tighten the body screws in three stages (approx. 1/3, then 2/3 and then full tightening torque, as specified in the following table), in each case crosswise. The diaphragm should be positioned and pressed evenly all around the actuator and valve body.

Diaphragm size	Tightening torques [Nm] (tolerance: +10 %)			
	all bodies except tube valve bodies (VP)		Tube valve body (VP)	
	EPDM, FKM	PTFE, advanced PTFE, GYLON®	EPDM, FKM	PTFE, advanced PTFE, GYLON®
6	1.1	1.1	–	–
8	2	2.5	2	2.5
15	3.5	4	3.5	4
20	4	4.5	4	4.5
25	5	6	7	8
32	6	8	8	10
40	8	10	12	15
50	12	15	15	20

Tab. 11: Tightening torques for body connection

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

9.1.3 Switching between PTFE diaphragm and EPDM diaphragm

Diaphragm size	Diaphragm material	
	PTFE and advanced PTFE	EPDM, FKM and GYLON®
≤8	Diaphragm fastening using buttons	
15, 20	Diaphragm fastening using bayonet catch	
≥25	Diaphragm fastening using bayonet catch	Diaphragm fastening using threaded connection

Tab. 12: Types of diaphragm fastening

9.1.3.1 Replacement for diaphragm size ≤8

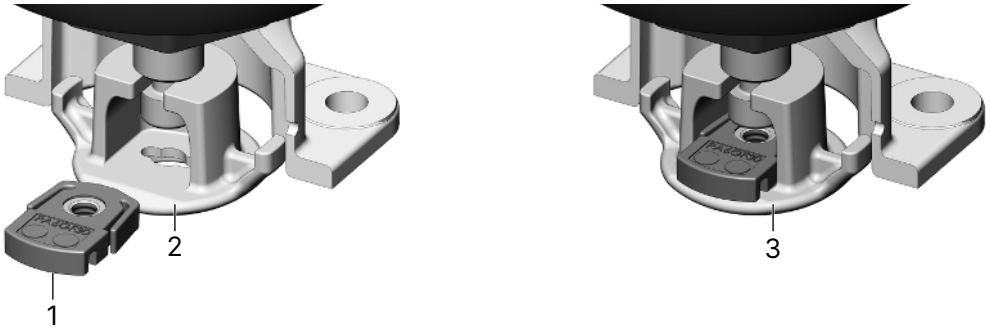
- Unbutton the diaphragm and button on the new diaphragm by turning it slightly.

9.1.3.2 Replacement for diaphragm sizes 15 and 20

- Loosen the bayonet diaphragm by turning it 90°, insert the new diaphragm and turn it 90° to secure it.

9.1.3.3 Replacement for diaphragm sizes ≥25

Switching from PTFE diaphragm to EPDM diaphragm



1	Insert	2	Compressor
3	Compressor with installed insert		

- Loosen the PTFE diaphragm by turning it 90°.
- Place the insert into the compressor.
- Screw in the EPDM diaphragm.

NOTICE!

Damage to diaphragms with threaded connection

If the pin is live, the diaphragm may be damaged.

- First screw on the diaphragm hand-tight, then loosen it by one-half turn anticlockwise.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Switching from EPDM diaphragm to PTFE diaphragm

NOTICE!

Damage to diaphragm with bayonet connection

If the insert is not removed from the compressor on diaphragms with a bayonet connection, the diaphragm and valve body may be severely damaged.

After changing from an EPDM diaphragm to a PTFE diaphragm, the maximum medium pressures at which tight shut-off can be maintained may be lower.

- Observe the permissible operating pressures according to the technical data.

- Unscrew the EPDM diaphragm.
- Remove the insert from the compressor.
- Insert the PTFE diaphragm and turn it 90° to secure it.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

10 Troubleshooting

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

Service and support

- For further information, technical advice and support, contact Bürkert service.

10.1 Actuator does not switch

Cause	Solution
Pilot air port interchanged.	▸ Connect the pilot air correctly: CF A: Lower pilot air port CF B: Upper pilot air port CF I: Lower pilot air port opens, upper pilot air port closes the valve
Pilot pressure too low.	▸ Observe pressure data on the type label.
Operating pressure too high.	▸ Observe pressure data on the type label.

