

## Type 3232, 3233, 3234, 3235, 3239

2/2-way-diaphragm valve with manually operated actuator

2/2-Wege-Membranventil mit handbetätigtem Antrieb

Vanne à membrane 2/2 avec actionneur manuel



## Operating Instructions

Bedienungsanleitung

Manuel d'utilisation

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

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Operating Instructions 2406/08\_EU-ML\_00809435 / Original DE

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# 1 OPERATING INSTRUCTIONS

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

## Important safety information.

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

## 1.1 Symbols



### DANGER

**Warning of an immediate danger.**

- Failure to comply will result in death or serious injury.



### WARNING

**Warns of a potential danger.**

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



### CAUTION

**Warns of a potential hazard.**

- Failure to comply with these instructions may result in moderate or minor injury.

## NOTE

### Warns of damage.



Important tips and recommendations.



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

- Highlights instructions to avoid a danger.

→ Designates a procedure which you must carry out.

## 1.2 Definition of terms

Term	Definition for these instructions
Device	Diaphragm valve type 3232, 3233, 3234 and 3239
Ex area	Potentially explosive atmosphere
Explosion protection approval	Approval in potentially explosive atmosphere

## 2 INTENDED USE

The diaphragm valve type 3232, 3233, 3234, 3235 and 3239 is designed to control the flow of media. The authorised media are listed in chapter “[Technical data](#)”.

- ▶ Use the device only as intended. Non-intended use of the device may be dangerous to people, nearby equipment and the environment.
- ▶ Prerequisites for safe and trouble-free operation are correct transportation, correct storage, installation, start-up, operation and maintenance.
- ▶ To use the device, observe the permitted data, operating conditions and application conditions. These specifications can be found in the contract documents, the operating instructions and on the Type label.
- ▶ Use the device only in conjunction with third-party devices and components recommended or approved by Bürkert.
- ▶ Only use equipment that is approved for this type of potentially explosive area. These devices are identified by a separate “Ex” type label. Before use, note the information on the separate Ex type label and the Ex additional instructions or the separate Ex operating Instructions.
- ▶ Protect device from environmental influences (e.g. radiation, air humidity, fumes). If you have any questions, contact your Bürkert sales department.

## 3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not take into account any unforeseen circumstances or events that occur during installation, operation and maintenance. The operator is responsible for observing the location-specific safety regulations, also with reference to personnel.



### **Risk of injury due to high pressure and escaping medium.**

- ▶ Switch off the pressure before working on the device or system. Vent or empty the lines.

### **Electric shock due to installed electrical component.**

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

### **Danger of bursting in case of overpressure.**

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

- ▶ Do not exceed the maximum medium pressure. Observe specifications on the type label.
- ▶ Observe allowable temperatures.

### **Danger of burns and risk of fire.**

Quickly switching actuators or hot medium may cause the surface of the device to become hot.

- ▶ Only touch the device when wearing protective gloves.
- ▶ Keep the device away from highly flammable substances and media.

**Medium may leak out if the diaphragm is worn.**

- ▶ Inspect relief bore for any medium leakages.
- ▶ Change the diaphragm if medium leaks.
- ▶ If the medium is hazardous, secure the area around the leakage to prevent risks.

**Danger of crushing due to mechanically moving parts.**

There is a risk of crushing due to the up and down movement of the device when it is actuated.

- ▶ Do not reach into the openings of the valve body.

**Danger due to loud noises.**

Depending on the operating conditions, the device may generate loud noises. More detailed information on the likelihood of loud noises is available from the relevant sales office.

- ▶ Wear hearing protection when in the vicinity of the device.

**To avoid injury, observe the following:**

- ▶ Do not make any changes to the device and do not subject it to mechanical stress.
- ▶ Only trained technicians may perform installation and maintenance work.
- ▶ Only use suitable tools to perform installation and maintenance work.
- ▶ Heavy equipment must only be transported, assembled and disassembled with the help of a second person as appropriate and using suitable apparatus.
- ▶ Only hand-tighten the valve when closing and do not use any tools or aids. Too much tightening may damage the device.

- ▶ The process must be restarted in a defined or controlled manner after an interruption in the power supply or pneumatic supply.
- ▶ The device may be operated only when in perfect condition and in consideration of the operating instructions.
- ▶ For applications planning and operation of the device, observe the plant-specific safety regulations.
- ▶ Only the media listed in chapter “Technical data” should be fed into the medium ports.
- ▶ Observe the general rules of technical equipment.
- ▶ The plant owner is responsible for the safe operation and handling of the plant.

## 4 GENERAL INFORMATION

### 4.1 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@burkert.com](mailto:info@burkert.com)

#### International

Contact addresses can be found on the final pages of the printed operating instructions.

And also on the Internet at: [country.burkert.com](http://country.burkert.com)

### 4.2 Warranty

The warranty is only valid if the device is used as intended in accordance with the specified application conditions.