10.2 Valve is not tight

Cause	Solution
Pilot pressure too low.	▸ Observe pressure data on the type label.
Operating pressure too high.	▸ Observe pressure data on the type label.

10.3 Flow rate reduced

Cause	Solution
Bulging PTFE diaphragm.	▸ Replace the diaphragm.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

11 Disassembly

Risk of injury or material damage when working on the device or system.

- Read and observe the chapter Safety [▶ 7] before working on the device or system.

DANGER!

Risk of injury from sudden discharge of pressure and escaping medium

Disassembling a pressurised device can cause medium to escape unexpectedly or a sudden discharge of pressure. This can cause serious injuries.

- Before disassembly, shut off the pressure and vent all lines.
- Completely drain the lines.
- During reinstallation, check the tightening torque of the body screws.

- Loosen the pneumatic connection.
- Disassemble the device.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

12 Spare parts

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

- Only use original Bürkert parts.

12.1 Diaphragm

Depending on the valve type, not all of the listed diaphragm sizes are available. The sizes specified for the respective diaphragm valve are decisive.

The diaphragms are labelled with a material code that specifies it. The material code is located on the identification tab or, in the case of two-part diaphragms, on the tab of the backing diaphragm and the diaphragm shield. The material code may differ for older materials.

Diaphragm size	EPDM (AD[5])		FKM (FF[5])	
	Order number	Material code	Order number	Material code
6	20130838	EPDM E04	–	–
8	688421	EPDM E04	677684	FKM F01
15	688422	EPDM E04	677685	FKM F01
15 BC[6]	693163	EPDM E04	693164	FKM F01
20	688423	EPDM E04	677686	FKM F01
20 BC[6]	693166	EPDM E04	693167	FKM F01
25	688424	EPDM E04	677687	FKM F01
32	688425	EPDM E04	677688	FKM F01
40	688426	EPDM E04	677689	FKM F01
50	688427	EPDM E04	677690	FKM F01
65	688428	EPDM E04	677691	FKM F01
80	688429	EPDM E04	677692	FKM F01
100	688430	EPDM E04	677693	FKM F01

Tab. 13: Order numbers for EPDM and FKM diaphragms

5) SAP code

6) Marking on the diaphragm

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Diaphragm size	PTFE/EPDM (EA[5])		Advanced PTFE/EPDM (EU[5])	
	Order number	Material code	Order number	Material code
6	–	–	–	–
8	20093068	PTFE L11	20093078	PTFE L12
15	20093069	EPDM E04/ PTFE P05	20093079	EPDM E04/ PTFE P06
20	20093070	EPDM E04/ PTFE P05	20093080	EPDM E04/ PTFE P06
25	20093071	EPDM E04/ PTFE P05	20093082	EPDM E04/ PTFE P06
32	20093072	EPDM E04/ PTFE P05	20093083	EPDM E04/ PTFE P06
40	20093073	EPDM E04/ PTFE P05	20093084	EPDM E04/ PTFE P06
50	20093074	EPDM E04/ PTFE P05	20093087	EPDM E04/ PTFE P06
65	20093075	EPDM E04/ PTFE P05	20093088	EPDM E04/ PTFE P06
80	20093076	EPDM E04/ PTFE P05	20093091	EPDM E04/ PTFE P06
100	20093077	EPDM E04/ PTFE P05	20093092	EPDM E04/ PTFE P06

Tab. 14: Order numbers for PTFE and advanced PTFE diaphragms

Diaphragm size	Laminate made from Gylon® and EPDM (ER[5])	
	Order number	Material code
6	20130839	PTFE L08
8	693175	PTFE L08
15	693176	PTFE L08
20	693177	PTFE L08
25	693178	PTFE L08
32	693179	PTFE L08
40	693180	PTFE L08
50	693181	PTFE L08
65	586616	PTFE L08
80	586617	PTFE L08
100	-	–

Tab. 15: Article numbers for GYLON® diaphragms

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

13 Logistics

13.1 Transport and storage

- Protect the device against moisture and dirt in the original packaging during transportation and storage.
- Avoid UV radiation and direct sunlight.
- Protect connections, if present, from damage with protective caps.
- Observe the permitted storage temperature.
- If the device is to be stored for a long time, loosen the body screws to avoid permanent deformation of the diaphragms due to a lack of medium pressure.
- Mark loosened screws clearly for safety reasons.

Observe the instructions in chapter Storage of elastomer parts [▶ 47].

DANGER!

Risk of injury due to escaping medium

Loosened body screws can cause medium (acid, alkali, hot media) to leak and lead to burns, including chemical burns.

- Before reinstallation, check the tightening torque of the body screws.

13.2 Return

No work or tests will be carried out on the device until a valid Contamination Declaration has been received.

- Before returning a used device, log in to a Bürkert account and create a return request via My Services.
  Register an account before creating the request, if necessary. A return number is required for all used devices.
- Complete the Contamination Declaration and include it with the return shipment.
- Reinstall all original protective caps and plugs before shipping. This helps protect the device against contamination and transport damage.
- Pack the device securely and clearly indicate the return number on the shipment.

13.3 Disposal

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 can be found at country.burkert.com

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

14 Appendix

14.1 Storage of elastomer parts

Elastomer parts could lose their eponymous features as storage time progresses. These changes happen based on various influencing factors such as light, heat, ozone, humidity, deformation, oxygen, oils and solvents. International standards such as DIN 7716 or ISO 2230 Basic illustrate basic instructions for correct storage.

The below mentioned information regarding storage time, under optimum conditions, are based on the above mentioned guidelines and on our experience. In principle, they should be considered when maintaining their physical and chemical properties. Correct storage is an important factor in the operating life of elastomers especially for highly stressed components (e.g. diaphragms).

- Optimal storage temperature is between + 5°C and + 25°C. The parts shouldn't be stored next to a heating element.
- Relative air humidity should be less than 65% with condensation avoided at all times.
- Parts should be stored away from all direct sunlight and artificial light with a high UV, as this will speed up the ageing process.
- All parts should be also stored in an airtight container to protect them from circulating air and other environmental influences such as Ozone for example.
- Ozone generating devices, such as electric motors, should also not be operated within storage areas.
- Elastomer parts are best stored in a relaxed and non deforming condition.
- Contact to solvents, oils, fats and other chemicals should be avoided at all times.
- No contact with rubber products of varying composition especially of varying colors.
- No contact with parts made of cooper, manganese or alloys of these metals.

Based on the above, the following is the expected life cycle for diaphragms.

Raw Material	Storage Period (max.)	Operating Time (max.)
EPDM	7 years	3 years
FKM	7 years	4 years
PTFE or advanced PTFE	10 years	3 years[7)]

[7)] Regarding PTFE diaphragm variants, the stated times of the elastomer material are crucial.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

14.2 Self-draining angle (α)

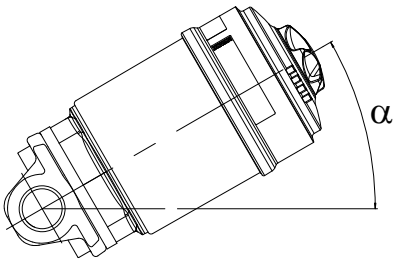


Fig. 10: Self-draining angle (α)

Bürkert has determined self-draining angles for the optimum draining of diaphragm valve bodies.

- The self-draining angle (α) depends on:
  - The size of the valve body (diaphragm size)
  - The inner diameter of the port connection (nominal diameter)
- The angle is given as a value on forged steel valve bodies (VS) and tube valve bodies (VP).
- The marking for self-draining angles on the port connection serves as a guide and must point upwards.
- The actual angle must be set with a suitable measuring tool.

For optimum self-draining, the angles given in the following tables apply.

The self-draining angles of the valve bodies with a welded connection also apply to the valve bodies with a clamp connection.

The responsible Bürkert sales department must be contacted to determine self-draining angles for welded connections that are not listed in the tables.

The installer and the operator are responsible for ensuring self-draining.

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

14.2.1 Forged steel valve body Type KB04 (VS/VH/VI)

For diaphragm size 15, the self-draining angle has changed due to optimisations made to the body (October 2025). Therefore, please always observe the information in the table and the engraving on the underside of the valve body during installation.