### 4.3 Information on the Internet

The operating instructions and data sheets for Types 3232, 3233, 3234, 3235, 3239 can be found on the Internet at: [country.burkert.com](http://country.burkert.com)

## 5 PRODUCT DESCRIPTION

### 5.1 Structure and description

The device is a manually operated valve and consists of a manual actuator and a valve body.

### 5.2 Variants

The types differ in the valve body.

#### 5.2.1 Diaphragm valve with 2/2-way valve body

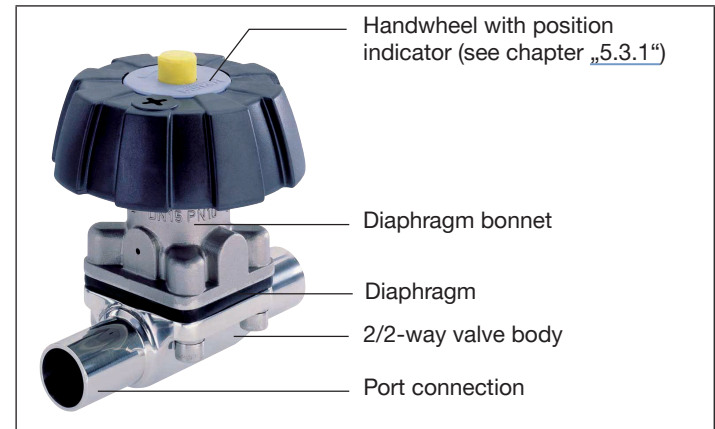


Fig. 1: Example of 2/2-way valve body Type 3232 and 3233

## 5.2.2 Diaphragm valve with T-valve body

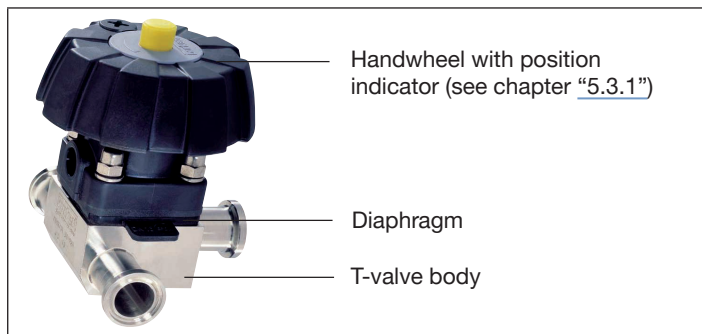


Fig. 2: T-valve body, Type 3234

## 5.2.3 Diaphragm valve with tank bottom body

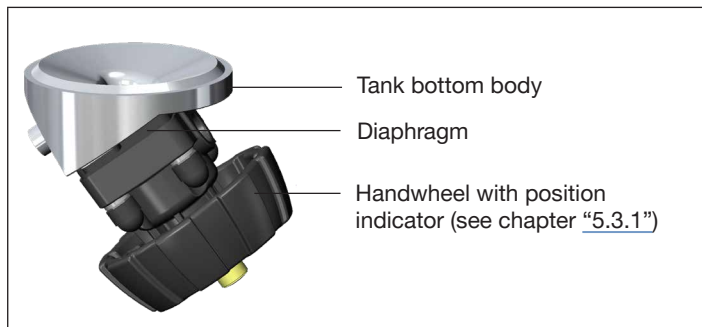


Fig. 3: Tank bottom body, Type 3235

## 5.2.4 Diaphragm valve with Y-valve body

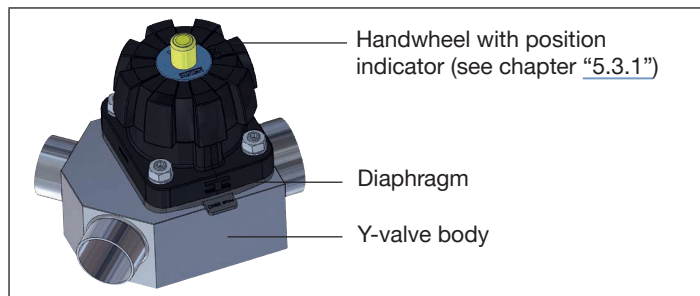


Fig. 4: Y-valve body, Type 3239

## 5.3 Function

The manual actuation of the handwheel transfers the force via a spindle and opens and closes the valve.

### 5.3.1 Position indicator

#### Actuator DN8 (diaphragm size)

When the valve is opened, a yellow mark is visible between the bonnet and the handwheel.

#### Actuator DN15 to DN50 (diaphragm size)

From DN15 a yellow cylinder provides information on the valve position:

- Yellow cylinder completely retracted in the handwheel:  
**Valve closed (CLOSED position)**

- Yellow cylinder projects all the way out of the handwheel:  
Valve opened (OPEN position)

Actuator DN65, DN80 and DN100 (diaphragm size)

From DN65 an spindle extension indicates the valve position:

- Spindle extension completely retracted in the handwheel:  
Valve closed (CLOSED position)
- Spindle extension projects all the way out of the handwheel:  
Valve opened (OPEN position)

## 5.4 Product identification

### 5.4.1 Type label

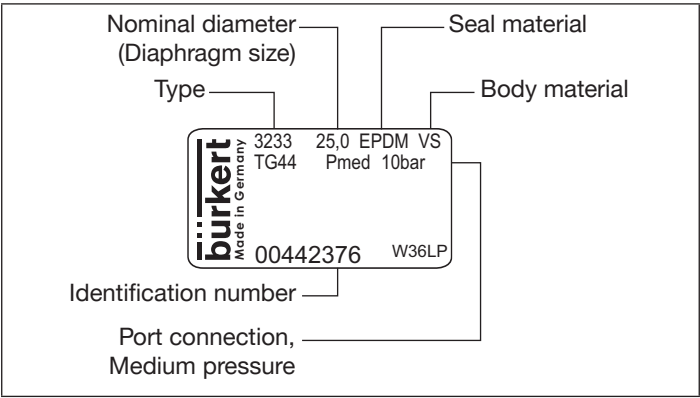


Fig. 5: Description of the type label (example)

### 5.4.2 Labelling on forged steel valve body

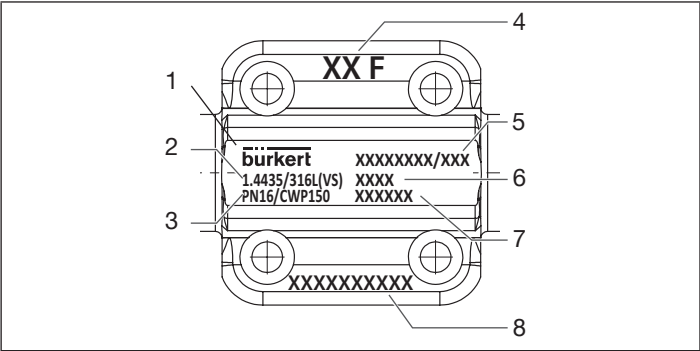


Fig. 6: Labelling on forged steel valve body

Item	Description	Item	Description
1	Company logo	5	Production number/serial number
2	Material	6	Self-draining angle
3	Nominal pressure class (PN)	7	Customer-specific text (optional)
4	Batch number	8	Nominal diameter and pipe dimensions

### 5.4.3 Labelling on cast valve body

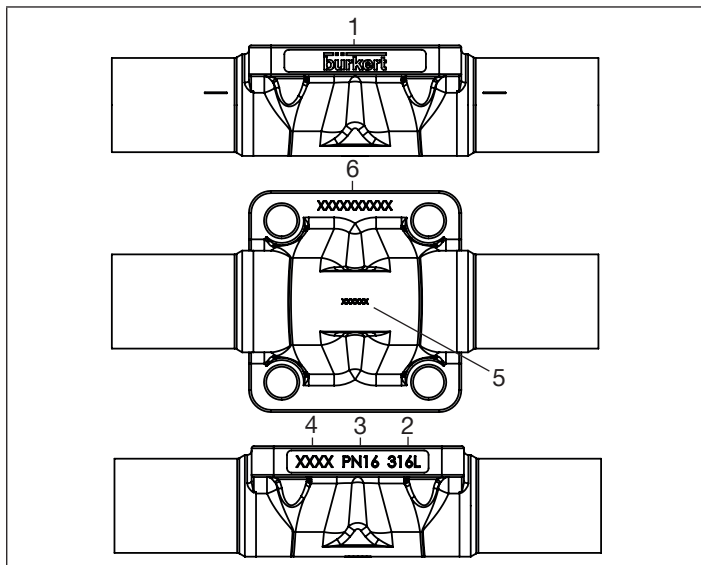


Fig. 7: Labeling on cast valve body

Item	Description	Item	Description
1	Company logo	4	Nominal diameter (diaphragm size)
2	Material	5	Batch number
3	Nominal pressure class (PN)	6	Nominal diameter and pipe dimensions

### 5.4.4 Labelling on tube valve body

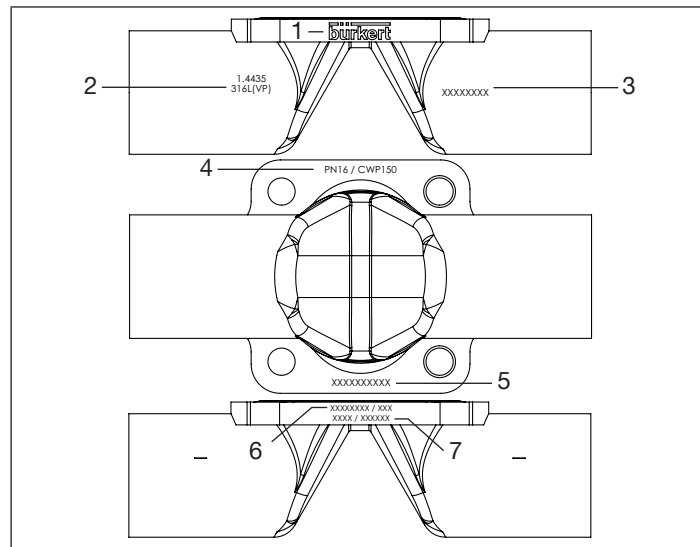


Fig. 8: Labeling on tube valve body

Item	Description	Item	Description
1	Company logo	5	Nominal diameter and pipe dimensions
2	Material	6	Serial number
3	Heat	7	Self-draining angle
4	Nominal pressure class (PN)		