The installer and the operator are responsible for ensuring self-draining.

Forged steel valve body, with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA40	8	6	13.5 x 1.6	20
SA40	8	8	13.5 x 1.6	24
SA40	8	15	13.5 x 1.6	40
SA41	10	8	17.2 x 1.6	13
SA41	10	15	17.2 x 1.6	29[8)]
SA42	15	15	21.3 x 1.6	22[9)]
SA42	15	20	21.3 x 1.6	26
SA43	20	20	26.9 x 1.6	17
SA43	20	25	26.9 x 1.6	26
SA44	25	25	33.7 x 2.0	19
SA44	25	40	33.7 x 2.0	27
SA45	32	40	42.4 x 2.0	20
SA46	40	40	48.3 x 2.0	14
SA47	50	50	60.3 x 2.0	14
SA48	65	65	76.1 x 2.0	9
SA48	65	80	76.1 x 2.0	20
SA49	80	80	88.9 x 2.3	15
SA39	100	100	114.3 x 2.3	14

Tab. 16: Forged steel valve body with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B

8) 25° before body optimisation

9) 18° before body optimisation

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Forged steel valve body, with welded connection as per DIN 11850 Series 0				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SC40	4	8	6.0 x 1.0	49
SC41	6	8	8.0 x 1.0	44
SC42	8	8	10.0 x 1.0	39
SC43	15	15	18.0 x 1.5	27[10)]
SC44	20	20	22.0 x 1.5	25
SC45	25	25	28.0 x 1.5	24
SC46	32	40	34.0 x 1.5	27
SC47	40	40	40.0 x 1.5	21
SC48	50	50	52.0 x 1.5	19

Tab. 17: Forged steel valve body with welded connection as per DIN 11850 Series 0

Forged steel valve body, with welded connection as per DIN 11850 Series 1 / DIN EN 10357 Series B				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SF40	10	8	12.0 x 1.0	24
SF41	15	15	18.0 x 1.0	25[11)]
SF42	20	20	22.0 x 1.0	22
SF43	25	25	28.0 x 1.0	23
SF45	40	40	40.0 x 1.0	20
SF46	50	50	52.0 x 1.0	18

Tab. 18: Forged steel valve body with welded connection as per DIN 11850 Series 1 / DIN EN 10357 Series B

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

10) 23° before body optimisation

11) 22° before body optimisation

Forged steel valve body, with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SD40	10	6	13.0 x 1.5	21
SD40	10	8	13.0 x 1.5	24
SD40	10	15	13.0 x 1.5	44[12)]
SD42	15	15	19.0 x 1.5	25[11)]
SD43	20	20	23.0 x 1.5	22
SD44	25	25	29.0 x 1.5	23
SD45	32	40	35.0 x 1.5	26
SD46	40	40	41.0 x 1.5	20
SD47	50	50	53.0 x 1.5	18
SD48	65	65	70.0 x 2.0	13
SD48	65	80	70.0 x 2.0	23
SD49	80	80	85.0 x 2.0	16
SD50	100	100	104.0 x 2.0	18

Tab. 19: Forged steel valve body with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A

Forged steel valve body, with welded connection as per DIN 11850 Series 3				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SE40	10	8	14.0 x 2.0	24
SE42	15	15	20.0 x 2.0	25[11)]
SE43	20	20	24.0 x 2.0	22
SE44	25	25	30.0 x 2.0	23
SE46	40	40	42.0 x 2.0	20
SE47	50	50	54.0 x 2.0	18

Tab. 20: Forged steel valve body with welded connection as per DIN 11850 Series 3