## 6 TECHNICAL DATA

### 6.1 Standards and directives

The device complies with the valid EU harmonisation legislation. In addition, the device also complies with the requirements of the laws of the United Kingdom.

The harmonised standards that have been applied for the conformity assessment procedure are listed in the current version of the EU Declaration of Conformity/ UK Declaration of Conformity.

### 6.2 Operating conditions

#### Permitted media

Type 3232	dirty and aggressive media
Type 3233, 3234, 3235, 3239	dirty, aggressive, high-purity, sterile media with higher viscosity

#### Connection

Stainless steel valve body	Weld connection Clamp connection
Plastic valve body	Spigot connection True union

#### Materials

Valve body Type 3232	PP, PVC, PVDF
Type 3233	Precision-cast stainless steel (VG), Forged steel (VS), Stainless steel tube valve body (VP)
Type 3234, 3235, 3239	Stainless steel block material
Actuator	PPS handwheel and diaphragm bonnet, PPS handwheel and stainless steel diaphragm bonnet Stainless steel handwheel and diaphragm bonnet
Diaphragm	EPDM, PTFE/EPDM, advanced PTFE/EPDM, laminate of GYLON® and EPDM, FKM

Installation position: any, bottom outlet valve type 3235: actuator downwards

### 6.2.1 Allowable temperatures

Ambient temperature for actuator

PPS actuator	0...+130 °C (short-term up to +150 °C)
Stainless steel actuator	-10...+140 °C (short-term up to +150 °C)

### Medium temperature for valve body

Stainless steel	-10...+150 °C
PVC (see PT-diagram)	10...+60 °C
PVDF (see PT-diagram)	-20...+120 °C
PP (see PT-diagram)	10...+90 °C

### Medium temperature for diaphragm

EPDM (AB)	-10...+130 °C Steam sterilisation up to +140 °C / 60 min
EPDM (AD)	-10...+143 °C Steam sterilisation up to +150 °C / 60 min
FKM (FF)	0...+130 °C No steam / dry heat up to +150 °C / 60 min
PTFE (EA)	-10...+130 °C Steam sterilisation up to +140 °C / 60 min
Advanced PTFE (EU)	-5...+143 °C Steam sterilisation up to +150 °C / 60 min
GYLON® (ER)	-5...+130 °C Steam sterilisation up to +140 °C / 60 min

### 6.2.2 Permitted medium pressure

Permitted medium pressure depending on the medium temperature:

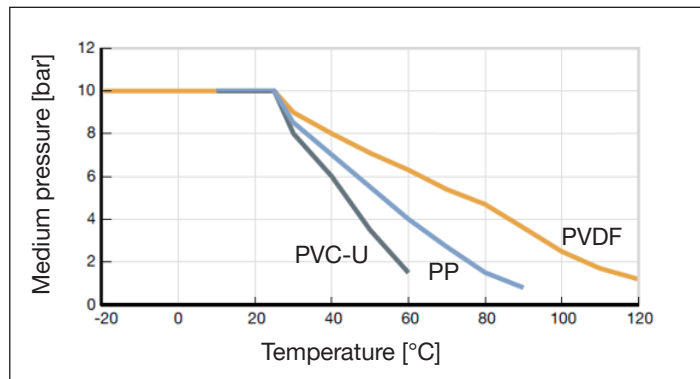


Fig. 9: Pressure temperature diagram for plastic valve body as per DIN EN ISO 16138



The information is important for the material selection. Observe the permitted operating pressure, depending on the medium temperature.

## Maximum permitted medium pressure

The values apply to body made of:

- plastic,
- stainless steel: block material, forged, casted and tube valve body.

Diaphragm size (Nominal diameter DN)	Maximum permitted medium pressure [bar]			
	Handwheel and bonnet PPS		Handwheel PPS / Bonnet stainless steel	
	EPDM/FKM	PTFE/advanced PTFE/GYLON®	EPDM/FKM	PTFE/advanced PTFE/GYLON®
8	10	10	10	10
15	10	10	10	10
20	10	10	10	10
25	10	10	10	10
32	10	10	10	10
40	10	10	10	10
50	7	7	10	10

Tab. 1: Maximum permitted medium pressure

## Maximum permitted medium pressure

Diaphragm size (Nominal diameter DN)	Maximum permitted medium pressure [bar]	
	Handwheel and bonnet stainless steel	
	EPDM/FKM	PTFE/advanced PTFE/GYLON®
65	10	10
80	10	10
100	6	6

Tab. 2: Maximum permitted medium pressure

## 7 INSTALLATION



### DANGER

**Risk of injury from high pressure in the equipment.**

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



### WARNING

**Risk of injury from improper installation.**

- ▶ Installation may be carried out by authorized technicians only and with the appropriate tools.
- ▶ Observe tightening torques.

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

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



### CAUTION

**Risk of injury due to heavy device.**

During transportation or installation work, a heavy device may fall down and cause injuries.

- ▶ Transport, install and remove heavy device with the aid of a second person only.
- ▶ Use suitable tools.

## 7.1 Information for the correct installation position

Depending on the valve body, the installation position of the diaphragm valve is different.

**Installation for leakage detection:**



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

### 7.1.1 Installation position of 2/2-way valve body

Installation position: any, preferably actuator facing up.

**Installation for self-drainage of the body**



It is the responsibility of the installer and operator to ensure self-drainage.

Self-draining must be considered during the installation:

1. Angle of inclination of the pipeline:

- The angle of inclination should correspond to the angle of inclination of the pipeline. For the pipeline, we recommend the inclination angles according to the valid ASME BPE.

2. Self-draining angle for valve body:

- The self-draining angle ( $\alpha$ ) depends on the valve body size (diaphragm size) and the inner diameter of the port connection (DN).
- The self-draining angle is specified as a value on forged steel valve bodies (VS) and tube valve bodies (VP).

- The marking on the port connection of valve bodies serves as an orientation aid. The marking must point upwards.
- The actual self-draining angle must be set with a suitable measuring tool.
- For valve bodies without angle information, you can find the self-draining angle on the Internet:  
[www.burkert.com](http://www.burkert.com)  
Type /Manuals /Supplementary information  
“Angle information for self-drainage of diaphragm valves”.

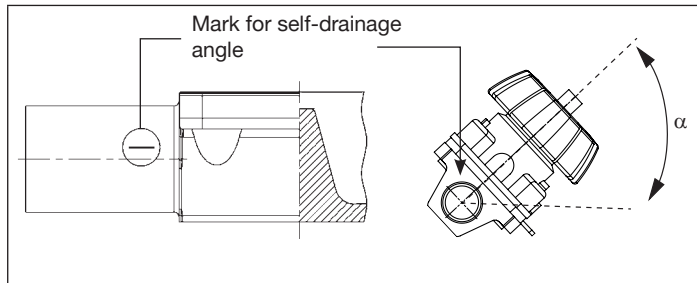


Fig. 10: Installation position for self-drainage of the body

## 7.1.2 Installation position T-valve body

For the installation of the T-valves into circular pipelines, we recommend the following installation positions:

When media is supplied:



When media is removed:

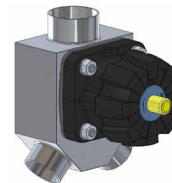


Fig. 11: Installation position type 3234

## 7.1.3 Installation position Y-valve body

For the installation of the Y-valves into systems, we recommend the following installation positions:

When media is supplied:



When media is removed:




Fig. 12: Installation position type 3239

## 7.2 Preparatory work

- Clear impurities from pipelines (seal material, metal chips, etc.).
- Support and align pipelines.

### Devices with bonded or adhesive bodies:

 The actuator and diaphragm must be dismantled before welding or bonding the valve body.


### 7.2.1 Welding tank bottom body



#### **DANGER**

**Risk of injury due to high pressure and escaping medium.**

- ▶ Switch off the pressure before working on the device or system. Vent or empty the lines.

 **Recommendations**

Observe the sequence:

1. Weld the tank bottom body to the container base before the container is assembled. It is possible to weld onto a ready-assembled container but it is more difficult. Note: weld the tank bottom body in the middle of the container base so that the container can be optimally drained.
2. Weld the tank bottom body into the pipeline.

- Ensure that pipelines are in alignment.
- Support and align pipelines. To ensure that the pipeline is self-draining, we recommend the inclination angles according to the valid ASME BPE.



For information on containers and instructions for welding, refer to the ASME VIII Division I standard. Check the batch number indicated on the manufacturer's certificate 3.1 supplied before starting welding work.



Observe the applicable laws of the country with regard to the qualification of welders and the execution of welding work.

- Welding the tank bottom body to the container.

#### **NOTE**

##### **Note when welding:**

- ▶ Only use welding materials that are suitable for the tank bottom body.
- ▶ The tank bottom valve must not collide with any other installation part. The actuator must be easy to install and remove.

- Weld the tank bottom body into the pipeline. Ensure installation is de-energized and low-vibration.
- Install diaphragm and actuator after welding.

## 7.3 Install device

### NOTE

The following must be heeded when installing the device in the system:

- ▶ The device and relief bore must be accessible for inspections and maintenance work.

### 7.3.1 Device with welded connection or bond connection

### NOTE

To prevent damage.