12) 40° before body optimisation

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Forged steel valve body, with welded connection as per ASME BPE / DIN 11866 Series C				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA89	1/8"	8	3.17 x 0.56	53
SA90	1/4"	6	6.35 x 0.89	35
SA90	1/4"	8	6.35 x 0.89	48
SA91	3/8"	6	9.53 x 0.89	27
SA91	3/8"	8	9.53 x 0.89	39
SA92	1/2"	6	12.7 x 1.65	23
SA92	1/2"	8	12.7 x 1.65	26
SA92	1/2"	15	12.7 x 1.65	45[13)]
SA93	3/4"	15	19.5 x 1.65	26[11)]
SA93	3/4"	20	19.5 x 1.65	29
SODF	1"	25	25.4 x 1.65	27
SODH	1 1/2"	40	38.1 x 1.65	24
SODI	2"	50	50.8 x 1.65	20
SODJ	2 1/2"	50	63.5 x 1.65	11
SODJ	2 1/2"	65	63.5 x 1.65	16
SODJ	2 1/2"	80	63.5 x 1.65	25
SODK	3"	80	76.2 x 1.65	19
SODL	4"	100	101.6 x 2.11	19

Tab. 21: Forged steel valve body with welded connection as per ASME BPE / DIN 11866 Series C

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

13) 41° before body optimisation

Forged steel valve body, with welded connection as per BS 4825				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SODB	1/4"	8	6.35 x 1.2	50
SODC	3/8"	8	9.53 x 1.2	42
SODD	1/2"	8	12.7 x 1.2	24
SODD	1/2"	15	12.7 x 1.2	43[12)]
SODE	3/4"	20	19.05 x 1.2	28

Tab. 22: Forged steel valve body with welded connection as per BS 4825

Forged steel valve body, with welded connection as per SMS 3008				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA60	25	25	25.0 x 1.2	27
SA62	40	40	38.0 x 1.2	22
SA63	50	50	51.0 x 1.2	19
SA64	65	65	63.5 x 1.6	16
SA65	80	80	76.1 x 1.6	19
SA66	100	100	101.6 x 2.0	19

Tab. 23: Forged steel valve body with welded connection as per SMS 3008

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

14.2.2 Cast valve body (VG)

Cast valve body, with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA40	8	6	13.5 x 1.6	19
SA40	8	8	13.5 x 1.6	23
SA41	10	8	17.2 x 1.6	14
SA42	15	15	21.3 x 1.6	15
SA42	15	20	21.3 x 1.6	24
SA43	20	20	26.9 x 1.6	17
SA44	25	25	33.7 x 2.0	19
SA45	32	40	42.4 x 2.0	21
SA46	40	40	48.3 x 2.0	16
SA47	50	50	60.3 x 2.0	15
SA48	65	65	76.1 x 2.0	9
SA48	65	80	76.1 x 2.0	20
SA49	80	80	88.9 x 2.3	14
SA39	100	100	114.3 x 2.3	13

Tab. 24: Cast valve body with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B

Cast valve body with welded connection as per DIN 11850 Series 0				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SC40	4	8	6.0 x 1.0	37
SC41	6	6	8.0 x 1.0	31
SC41	6	8	8.0 x 1.0	32
SC42	8	8	10.0 x 1.0	28
SC43	15	15	18.0 x 1.5	20
SC44	20	20	22.0 x 1.5	23
SC45	25	25	28.0 x 1.5	25
SC46	32	25	34.0 x 1.5	18
SC47	40	40	40.0 x 1.5	22
SC48	50	50	52.0 x 1.5	20

Tab. 25: Cast valve body with welded connection as per DIN 11850 Series 0

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Cast valve body with welded connection as per DIN 11850 Series 1 / DIN EN 10357 Series B				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SF40	10	8	12.0 x 1.0	24
SF41	15	15	18.0 x 1.0	19
SF42	20	20	22.0 x 1.0	22
SF43	25	25	28.0 x 1.0	23
SF45	40	40	40.0 x 1.0	21
SF46	50	50	52.0 x 1.0	19

Tab. 26: Cast valve body with welded connection as per DIN 11850 Series 1 / DIN EN 10357 Series B

Cast valve body, with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SD40	10	8	13.0 x 1.5	24
SD42	15	15	19.0 x 1.5	19
SD43	20	20	23.0 x 1.5	22
SD44	25	25	29.0 x 1.5	23
SD46	40	40	41.0 x 1.5	21
SD47	50	50	53.0 x 1.5	19
SD48	65	65	70.0 x 2.0	13
SD49	80	80	85.0 x 2.0	14
SD50	100	100	104.0 x 2.0	17