Before welding or gluing the body, the actuator and the diaphragm must be removed.

- Rotate the handwheel anticlockwise until it comes to a stop (UP position).
- Loosen the fastening screws crosswise and remove the actuator with diaphragm from the valve body.
- Weld or bond the valve body into the pipeline.
- After welding or bonding the valve body, smooth the body surface (if necessary) by sanding.
- Clean valve body carefully.
- Place the actuator together with diaphragm on the valve body.
- Slightly tighten the fastening screws crosswise until the diaphragm rests between the valve body and the actuator.
- Close and open the diaphragm valve twice to ensure that the diaphragm is properly seated.

- Close the diaphragm valve again and open it approx. 20 %.

### NOTE

Damage to the device when failing to observe tightening torque.

- ▶ Observe tightening torques.

- Tighten each fastening screw in 3 stages (approx. 1/3, approx. 2/3, 3/3 of the tightening torque in accordance with “Tab. 3”) crosswise. The diaphragm should be positioned and pressed evenly around the actuator and valve body.

### 7.3.2 Tightening torques

Diaphragm size	Tightening torques [Nm]*			
	VS, PP, PVC, PVDF, VG		VP	
	EPDM/FKM	PTFE/advanced PTFE/GYLON®	EPDM/FKM	PTFE/advanced PTFE/GYLON®
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. 3: Tightening torques depending on diaphragm

\* A tolerance of +10 % of the respective tightening torque applies to all values

Diaphragm size	Tightening torques [Nm]*			
	VS, PP, PVC, PVDF, VG		VP	
	EPDM/ FKM	PTFE/ advanced PTFE/ GYLON®	EPDM/ FKM	PTFE/ advanced PTFE/ GYLON®
65	20	30	20	30
80	30	40	30	40
100	40	40	-	-

Tab. 4: Tightening torques for diaphragms

\* A tolerance of +10 % of the respective tightening torque applies to all values

## 8 MAINTENANCE, CLEANING



### DANGER

Risk of injury due to high pressure and escaping medium.

- Switch off the pressure before working on the device or system. Vent or empty the lines.

Risk of injury due to electrical shock.

- Before reaching into the 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.

- Installation may be carried out by authorized technicians only and with the appropriate tools.

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

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

## 8.1 Maintenance work

### 8.1.1 Actuator

When used in accordance with these operating instructions, the actuator is maintenance-free.

## 8.1.2 Inspection intervals

The following maintenance work is required for the diaphragm valve

- After the first steam sterilization, or when required, re-tighten fastening screws crosswise.
- After maximum  $10^5$  switching cycles check the diaphragm for wear.



Muddy and abrasive media require correspondingly shorter inspection intervals.

## 8.1.3 Wearing parts of the diaphragm valve

Parts which are subject to natural wear:

- Diaphragm
- If leaks occur, replace the particular wearing parts with an appropriate spare part (see chapter “10”).

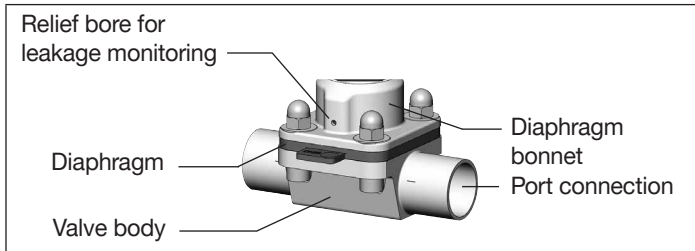


Fig. 13: Relief bore for leakage monitoring



A bulging PTFE diaphragm may reduce the flow-rate.

## 8.1.4 Service life of the diaphragm

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

- Diaphragm material,
- Medium,
- Medium pressure,
- Medium temperature.

## 8.1.5 Cleaning

Commercially available cleaning agents can be used to clean the outside.

### NOTE

**Avoid causing damage with cleaning agents.**

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

## 9 REPLACING THE DIAPHRAGM



### DANGER

**Risk of injury due to medium leakage and pressure discharge.**

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

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

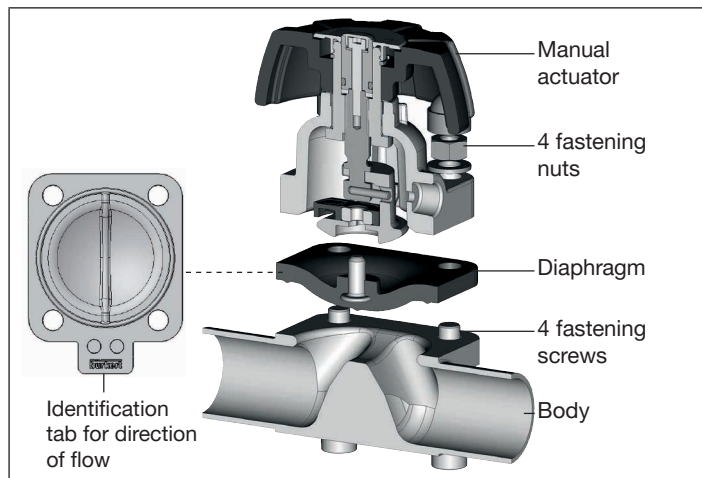


Fig. 14: Replacing the diaphragm

### Fastening types

Diaphragm size (Nominal diameter DN)	Fastening types for diaphragm	
	PTFE	EPDM / FKM
8	Diaphragm buttoned	Diaphragm buttoned
15	Diaphragm with bayonet catch	Diaphragm with bayonet catch
20		
25	Diaphragm with bayonet catch	Diaphragm screwed in
40		
50		
65		
80		
100		

Tab. 5: Fastening types for diaphragm

- Clamp valve body in a collet (only for valves which have not yet been installed).
- Rotate the handwheel anticlockwise until it comes to a stop (UP position).
- Loosen the fastening screws crosswise and remove the actuator with diaphragm from the valve body.
- Rotate the handwheel clockwise until it comes to a stop (CLOSED position).
- Unbutton or unscrew the old diaphragm. When fastening with a bayonet catch, loosen the diaphragm by rotating it 90°. For DN25-DN50, see chapter [“9.1.1”](#).

## NOTE

Damage to the diaphragm with threaded connection due to live pin.

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

- Install new diaphragm in the actuator (see “Tab. 5”).
- Rotate the handwheel anticlockwise until it comes to a stop (UP position).
- Align diaphragm.  
Identification tab at a 90-degree angle to the direction of flow.
- Place the actuator together with diaphragm on the valve body.
- Slightly tighten fastening screws crosswise.
- Close and open the diaphragm valve twice to ensure that the diaphragm is properly seated.
- Close the diaphragm valve again and open it approx. 20 %.

## NOTE

Damage to the device when failing to observe tightening torque.

- ▶ Observe tightening torques.

- Tighten each fastening screw in three stages (approx. 1/3, approx. 2/3, 3/3 of the tightening torque) crosswise. The diaphragm should be positioned and pressed evenly around the actuator and valve body.



Observe tightening torques in accordance with the tables.

## 9.1.1 Change between PTFE and EPDM diaphragms

### 1. Change of diaphragm for diaphragm size 8

- Unbutton PTFE diaphragm and button on new EPDM diaphragm (or vice versa).

### 2. Change of diaphragm for diaphragm size 15 and 20

- Loosen PTFE diaphragm bayonet and insert new EPDM diaphragm (or vice versa).

### 3. Change of diaphragm for diaphragm size 25 to 50

#### Change the PTFE diaphragm to EPDM diaphragm:

- Loosen PTFE diaphragm by turning it 90°.
- Fitting the insert into the compressor.

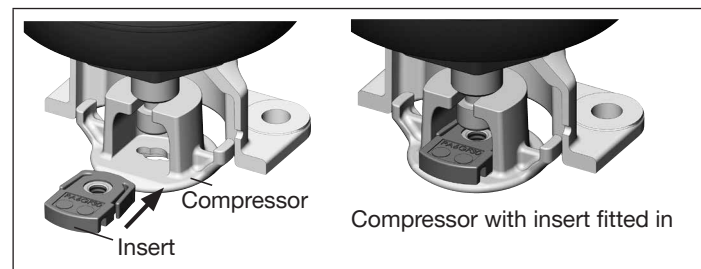


Fig. 15: Fitting the insert into the compressor

- Insert and screw in the EPDM diaphragm.

## NOTE

Damage to the diaphragm with threaded connection due to live pin.

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

Change the EPDM diaphragm to a PTFE diaphragm:

- Unscrew the EPDM diaphragm.
- Remove the insert from the compressor.

## NOTE

For diaphragm with bayonet connection:

If the insert is not removed, a diaphragm with bayonet connection can still be fitted. This can severely damage the diaphragm and valve body.

- Insert the PTFE diaphragm and fix it by turning it through 90°.

## 10 SPARE PARTS, ACCESSORIES



### 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 device and the surrounding area.

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

The following spare parts are available for the manually actuated diaphragm valves type 3232, 3233, 3234, 3235 and 3239:

- Manual actuator complete,
- Diaphragm.

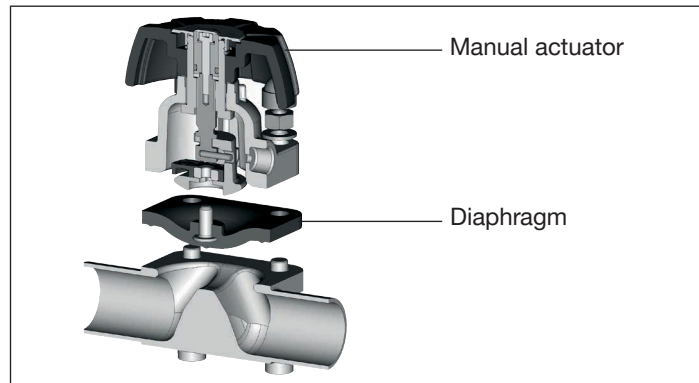


Fig. 16: Spare parts

## 10.1 Handwheel locking device option

The handwheel locking device option (from actuator size DN15 to DN50) prevents unintentional or unauthorized operation of the valve. Handwheel can be locked in 12 detent positions per revolution (30° each).