Tab. 27: Cast valve body with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Cast valve body with welded connection as per DIN 11850 Series 3				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SE40	10	8	14.0 x 2.0	24
SE42	15	15	20.0 x 2.0	19
SE43	20	20	24.0 x 2.0	22
SE44	25	25	30.0 x 2.0	23
SE46	40	40	42.0 x 2.0	21
SE47	50	50	54.0 x 2.0	19

Tab. 28: Cast valve body with welded connection as per DIN 11850 Series 3

Cast valve body with welded connection as per ASME BPE / DIN 11866 Series C				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA90	1/4"	6	6.35 x 0.89	35
SA90	1/4"	8	6.35 x 0.89	36
SA91	3/8"	6	9.53 x 0.89	27
SA91	3/8"	8	9.53 x 0.89	29
SA92	1/2"	6	12.7 x 1.65	23
SA92	1/2"	8	12.7 x 1.65	25
SA93	3/4"	15	19.5 x 1.65	19
SA93	3/4"	20	19.5 x 1.65	27
SODF	1"	25	25.4 x 1.65	27
SODH	1 1/2"	40	38.1 x 1.65	23
SODI	2"	50	50.8 x 1.65	21
SODJ	2 1/2"	50	63.5 x 1.65	12
SODJ	2 1/2"	65	63.5 x 1.65	16
SODK	3"	80	76.2 x 1.65	19
SODL	4"	100	101.6 x 2.11	18

Tab. 29: Cast valve body with welded connection as per ASME BPE / DIN 11866 Series C

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Cast valve body with welded connection as per BS 4825				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SODB	1/4"	8	6.35 x 1.2	37
SODC	3/8"	8	9.53 x 1.2	30
SODD	1/2"	8	12.7 x 1.2	23
SODE	3/4"	15	19.05 x 1.2	16

Tab. 30: Cast valve body with welded connection as per BS 4825

Cast valve body with welded connection as per SMS 3008				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA60	25	25	25.0 x 1.2	27
SA62	40	40	38.0 x 1.2	23
SA63	50	50	51.0 x 1.2	20
SA64	65	65	63.5 x 1.6	16
SA65	80	80	76.1 x 1.6	19
SA66	100	100	101.6 x 2.0	18

Tab. 31: Cast valve body with welded connection as per SMS 3008

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

14.2.3 Tube valve body (VP)

Tube valve body with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA40	8	8	13.5 x 1.6	20
SA41	10	8	17.2 x 1.6	16
SA42	15	15	21.3 x 1.6	20
SA43	20	20	26.9 x 1.6	20
SA44	25	25	33.7 x 2.0	19
SA45	32	32	42.4 x 2.0	18
SA46	40	40	48.3 x 2.0	18
SA47	50	50	60.3 x 2.0	18

Tab. 32: Tube valve body with welded connection as per DIN EN ISO 1127 / ISO 4200 / DIN 11866 Series B

Tube valve body with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SD40	10	8	13.0 x 1.5	20
SD42	15	15	19.0 x 1.5	24
SD43	20	15	23.0 x 1.5	16
SD44	25	20	29.0 x 1.5	18
SD45	32	25	35.0 x 1.5	17
SD46	40	32	41.0 x 1.5	21
SD47	50	40	53.0 x 1.5	13

Tab. 33: Tube valve body with welded connection as per DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026

Tube valve body with welded connection as per ASME BPE / DIN 11866 Series C				
Port connection code	DN	Diaphragm size	Pipe dimensions	Self-draining angle (α)
SA92	1/2"	8	12.7 x 1.65	23
SA93	3/4"	15	19.5 x 1.65	24
SODF	1"	20	25.4 x 1.65	23
SODH	1 1/2"	32	38.1 x 1.65	24
SODI	2"	40	50.8 x 1.65	16
SODJ	2 1/2"	50	63.5 x 1.65	15
SODK	3"	65	76.2 x 1.65	14
SODL	4"	80	101.6 x 2.11	12

Tab. 34: Tube valve body with welded connection as per ASME BPE / DIN 11866 Series C

MAN 1000759136 EN Version: A Status: RL (released | freigegeben) printed: 08.10.2026