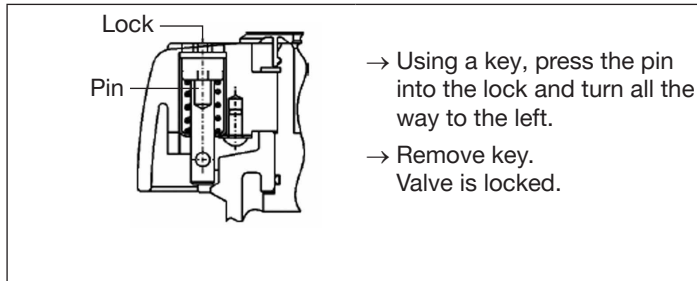


Fig. 17: Handwheel with lock

## 10.2 Order table for diaphragms

Replacement diaphragms can be ordered according to the table below. The diaphragms are marked with a material code that specifies them. The material code is located on the identification tab or, in the case of two-piece diaphragms, on the tab of the support diaphragm and the diaphragm plate. The material code may differ for older materials.

Diaphragm size	EPDM (AD*)		FKM (FF*)	
	Order number	Material code	Order number	Material code
8	688 421	EPDM E03/E04	677 684	FKM F01
15	688 422	EPDM E03/E04	677 685	FKM F01
15 BC**	693 163	EPDM E03/E04	693 164	FKM F01
20	688 423	EPDM E03/E04	677 686	FKM F01
20 BC**	693 166	EPDM E03/E04	693 167	FKM F01
25	688 424	EPDM E03/E04	677 687	FKM F01
32	688 425	EPDM E03/E04	677 688	FKM F01
40	688 426	EPDM E03/E04	677 689	FKM F01
50	688 427	EPDM E03/E04	677 690	FKM F01
65	688 428	EPDM E03/E04	677 691	FKM F01
80	688 429	EPDM E03/E04	677 692	FKM F01
100	688 430	EPDM E03/E04	677 693	FKM F01

Tab. 6: Order numbers for EPDM and FKM diaphragms

**Type 3232, 3233, 3234, 3235,  
3239**

Spare parts, accessories

Diaphragm size	PTFE (EA*)		Advanced PTFE (EU*)		GYLON® laminated (ER*)	
	Order number	Material code	Order number	Material code	Order number	Material code
8	677 674	PTFE L04/L10	679 540	PTFE L05/L09	693 175	PTFE L06/L08
15	677 675	EPDM E02/E04 / PTFE P01	679 541	EPDM E02/E04 / PTFE P02 or hole	693 176	PTFE L06/L08
20	677 676	EPDM E02/E04 / PTFE P01	679 542	EPDM E02/E04 / PTFE P02 or hole	693 177	PTFE L06/L08
25	677 677	EPDM E02/E04 / PTFE P01	679 543	EPDM E02/E04 / PTFE P02 or hole	693 178	PTFE L06/L08
32	677 678	EPDM E02/E04 / PTFE P01	679 544	EPDM E02/E04 / PTFE P02 or hole	693 179	PTFE L06/L08
40	584 378	EPDM E02/E04 / PTFE P01	584 379	EPDM E02/E04 / PTFE P02 or hole	693 180	PTFE L06/L08
50	584 386	EPDM E02/E04 / PTFE P01	584 387	EPDM E02/E04 / PTFE P02 or hole	693 181	PTFE L06/L08
65	20047938	EPDM E02/E04 / PTFE P01	20047940	EPDM E02/E04 / PTFE P02 or hole	586 616	PTFE L08
80	20047939	EPDM E02/E04 / PTFE P01	20047941	EPDM E02/E04 / PTFE P02 or hole	586 617	PTFE L08
100	677 683	EPDM E02/E04 / PTFE P01	679 745	EPDM E02/E04 / PTFE P02 or hole	-	-

Tab. 7: Order numbers for PTFE and GYLON® diaphragms

\* SAP Code

## 11 TRANSPORTATION, STORAGE, DISPOSAL



### CAUTION

**Risk of injury due to heavy device.**

During transportation or installation work, a heavy device may fall down and cause injuries.

- ▶ Heavy equipment must only be transported, assembled and disassembled with the help of a second person.
- ▶ Use suitable tools.

### NOTE

**Damage in transit due to inadequately protected devices.**

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

**Incorrect storage may damage the device.**

- ▶ Store the device in a dry and dust-free location.
- ▶ Storage temperature: -40 °C...+55 °C.

### Environmentally friendly disposal



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

Further information at [country.burkert.com](https://country.burkert.com)



[www.burkert.com](http://www.burkert.com)